



# **NAVAL POSTGRADUATE SCHOOL**

**MONTEREY, CALIFORNIA**

## **THESIS**

**DEBATING DEINDUSTRIALIZATION: A  
COMPARATIVE ANALYSIS OF BRAZIL AND MEXICO**

by

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September 2014

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**DEBATING DEINDUSTRIALIZATION: A COMPARATIVE ANALYSIS OF  
BRAZIL AND MEXICO**

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## **ABSTRACT**

Brazil and Mexico are often studied as opposing models of neoliberal reform, yet assessments of each model suggest that the economic growth of both countries has been relatively stagnant. Many theories address possible causes of their stagnation, but the prospect of premature deindustrialization has received little attention. Could premature deindustrialization be a source of economic stagnation in Brazil and Mexico, and if so, how can these two cases help developing countries avoid potential economic pitfalls?

A comparison of Brazil and Mexico's past trade agreements, policies, and economic struggles reveals that the countries followed similar paths until neo-liberal reforms. Since opening their economies to the global markets, the two countries have followed vastly different trajectories, yet both continue to experience economic stagnation. This thesis takes a close look into each country, highlighting trends that have led each state to experience premature deindustrialization.

The thesis concludes that both Brazil and Mexico have experienced premature deindustrialization, albeit in different forms and for distinctive reasons. The findings of this thesis are intended to spur further research into deindustrialization as a possible cause of economic stagnation in the two largest economies of Latin America. The results could prove helpful to developing neighbors in the region.

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## TABLE OF CONTENTS

|             |                                                                           |           |
|-------------|---------------------------------------------------------------------------|-----------|
| <b>I.</b>   | <b>INTRODUCTION TO DEINDUSTRIALIZATION.....</b>                           | <b>1</b>  |
| <b>A.</b>   | <b>MAJOR RESEARCH QUESTION.....</b>                                       | <b>1</b>  |
| <b>B.</b>   | <b>IMPORTANCE.....</b>                                                    | <b>3</b>  |
| <b>C.</b>   | <b>PROBLEMS AND HYPOTHESES.....</b>                                       | <b>3</b>  |
| <b>D.</b>   | <b>METHODS AND SOURCES.....</b>                                           | <b>5</b>  |
| <b>E.</b>   | <b>THESIS OVERVIEW.....</b>                                               | <b>6</b>  |
| <b>II.</b>  | <b>DEINDUSTRIALIZATION: DEFINITIONS AND THEORETICAL EXPLANATIONS.....</b> | <b>7</b>  |
| <b>A.</b>   | <b>INTRODUCTION.....</b>                                                  | <b>7</b>  |
| <b>B.</b>   | <b>DEFINITIONS .....</b>                                                  | <b>7</b>  |
| 1.          | Timing Is Everything.....                                                 | 8         |
| <b>C.</b>   | <b>CAUSAL THEORIES .....</b>                                              | <b>9</b>  |
| 1.          | Technology.....                                                           | 10        |
| 2.          | Currency .....                                                            | 10        |
| 3.          | Outsourcing .....                                                         | 11        |
| 4.          | North-South Relationships and Regressive Specialization .....             | 12        |
| 5.          | The Resource Curse.....                                                   | 13        |
| <b>D.</b>   | <b>DANGERS .....</b>                                                      | <b>14</b> |
| <b>E.</b>   | <b>CONCLUSION.....</b>                                                    | <b>14</b> |
| <b>III.</b> | <b>BRAZIL’S RESOURCE CURSE.....</b>                                       | <b>15</b> |
| <b>A.</b>   | <b>INTRODUCTION.....</b>                                                  | <b>15</b> |
| <b>B.</b>   | <b>BACKGROUND.....</b>                                                    | <b>15</b> |
| 1.          | The Plano Real .....                                                      | 16        |
| 2.          | Macroeconomic Trinity .....                                               | 17        |
| 3.          | Growth Acceleration Program .....                                         | 18        |
| 4.          | The Greater Brazil Plan .....                                             | 19        |
| <b>C.</b>   | <b>APPLYING THE FIVE THEORIES .....</b>                                   | <b>20</b> |
| 1.          | Technology.....                                                           | 21        |
| 2.          | Currency .....                                                            | 22        |
| 3.          | Outsourcing .....                                                         | 24        |
| 4.          | North-South Relationships.....                                            | 25        |
| 5.          | The Resource Curse (Dutch Disease) .....                                  | 25        |
| a.          | <i>Brazil’s Disease</i> .....                                             | 26        |
| b.          | <i>Solutions</i> .....                                                    | 29        |
| <b>D.</b>   | <b>CONCLUSION.....</b>                                                    | <b>30</b> |
| <b>IV.</b>  | <b>MEXICO’S DISGUISED DILEMMA.....</b>                                    | <b>31</b> |
| <b>A.</b>   | <b>INTRODUCTION.....</b>                                                  | <b>31</b> |
| <b>B.</b>   | <b>BACKGROUND.....</b>                                                    | <b>31</b> |
| 1.          | From ISI to FDI .....                                                     | 32        |
| 2.          | NAFTA.....                                                                | 35        |
| 3.          | The Wage Gap.....                                                         | 38        |

|    |                                                        |    |
|----|--------------------------------------------------------|----|
| 4. | The Resource Curse.....                                | 42 |
| 5. | Remittances .....                                      | 43 |
| C. | GROWTH OR STAGNATION? .....                            | 47 |
| D. | APPLYING THE FIVE THEORIES OF DEINDUSTRIALIZATION..... | 48 |
| 1. | Technology.....                                        | 48 |
| 2. | Currency .....                                         | 49 |
| 3. | Outsourcing .....                                      | 49 |
| 4. | North-South Relationships.....                         | 50 |
| 5. | “Dutch Disease” .....                                  | 51 |
| E. | CONCLUSION.....                                        | 51 |
| V. | COMPARATIVE ANALYSIS AND FINAL CONCLUSIONS .....       | 53 |
| A. | TWO WAYS TO GLOBALIZE .....                            | 53 |
| B. | DIFFERENT, YET SIMILAR.....                            | 57 |
| C. | TWO WAYS TO DEINDUSTRIALIZE.....                       | 57 |
| D. | FINAL CONCLUSIONS .....                                | 59 |
|    | LIST OF REFERENCES .....                               | 61 |
|    | INITIAL DISTRIBUTION LIST .....                        | 69 |

## LIST OF FIGURES

|            |                                                                                                                         |    |
|------------|-------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1.  | GDP Growth 2004–2013 (Annual Percentage). ....                                                                          | 3  |
| Figure 2.  | Peak Manufacturing Levels .....                                                                                         | 21 |
| Figure 3.  | Participation of Subsectors in Employment in the Service Sector, Grouped<br>by Technological Intensity (1995-2006)..... | 22 |
| Figure 4.  | Brazilian Real Exchange Rate against U.S. Dollar 2008–2013.....                                                         | 24 |
| Figure 5.  | Shift in Brazilian Exports 2000–2010.....                                                                               | 27 |
| Figure 6.  | Percentage of value added to GDP 1990-2006.....                                                                         | 29 |
| Figure 7.  | GDP Growth and Currency Inflation, 1960–2000.....                                                                       | 35 |
| Figure 8.  | Latin American Imports plus Exports over GDP.....                                                                       | 37 |
| Figure 9.  | Maquiladora Locations and Production in Billions (Pesos, 2003). ....                                                    | 39 |
| Figure 10. | Mexico Manufacturing Imports and Exports vs. percentage of GDP.....                                                     | 42 |
| Figure 11. | Total Remittances Received in Latin America and Mexico, 2000–2013<br>(millions, U.S. dollars). ....                     | 45 |

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## LIST OF TABLES

|          |                                                                     |    |
|----------|---------------------------------------------------------------------|----|
| Table 1. | Remittances Received 2013 estimates (millions, U.S. dollars). ..... | 46 |
| Table 2. | Remittances as a Share of GDP, 2012 (percentage). .....             | 47 |

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

|          |                                                                     |
|----------|---------------------------------------------------------------------|
| BRICS    | Brazil, Russia, India, China, and South Africa                      |
| FDI      | Foreign direct investment                                           |
| GATT     | General Agreement on Tariffs and Trade                              |
| GDP      | gross domestic product                                              |
| IDB      | Inter-American Development Bank                                     |
| IMF      | International Monetary Fund                                         |
| IMMEX    | Manufacturing, Maquiladora, and Export Services Industry            |
| ISI      | Import-Substitution Industrialization                               |
| NAFTA    | North American Free Trade Agreement                                 |
| MERCOSUR | Mercado Común del Sur (Southern Common Market)                      |
| MINUSTAH | U.N. Stabilization Mission in Haiti                                 |
| OECD     | Organization for Economic Co-operation and Development              |
| PAC      | Programa de Aceleração do Crescimento (Growth Acceleration Program) |
| PEMEX    | Petróleos Mexicanos (Mexican Petroleums)                            |
| U.N.     | United Nations                                                      |
| WTO      | World Trade Organization                                            |

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# **I. INTRODUCTION TO DEINDUSTRIALIZATION**

## **A. MAJOR RESEARCH QUESTION**

Brazil and Mexico are often studied as opposing models of neoliberal reform, yet assessments of each model suggest that the economic growth of both countries has been relatively stagnant. Many theories address possible causes of their stagnation, but the prospect of premature deindustrialization has received little attention. Could premature deindustrialization be a source of economic stagnation in Brazil and Mexico, and if so, how can these two cases help developing countries avoid potential economic pitfalls?

De-industrialization alone is not a threat to a state; the process can demonstrate a healthy economic trajectory when a country slowly shifts from a manufacturing-centered economy to a service-based economy. However, if a country begins the transition to the service sector before the economy can sustain it, the results can have negative effects on growth, causing the economy to stagnate.<sup>1</sup> The scope of this thesis is to explore de-industrialization, examine the root causes of the phenomenon, and determine whether the process is negatively affecting the political economies of Brazil and Mexico. A comparative analysis of the countries' different paths of economic development assists in determining whether Brazil and Mexico are experiencing de-industrialization, and for what reasons.

Brazil and Mexico share many similarities that justify their use in this comparative analysis. Both are large states that rank highest in population and gross domestic product (GDP) among Latin American countries. Both are rich in natural resources and showcase diverse economies with Brazil having the seventh largest in GDP in the world, while Mexico is fourteenth according to the 2013 World Bank rankings.<sup>2</sup> Despite high degrees of inequality in income distribution, the pair are considered middle-income countries, meaning that their per-capita income is not at the levels of advanced

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<sup>1</sup> Dani Rodrik, "The Perils of Premature Deindustrialization," Project Syndicate, October 11, 2013, 3, <http://www.project-syndicate.org/commentary/dani-rodrikdeveloping-economies--missing-manufacturing>.

<sup>2</sup> The World Bank, *World Development Indicators 2014* (2013 GDP Ranking), last modified July 1, 2014, <http://databank.worldbank.org/data/download/GDP.pdf>.

economies, but each state is better off than the developing countries found in Latin America, Africa, and Asia.<sup>3</sup> Brazil and Mexico also share similar historical backgrounds; both have been independent nation states since the early 1800s and experienced periods of considerable economic success under the era of import substitution industrialization. In the 1980s and the 1990s, Brazil and Mexico underwent neoliberal reforms, each selecting a different path toward globalization of their economies. While Mexico fully embraced economic openness with foreign trade agreements and foreign direct investments (FDI), Brazil maintained a relatively closed stance and instead pursued a role of regional leadership.<sup>4</sup> Despite the different paths taken, both economies have struggled to achieve the GDP growth rates experienced prior to neoliberal reforms; many say the economies are stagnant (See Figure 1). The similar stagnant economic performances, despite different paths since neoliberal reforms, make Brazil and Mexico an interesting duo for comparison. This thesis analyzes the paths of both states and offers a possible explanation for the similar stagnant outcome—deindustrialization.

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<sup>3</sup> Angus Maddison, *Brazil and Mexico—The Political Economy of Poverty, Equity, and Growth, Volume I* (Oxford: Oxford University Press, 1992), vii, 4, [http://econ.worldbank.org/external/default/main?pagePK=64165259&theSitePK=477894&piPK=64165421&menuPK=64166093&entityID=000178830\\_9810191113027](http://econ.worldbank.org/external/default/main?pagePK=64165259&theSitePK=477894&piPK=64165421&menuPK=64166093&entityID=000178830_9810191113027).

<sup>4</sup> Peter Hakim, “Two Ways to Go Global,” *Foreign Affairs* 81, no. 1 (January 1, 2002): 148, doi:10.2307/20033009.

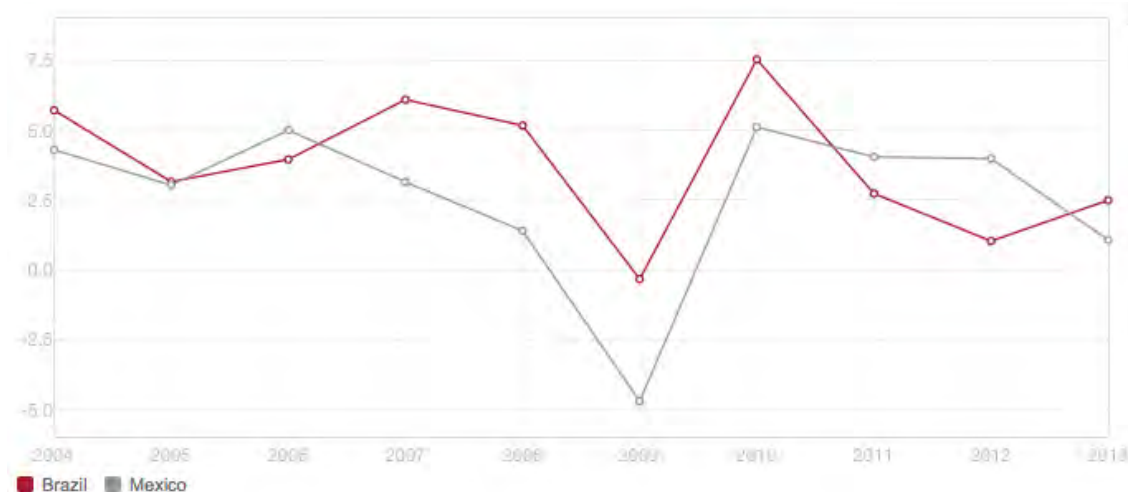


Figure 1. GDP Growth 2004–2013 (Annual Percentage).<sup>5</sup>

## B. IMPORTANCE

The importance of this thesis is two-fold. First and foremost, deindustrialization is a topic that receives little attention in the literature of Brazil and Mexico's economic growth performance, yet literature on deindustrialization confirms that if the process occurs prematurely, economic stagnation can occur. In hopes of spurring further research, this thesis offers the explanation that deindustrialization is a causal factor of economic stagnation in Brazil and Mexico. Second, this thesis offers a comparative perspective that may reveal trends in models of economic development that could prove useful to other developing nations. Understanding the different paths of Brazil and Mexico may reveal specific pitfalls that lead to deindustrialization, which developing nations could avoid.

## C. PROBLEMS AND HYPOTHESES

The most prominent issue that the research question presents is determining whether premature deindustrialization is affecting the economies of both Brazil and Mexico. If each state is experiencing the phenomenon, then determining the extent of

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<sup>5</sup> Chart from The World Bank, *World Development Indicators 2014* (Brazil and Mexico GDP Growth 2004–2013), accessed August 3, 2014, <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG/countries/BR-MX?display=graph>.

each case is also a challenge due to the different styles of neoliberal reform. Finding similarities in the distinctive paths along with highlighting problem areas is useful in explaining possible causes of economic stagnation and can also be viewed as valuable data that developing countries may use when planning for economic success.

There are three preliminary hypotheses that can be derived from the research question. The first hypothesis is that Mexico and Brazil are both experiencing deindustrialization at a premature rate, which, in turn, is contributing to the economic stagnation of each country. If this is the case, then it is important to highlight the differences in each circumstance for comparative analysis. Seeking out dissimilarities in each case between standard circumstances of traditional deindustrialization and unique circumstances of an individual instance helps to clarify potential trends. Finding enough commonalities that would project a possible trend of similar causes of deindustrialization in both countries is improbable, as the two countries have taken different paths in terms of domestic policy, international policy, and trade agreements. Additionally, each country has vastly different characteristics in areas such as resources, export specialization, industrial make-up, and infrastructure. If the hypothesis is successfully argued that both Brazil and Mexico are experiencing premature deindustrialization, the likely outcome is that the cause, type, and extent of the phenomenon vary greatly. Proving this hypothesis would not only help to explain economic stagnation in each country, but would also provide useful information to developing countries in avoiding economic pitfalls.

Another possibility is that only one country is experiencing deindustrialization prematurely. If this is the case, then deindustrialization becomes less of a factor in explaining economic stagnation for the case studies, yet, the analysis of each state's path to neoliberal reforms becomes dominant in determining economic pitfalls and successes. If one state proves to have made better economic decisions throughout the reform process, piloting the country away from deindustrializing, then state actions become more apparent examples for developing countries to follow. The value of a comparative analysis in this sense becomes less focused on trends as it will simply become a case of analyzing opposing styles of reform.

The last hypothesis is that Mexico and Brazil are not encountering premature de-industrialization. Some scholars offer other reasons for economic stagnation, and do not acknowledge any occurrence of premature deindustrialization in Brazil or Mexico.<sup>6</sup> It is the goal of this thesis to disprove this hypothesis and show that both countries are encountering the phenomenon.

#### **D. METHODS AND SOURCES**

This thesis incorporates multiple methods of analysis; the research includes scholarly theories, government documents, and statistical trends from primary sources. Primarily, the thesis is a comparative analysis of contemporary political and economic circumstances in Brazil and Mexico. To accomplish the comparative analysis successfully, a case study of each state is included. The case studies consist of recent historical analysis concerning policies and trade agreements, and statistical analysis of economic trends. Additionally, an overview of causal theories of de-industrialization is necessary in order to frame the analytical argument for each state. The causal theories of de-industrialization are applied to each case study in order to illustrate and highlight any contributory factors of deindustrialization within each country. If theoretical application is successful in each case, the comparative analysis between the two countries will provide further details in areas of similarity and disparity along their paths of economic development. Looking at the two paths in order to determine pitfalls that each country incurred is a valuable asset that can assist other developing countries in avoiding similar circumstances.

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<sup>6</sup> Pedro Luiz Barros Silva, José Carlos de Souza Braga, and Vera Lúcia Cabral Costa, “Lula’s Administration at a Crossroads: The Difficult Combination of Stability and Development in Brazil.” In *Leftist Governments Latin America Successes and Shortcomings*, ed Kurt Weyland, Raúl L. Madrid, and Wendy Hunter (Cambridge: Cambridge University Press, 2010) 124–140; Rhys Jenkins and Alexandre de Freitas Barbosa, “Fear for Manufacturing? China and the Future of Industry in Brazil and Latin America,” *The China Quarterly* 209 (29 March 2012): 59–81, doi:10.1017/S0305741011001482; Julio A. Santaella, *Economic Growth in Mexico: Searching For Clues to Its Slowdown* (Washington, DC: Inter-American Development Bank, 1998); Shannon K. O’Neil, “Six Markets to Watch: Mexico,” *Foreign Affairs* 93, no. 1 (2014): 11–16; and Albert Fishlow, *Starting Over: Brazil Since 1985* (Washington, DC: Brookings Institute Press, 2011).

## **E. THESIS OVERVIEW**

This thesis begins with an overview of the phenomenon of de-industrialization, to include a definition of the process and a survey of five theories of causal analysis. The five causal theories of deindustrialization include the following: 1) insufficient technology in the industrial sector 2) currency based problems in the economy 3) outsourcing of labor 4) North-South relationships 5) the resource curse, or “Dutch disease.” Finally, this first section concludes with addressing some of the dangers associated with premature de-industrialization. The next section addresses the situation that Brazil faces. The chapter begins with a short history of Brazil’s political and economic policies, and trade agreements since the opening of their economy to the global markets. This chapter also details causal factors in Brazil’s situation and describes the type of premature de-industrialization that the economy is encountering. The following chapter focuses on Mexico. Detail is given to the history, policies, and trade agreements of the Mexican government and economy, especially the NAFTA agreement and how it has affected the Mexican economy. This chapter also uses economic statistics, highlighting industry trends, GDP growth patterns, and currency trends, to assess Mexico’s economic situation as a disguised case of deindustrialization. The final chapter is a comparative analysis between the Brazilian and Mexican case studies in order to draw together the similarities and differences that the two countries exhibited throughout neo-liberal reforms. Deindustrialization in each state is also compared to determine whether the phenomenon could be a cause of the economic stagnation that Brazil and Mexico are experiencing and also to illustrate the various pitfalls that developing nations could possibly avoid. The final chapter also draws conclusions for the issue of premature deindustrialization in Brazil and Mexico and explores possible solutions for the phenomenon.

## **II. DEINDUSTRIALIZATION: DEFINITIONS AND THEORETICAL EXPLANATIONS**

### **A. INTRODUCTION**

Before analyzing the situations in Brazil and Mexico to determine whether premature deindustrialization could be a possible cause of economic stagnation, it is helpful to understand that deindustrialization does not always connote a negative economic scenario for a country. Furthermore, each case of deindustrialization is unique to the economy experiencing it. Analyzing some of the more common causal theories of deindustrialization will reveal that multiple factors can contribute to the process. To create a foundational knowledge of the phenomenon, this thesis begins with a short survey of deindustrialization that includes several definitions of the term, five theories of possible causes, and dangers associated with the premature occurrence of the process.

### **B. DEFINITIONS**

Many definitions of deindustrialization are available throughout the literature. W. F. Lever contributes four possible meanings to the word. The first definition Lever offers is simply a decline in employment or output of the manufacturing industry.<sup>7</sup> The second is a shift in a majority of total employment or total output from the manufacturing industry to the service industry.<sup>8</sup> While these first two theories both denote a decline in the manufacturing industry, the key difference between them is the shift toward the service industry. Although economic shift toward a service-based industry is typically seen as a sign of economic growth, Lever annotates that the relationship between the two industries in the second model is relative. In this scenario, manufacturing may actually continue to grow, albeit at a lesser rate than the service industry.<sup>9</sup> As a result, the total share of manufacturing employment or output relative to other industries is what declines. Alternatively, a decline in employment or output without a noted shift toward

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<sup>7</sup> W. F. Lever, "Deindustrialisation and the Reality of the Postindustrial City," *Urban Studies* 28, no. 6 (1991): 983, doi:10.1080/00420989120081161.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

the service industry (such as in the first model) could perhaps allude to temporary or cyclical economic recessions.<sup>10</sup> It is also worth noting that a drop in manufacturing industry employment does not necessarily mean output will also decline. Under certain circumstances, manufacturing output can actually increase while employment declines. Such an example is seen in industries where advancements in technology reduce the need for low skill labor while production numbers increase.

Lever's third definition has global connotations as deindustrialization is considered to be a decline of manufactured exports in a country's share of world trade.<sup>11</sup> The fourth definition can be considered an extension of the third in that the decline of manufactured exports leads to an inability to purchase imports that help sustain production, resulting in further breakdown of the manufacturing industry<sup>12</sup> Lever's multiple definitions provide an analytical explanation of the term deindustrialization while others provide a much more generalized explanation.

José Gabriel Palma's description combines aspects of Lever's first and second definitions. Palma defines deindustrialization simply as the point when employment numbers in the manufacturing industry start to decrease, and the service industry becomes the main source of employment.<sup>13</sup> For the purpose of this paper, Palma's explanation serves as the foundational explanation of deindustrialization. Lever's third and fourth definitions also provide an understanding of the concept and will assist in portraying the case studies of Brazil and Mexico in a global context.

## **1. Timing Is Everything**

The process of deindustrialization can sometimes be positive. When the timing is right for an economy to evolve into a service-based economy, deindustrialization can be considered a sign of economic achievement. Robert Rowthorn and Ramana Ramaswamy

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<sup>10</sup> W. F. Lever, "Deindustrialisation and the Reality of the Postindustrial City," 983.

<sup>11</sup> Ibid., 984.

<sup>12</sup> Ibid.

<sup>13</sup> Jose Gabriel Palma, "Four Sources of De-Industrialization and a New Concept of the Dutch Disease," in *Beyond Reforms, Structural Dynamics and Macroeconomic Vulnerability*, ed. Jose Antonio Ocampo (Washington, DC: World Bank Publications, 2005), 72.

describe the transition as the natural outcome of economic success, a sign that an economy has profitably reached a higher standard of living.<sup>14</sup> However, the authors also admit that deindustrialization can often be the result of trouble in the manufacturing industry, or be connected with widespread problems throughout the entire economy.<sup>15</sup> Dani Rodrik reveals that there are possible dangers if the process happens too early. If deindustrialization occurs at a time when an economy should be building wealth and continuing to grow through industrialization, then economic progress can deteriorate.<sup>16</sup> As a result, instead of following a path of economic growth toward convergence with advanced economies, a state may experience stagnation resulting in economic divergence from global leaders.<sup>17</sup> The emphasis of this thesis is on premature deindustrialization.

### C. CAUSAL THEORIES

Many scholars agree that economic liberalization in Latin America and the resulting effects of globalization broadly explain the phenomenon of deindustrialization in the region.<sup>18</sup> Economic openness and global competition created an environment in Latin America that proved difficult for keeping up with the manufacturing giants of East Asia.<sup>19</sup> A broad explanation of the process is helpful in recognizing that there is a problem, but looking at causal factors on a smaller scale is useful in understanding individual occurrences. Several theories presented throughout the literature offer varying causes of manufacturing decline in conjunction with economic openness and globalization. Certain aspects of theories are overlapping; it is possible that each case of deindustrialization may have more than one causal factor. Some of the theories can serve as a sole causal factor, while some have a multiplier effect on other theories. The

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<sup>14</sup> Robert Rowthorn and Ramana Ramaswamy, "Deindustrialization: Its Causes and Implications," *Economic Issues* 10 (1997): 5, <http://www.imf.org/external/pubs/ft/issues10/>.

<sup>15</sup> Ibid.

<sup>16</sup> Rodrik, "The Perils of Premature Deindustrialization," 3.

<sup>17</sup> Ibid.

<sup>18</sup> Juan Ariel Bogliaccini, "Trade Liberalization, Deindustrialization, and Inequality: Evidence from Middle-Income Latin American Countries," *Latin American Research Review* 48, no. 2 (2013): 83, doi:10.1353/lar.2013.0028; Rodrik, "The Perils of Premature Deindustrialization," 2.

<sup>19</sup> Rodrik, "The Perils of Premature Deindustrialization," 2.

remainder of this chapter explores five hypotheses that pose feasible root causes of the process, which are attributed to both internal and external factors.

## **1. Technology**

Palma offers the possibility that deindustrialization is related to advancements in technology. His position is that “rapid productivity growth in (at least some sectors of) manufacturing, brought about by the propagation of the new technological paradigm of microelectronics” has led to the overall decline of the manufacturing industry.<sup>20</sup> This theory assumes that advanced technology increases production in manufacturing and therefore reduces the need for manual labor; the result is less job availability in the manufacturing industry.

Rowthorn and Ramaswamy confirm that technology can create a situation of “asymptotic stagnancy” within an economy.<sup>21</sup> The authors extend the argument to explain that technologically progressive industries (specifically the manufacturing industry) will standardize and improve production, and thus increase growth rates with fewer workers. Meanwhile, less technologically progressive industries (like many in the service sector where productions rates cannot be standardized) experience slower growth rates and become technologically stagnant. The end result is that less technologically progressive industries determine the growth rate of the economy as a whole, creating an asymptotic stagnancy within the economy.<sup>22</sup> Theorists of this school of thought maintain that the lack of technological progress and the failure to diffuse technology within the industrial sector is what caused Latin America to fall behind.<sup>23</sup>

## **2. Currency**

A second endogenous theory of deindustrialization is that the process is a currency-driven phenomenon. Nicolás Magud and Sebastián Sosa reveal in their IMF

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<sup>20</sup> Palma, “Four Sources of De-Industrialization and a New Concept of the Dutch Disease,” 74.

<sup>21</sup> Rowthorn and Ramaswamy, “Deindustrialization: Its Causes and Implications,” 9.

<sup>22</sup> Ibid., 9–10.

<sup>23</sup> Marcio Cruz et al., *Structural Change and the Service Sector in Brazil*, (Universidade Federal do Paraná, Department of Economics, 2008): 5, <http://econpapers.repec.org/paper/fupwpaper/0075.htm>.

study that real exchange rates greatly affect economic growth. Many believe that an undervalued exchange rate promotes economic growth while an overvalued exchange rate obstructs growth, whereas some simply argue that any instability in the exchange rate slows economic growth.<sup>24</sup> Rowthorn and Ramaswamy add to the argument stating that large increases in exchange rates can actually cause a country to lose manufacturing jobs.<sup>25</sup> As the manufacturing sector deindustrializes, the service sector may be unable to support such an influx of labor supply. The resulting danger associated with such an occurrence is a decline in the growth of living standards within a country.<sup>26</sup>

The currency argument works better as a supporting theory of deindustrialization, than it does as a singular cause. We will see that each situation in the four other theories also lead to circumstances that affect currency in manners such as inflation, investment, credit availability, and exchange rate fluctuations. Of those, the real exchange rate is the most commonly affected as it is highly dependent upon domestic policy, trade agreements, and global market fluctuations. Although the currency argument is closely related to the other theories, it still serves as a distinct concept as it is specific to each country; therefore it remains a valid causal factor, although in a supportive nature.<sup>27</sup>

### **3. Outsourcing**

A third hypothesis for the source of deindustrialization is an exogenous cause. Palma refers to the new international division of labor and outsourcing as one of the better-known hypotheses for decreases in manufacturing within an economy.<sup>28</sup> In the old colonial division of labor, countries exported raw materials and imported finished goods; capitalism drives the new international division of labor as countries seek to drive down

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<sup>24</sup> Nicolas Magud and Sebastián Sosa, “When and Why Worry about Real Exchange-Rate Appreciation? The Missing Link between Dutch Disease and Growth,” (IMF Working Paper No. 10/271, December 1, 2010), 3, <https://www.imf.org/external/pubs/cat/longres.cfm?sk=24395.0>.

<sup>25</sup> Rowthorn and Ramaswamy, “Deindustrialization: Its Causes and Implications,” 5.

<sup>26</sup> Ibid.

<sup>27</sup> Magud and Sosa, “When and Why Worry about Real Exchange-Rate Appreciation?” 4.

<sup>28</sup> Palma, “Four Sources of De-Industrialization and a New Concept of the Dutch Disease,” 74.

export production costs and import more capital-intensive goods.<sup>29</sup> As James Petras describes the cycle, cheap labor-intensive manufacturing decreases in industrializing countries once less expensive alternatives to manufacturing are discovered.<sup>30</sup> As a result, cheaper imports increase and manufacturing demands within the country decrease.

#### **4. North-South Relationships and Regressive Specialization**

There is another external hypothetical cause for deindustrialization that overlaps with the outsourcing argument, and focuses on relationships with larger economies. In a North-South relationship, a wealthy more-developed country finds cost-efficient means of production through globalization and the use of a less-developed country's industry.<sup>31</sup> The relationship can lead to output growth in the "North" country and employment growth in the "South" country; however, some believe that the effects of North-South relationships lead to both deindustrialization and regressive specialization within an economy.<sup>32</sup> Christopher Kollmeyer explains that the expanse of globalization has increased trade connections between advanced and developing economies, which have contributed to deindustrialization.<sup>33</sup> Typically in this scenario, the country of greater affluence is the one that experiences the deindustrialization; however, some contend that North-South relationships can create excessive specialization in the less-developed member of the relationship.<sup>34</sup> The regressive specialization in such circumstances, especially in natural resource diverse economies, can also lead to deindustrialization.<sup>35</sup> Rowthorn and Ramaswamy also recognize North-South trade as a possible cause, but they consider the hypothesis to only account for a small portion of the advanced economy

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<sup>29</sup> James Petras, "A New International Division of Labor?," *MERIP Reports*, no. 94 (February 1, 1981): 28, doi:10.2307/3012258.

<sup>30</sup> Ibid.

<sup>31</sup> Christopher Kollmeyer, "Explaining Deindustrialization: How Affluence, Productivity Growth, and Globalization Diminish Manufacturing Employment," *American Journal of Sociology* 114, no. 6 (May 2009): 1649, doi:10.1086/597176

<sup>32</sup> Ibid., 1650.

<sup>33</sup> Ibid., 1662.

<sup>34</sup> André Cunha, et al. "Brazil in Face of Chinese Rise: The Risks of Regressive Specialization," *Austral: Brazilian Journal of Strategy and International Relations* 1, no. 2 (2012): 152, [http://americo.usal.es/iberoame/sites/default/files/da\\_silva\\_et\\_al\\_brasil\\_face\\_chinese\\_rise.pdf](http://americo.usal.es/iberoame/sites/default/files/da_silva_et_al_brasil_face_chinese_rise.pdf).

<sup>35</sup> André Cunha, et al. "Brazil in Face of Chinese Rise," 152.

cases that exhibit a decline in manufacturing employment, thus giving the hypothesis a limited role in deindustrialization trends.<sup>36</sup>

## 5. The Resource Curse

The final theory that provides a possible explanation for the source of deindustrialization is known as the “resource curse.” The process is also called “Dutch disease,” which is a term coined in the 1960s when the Netherlands experienced economic stagnation as a result of the discovery and production of oil in the North Sea.<sup>37</sup> The curse can be the result of the exploitation of one single resource (such as oil) or the result of many natural resource exports that collectively outperform manufactured exports.<sup>38</sup> Additionally, remittances have become another source of income in Latin America that has an effect similar to a resource curse. Rick Eyerdam contests that remittances weaken the incentive to increase local productivity in Latin American economies.<sup>39</sup>

As Luis Carlos Bresser-Pereira describes “Dutch disease,” the process occurs when a country exploits abundant natural resources so cheaply that it causes local currency exchange rate appreciation in the global market.<sup>40</sup> As a result, commodity exports increase and manufacturing exports decrease, leading to less competition, less production, and more job losses in the manufacturing industry. The phenomenon is damaging to growing economies as it slowly leads to deindustrialization. Eyerdam concurs that “Dutch disease” causes manufactured goods of a country to become less competitive in the international market, and if left unchecked, the situation results in an

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<sup>36</sup> Rowthorn and Ramaswamy, “Deindustrialization: Its Causes and Implications,” 8, 34.

<sup>37</sup> Luiz Carlos Bresser-Pereira, “The Value of the Exchange Rate and the Dutch Disease,” *Brazilian Journal of Political Economy* 33, no. 3 (September 2013): 379, <http://www.scielo.br/pdf/rep/v33n3/v33n3a01.pdf>.

<sup>38</sup> Ibid., 372–373.

<sup>39</sup> Rick Eyerdam, “The Tulip and the Steer,” *Florida Shipper* 33, no. 6 (February 11, 2008): 6, <http://libproxy.nps.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=29980441&site=ehost-live&scope=site>.

<sup>40</sup> Bresser-Pereira, “The Value of the Exchange Rate and the Dutch Disease,” 372.

increase of imports and decrease of exports; he adds that such situations will eventually lead to economic protectionism.<sup>41</sup>

#### **D. DANGERS**

Under ideal circumstances of economic development, deindustrialization is a welcomed phase that is required to achieve a higher level of economic affluence. Unfortunately, some developing countries encounter the process prematurely.<sup>42</sup> Some of the dangers that premature deindustrialization bring are overvalued exchange rates, high interest rates, an enlarged informal sector, greater spreads in levels of income inequality, and overall economic stagnation.<sup>43</sup> Negative effects such as these on a developing economy can result in economic decline and even divergence from other global economies.

#### **E. CONCLUSION**

This chapter has focused on defining the term deindustrialization, and developing the context of the phenomenon for the remainder of this thesis. The five causal theories are useful in applying the process to the two case studies of Brazil and Mexico in order to determine if each state is possibly experiencing deindustrialization at a premature rate. Understanding the relationships between the causal theories, and seeing where overlapping tendencies lie, helps to determine whether there are multiple causal factors present in each case study.

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<sup>41</sup> Eyerdam, "The Tulip and the Steer," 6.

<sup>42</sup> Rodrik states that Brazil (\$5,000 per capita), China (\$3,000 per capita), and India (\$2,000 per capita) are experiencing shrinking manufacturing industries at an early rate based on GDP per capita at the inception of deindustrialization. See Rodrik, "The Perils of Premature Deindustrialization," 2.

<sup>43</sup> Bogliaccini, "Trade Liberalization, Deindustrialization, and Inequality," 85; Rodrik, "The Perils of Premature Deindustrialization," 2.

### **III. BRAZIL'S RESOURCE CURSE**

#### **A. INTRODUCTION**

As the largest economy in Latin America, Brazil serves as a model of success for other developing nations in the region. Despite success, some believe that Brazil is encountering premature deindustrialization in the form of a resource curse. This chapter looks at political and economic policies that Brazil has demonstrated over recent years since neoliberal reforms to help explain the country's current situation. The five selected theories of deindustrialization are then applied to Brazil's economy in an effort to understand why some say the resource curse afflicts the regional power. Finally, a solution is offered that could assist Brazil's economic future and may provide pitfall-avoiding guidance for other developing nations in the region.

#### **B. BACKGROUND**

To understand why Brazil is encountering the resource curse and beginning to deindustrialize, it is helpful to examine past economic policies of the Brazilian government, beginning with the transition from protectionism and import-substitution industrialization (ISI) to neoliberal reforms and a market-based economic model. Import substitution, designed to help backward economies catch up to global competitors, worked better in Brazil than it did in most of Latin America; however, by the late 1980s, a financial crisis arose in the country that showed signs of ISI beginning to break down.<sup>44</sup> When President Fernando Collor took office in 1990, his answer to solve the financial crisis and stop hyperinflation was a turn to neoliberalism. Collor was only in office for two years before he was impeached, but during that time he was able to successfully create a new economic path for Brazil through the promotion of privatization and commercial liberalization.<sup>45</sup> The result was a deregulated economy open to global

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<sup>44</sup> Peter R. Kingstone, "Constitutional Reform and Macroeconomic Stability: Implications for Democratic Consolidation in Brazil," in *Markets and Democracy in Latin America*, ed. Philip Oxhorn and Pamela K. Starr (Boulder, CO: Lynne Rienner, 1999), 134–136.

<sup>45</sup> *Ibid.*, 134–140.

markets. Despite Collor's neoliberal progress, he was unable to stabilize the economy and inflation continued.<sup>46</sup>

## **1. The Plano Real**

In 1994, the former finance minister, Fernando Henrique Cardoso, came into office and implemented a new stabilization plan for Brazil, the Plano Real. The plan called for slowly introducing a new currency, the Brazilian real, in a tightly controlled manner as to not shock the economy. The transfer was successful, but Cardoso experienced difficulties as he tried to establish financial reforms to the constitution; the congress proved difficult to work with. The proportional representation system involved 18 different parties when Cardoso came to office. As a consequence of open list elections and large voting districts, the politicians seldom had any real ideological ties to their parties; instead, they valued patronage and clientalism.<sup>47</sup> As a result, it was difficult for Cardoso to earn a supporting two-thirds majority of the congress to push through any constitutional reforms.

The difficulty with congress did not allow for any long-term fiscal reforms initially, and the economy began to struggle. At first, Cardoso's plan had the real fixed to the U.S. dollar.<sup>48</sup> High interest rates and an overvalued exchange rate were the stabilizing properties of the plan. Increased privatization and high interest rates led to a dramatic increase in foreign inflow, while the overvaluation of the currency led to decreased inflation rates.<sup>49</sup> Low tariffs and stable prices drove up imports and a consumption boom ensued. The public overspent and economic growth slowed. The government did not take restrictive measures to ensure fiscal responsibility, or make any progress toward public finance reform. Over the next few years, the government continued to decrease taxes and increase expenditures with wasteful measures like increasing the minimum wage and

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<sup>46</sup> Kingstone, "Constitutional Reform and Macroeconomic Stability: Implications for Democratic Consolidation in Brazil," 134–138; Albert Fishlow, *Starting Over: Brazil Since 1985*, 39–41.

<sup>47</sup> Kingstone, "Constitutional Reform and Macroeconomic Stability: Implications for Democratic Consolidation in Brazil," 141.

<sup>48</sup> Fishlow, *Starting Over: Brazil Since 1985*, 44.

<sup>49</sup> Kingstone, "Constitutional Reform and Macroeconomic Stability: Implications for Democratic Consolidation in Brazil," 134; Fishlow, *Starting Over: Brazil Since 1985*, 45–46.

government pensions. Interest rates continued to rise, and slowly the nation slipped into a recession as capital reserve surpluses dwindled. The public went into significant debt in excess of 200 billion real.<sup>50</sup> In 1997, the International Monetary Fund agreed to a \$41.6 billion loan to Brazil, but the amount was insufficient for economic rescue.<sup>51</sup> The exchange rate of the real began to fall; it was evident that serious fiscal reforms were necessary.<sup>52</sup>

## **2. Macroeconomic Trinity**

In 1999, the government shifted the real to a floating exchange rate that relied upon market fluctuations in order to stabilize the currency and retain reserves. The change marked a new era of economic policy focusing on fiscal responsibility. Albert Fishlow writes that in addition to the new floating exchange rate, openness to foreign capital inflow and inflation targeting created a new “macroeconomic trinity.”<sup>53</sup> The congress, now more willing to work on financial reforms passed the Law of Fiscal Responsibility in 2000 as part of the previous loan agreement with the IMF. The law centered on reducing deficits and restricting future indebtedness through responsible fiscal measures. Over the next several years, the government increased taxes and exercised expenditure restraint in order to foster foreign trade while maintaining slow economic growth and a moderate surplus.<sup>54</sup>

Precursors of deindustrialization are seen throughout the Cardoso years. Sectors suffered horrible consequences of the massive import consumption phase. Low tariff rates on imports limited domestic prices. To adjust to the new demands, businesses had to modernize through the introduction of new technology. Many firms were forced to downsize and some went out of business.<sup>55</sup> From the evidence Philip Ueno provides, the

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<sup>50</sup> Kingstone, “Constitutional Reform and Macroeconomic Stability: Implications for Democratic Consolidation in Brazil,” 144; Fishlow, *Starting Over: Brazil Since 1985*, 44.

<sup>51</sup> Fishlow, *Starting Over: Brazil Since 1985*, 46.

<sup>52</sup> Kingstone, “Constitutional Reform and Macroeconomic Stability: Implications for Democratic Consolidation in Brazil,” 146–156; Fishlow, *Starting Over: Brazil Since 1985*, 43–47.

<sup>53</sup> Fishlow, *Starting Over: Brazil Since 1985*, 47.

<sup>54</sup> *Ibid.*, 47–48.

<sup>55</sup> Fishlow, *Starting Over: Brazil Since 1985*, 47–48.

percentage of GDP from industry sharply declined from 40 to 28 percent in 1994 when the Plano Real was introduced.<sup>56</sup> Industry stagnated for many years after. Concurrently, the service sector's percentage of GDP skyrocketed from 50 to 67 percent.<sup>57</sup> In addition to early signs of deindustrialization, the beginning signs of "Dutch disease" were evident in an increase of agriculture and mineral commodity exports over the same period of industrial stagnation.<sup>58</sup>

### **3. Growth Acceleration Program**

Little change in economic policy occurred under the Luiz Inácio Lula da Silva presidency; instead, the administration maintained the economic stability that Cardoso instituted while achieving modest economic growth.<sup>59</sup> Pedro Luiz Barros Silva, José Carlos de Souza Braga, and Vera Lúcia Cabral Costa suggest that while Brazil traveled along a path of "capital accumulation" brought on with the Cardoso reforms, the Lula administration focused more upon social reform and left the economic policies relatively unchecked.<sup>60</sup> While Lula's social programs like Bolsa Família achieved both success and popularity, the economic situation continued to shift away from manufacturing as demands for commodity exports increased. Although Silva, Braga, and Costa contest that deindustrialization is happening in Brazil, they admit to the increase in commodity production and claim the current economic path is unsustainable for future growth.<sup>61</sup> The authors label Brazil as "underdeveloped" and recommend socio-economic policy reforms in order to increase technology innovation, reduce foreign capital dependence, and build

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<sup>56</sup> Philip Ueno, "Can Dutch Disease Harm the Export Performance of Brazilian Industry?" (Conference Paper presented at the Druid Summer Conference 2010, Opening Up Innovation: Strategy, Organization and Technology, Imperial College London Business School, 2010): 18, <http://www2.druid.dk/conferences/viewpaper.php?id=501363&cf=43>.

<sup>57</sup> Ibid.

<sup>58</sup> Fishlow, *Starting Over: Brazil Since 1985*, 71.

<sup>59</sup> Silva, de Souza Braga, and Cabral Costa, "Lula's Administration at a Crossroads: The Difficult Combination of Stability and Development in Brazil," 125.

<sup>60</sup> Ibid., 124–139.

<sup>61</sup> Ibid., 138.

infrastructure.<sup>62</sup> A comparison of these authors' recommendations with others in the literature suggests that the country is encountering premature deindustrialization.

With the increasing shift toward commodity exports, the Lula administration realized the need for a plan that ensured continued economic growth for Brazil. In 2007, a multi-faceted plan called the Growth Acceleration Program (PAC) was introduced. Amidst the various components of the plan, a commitment of \$235 billion was dedicated to increasing infrastructure and industrial capabilities.<sup>63</sup> Among the things that have been hurting Brazil's economic activities, poor logistics due to dismal infrastructure is one of the front-runners. Rick Eyerdam reveals, "In the region, Brazil has the fourth most inefficient export and import system, just behind Bolivia, Colombia, and El Salvador."<sup>64</sup> Lula's plan included the construction of roads, airports, waterways, ports, railroads, and energy production facilities.<sup>65</sup>

#### **4. The Greater Brazil Plan**

The PAC plan continued on into the next administration in 2010. President Dilma Rousseff announced her updated plan in 2011. The Greater Brazil Plan continued what PAC started and also focused on supporting economic growth through foreign trade, innovation and technology, expanding markets, and continuing to improve infrastructure.<sup>66</sup> Despite efforts, economic growth has been relatively weak under Rousseff's administration. The increasing commodity prices have helped to curb the strong real exchange rate that deteriorated the economy in the late 1990s; however, as long as commodity export growth exceeds manufacturing export growth, the real will maintain a strongly overvalued exchange rate and deindustrialization will continue to

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<sup>62</sup> Silva, de Souza Braga, and Cabral Costa, "Lula's Administration at a Crossroads: The Difficult Combination of Stability and Development in Brazil," 136–137.

<sup>63</sup> Silva, de Souza Braga, and Cabral Costa, "Lula's Administration at a Crossroads: The Difficult Combination of Stability and Development in Brazil," 135; Fishlow, *Starting Over: Brazil Since 1985*, 75.

<sup>64</sup> Eyerdam, "The Tulip and the Steer," 74.

<sup>65</sup> Silva, de Souza Braga, and Cabral Costa, "Lula's Administration at a Crossroads: The Difficult Combination of Stability and Development in Brazil," 135; Eyerdam, "The Tulip and the Steer," 75.

<sup>66</sup> Brazilian Government, "Plano Brasil Maior: 2011/2014," (2011), <http://www.brasilmaior.mdic.gov.br/images/data/201205/ac36870491379be10d85230b0a3bf526.pdf>.

trouble Brazil's economy.<sup>67</sup> Furthermore, with the recent discovery of pre-salt oil fields, the plague of "Dutch disease" could fester as oil production is scheduled to increase in the coming years.<sup>68</sup>

### C. APPLYING THE FIVE THEORIES

Some believe that the problem that Brazil faces is that the country is beginning to show signs of deindustrialization at a premature stage in comparison to other states that have successfully encountered the process under normal circumstances of economic progress. Although the country has experienced economic growth in recent years, premature deindustrialization is still occurring. Brazil's most recent GDP per capita in 2013 was only \$14,750 U.S. dollars.<sup>69</sup> As a comparison, the average GDP per capita of all member countries in the Organization for Economic Co-operation and Development (OECD) was \$36,427 U.S. dollars in 2012.<sup>70</sup> Although Brazil is not a member of OECD, it stands to learn from the organization as many of the current members have undergone a successful transition of deindustrialization, which all occurred at much higher GDP rates than Brazil exhibits. Rodrik reveals that when countries like the U.S., Great Britain, Germany, and Sweden began to deindustrialize in the 1990s, their GDP per capita ranged between \$9,000 and \$11,000; in comparison, Brazil's per capita was only \$5,000 when the country began to deindustrialize (see Figure 2).<sup>71</sup> A multitude of factors contribute to Brazil's predicament, but many scholars concur that the resource curse could be the primary cause of premature deindustrialization in the country. Applying the five theories to Brazil's economic situation reveals that the "Dutch disease" is a logical explanation for Brazil's troubles.

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<sup>67</sup> Eugenio J. Alemán, "The Brazilian Exchange Rate Conundrum." (Wells Fargo Securities Economics Group Special Commentary, June 30, 2011), 7, [http://www.realclearmarkets.com/blog/BrazilianExchangeRate\\_06302011%5B1%5D.pdf](http://www.realclearmarkets.com/blog/BrazilianExchangeRate_06302011%5B1%5D.pdf).

<sup>68</sup> Ueno, "Can Dutch Disease Harm the Export Performance of Brazilian Industry?," 26.

<sup>69</sup> "2013 GDP Ranking."

<sup>70</sup> Gross Domestic Product (GDP), Organization for Economic Co-operation and Development, June 25, 2014, <http://www.oecd-ilibrary.org/content/indicator/dc2f7aec-en>.

<sup>71</sup> Rodrik, "The Perils of Premature Deindustrialization," 2.

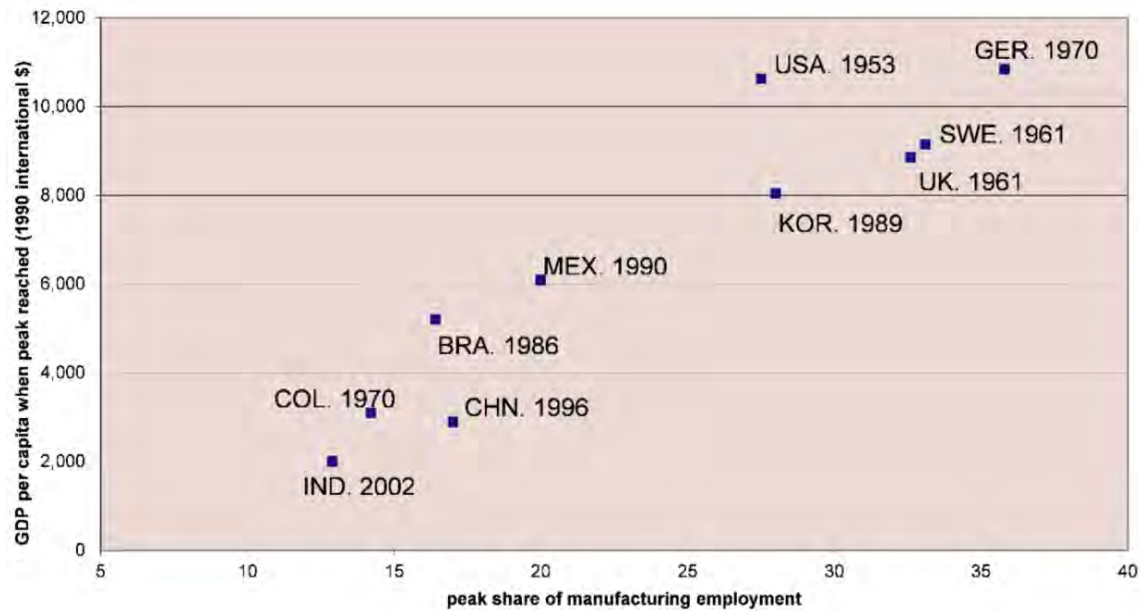


Figure 2. Peak Manufacturing Levels<sup>72</sup>

## 1. Technology

In Brazil's case, a few sectors such as the aviation and auto industries have experienced advancements in high-technology production, which in turn have led to job losses in manufacturing.<sup>73</sup> The issues that Brazil faces deal more with decreased manufacturing due to a lack of technology. These low-tech problems that plague Brazil's manufacturing industry stem from the difficulties incurred from Brazilian policy, outsourcing, and the technological advances of Brazil's competitors. According to research from the Department of Economics at the Federal University of Paraná, certain Brazilian policies profoundly affected industrial technological advancements within the country and therefore reduced market competitiveness.<sup>74</sup> Figure 3 depicts the growth of the service sector in comparison to the stagnation of advanced technology in Brazil. Adding to the argument, Pierre Salama writes that Brazil failed to market high-technology exports and therefore, lost out in global competition to countries such as

<sup>72</sup> Dani Rodrik, "On Premature Deindustrialization," *Dani Rodrik's Weblog: Unconventional Thoughts on Economic Development and Globalization*, October 11, 2013, [http://rodrik.typepad.com/dani\\_rodriks\\_weblog/2013/10/on-premature-deindustrialization.html](http://rodrik.typepad.com/dani_rodriks_weblog/2013/10/on-premature-deindustrialization.html).

<sup>73</sup> Fishlow, *Starting Over: Brazil Since 1985*, 70.

<sup>74</sup> Cruz et al., *Structural Change and the Service Sector in Brazil*, 6.

China that were able to sell similar products at a lower price.<sup>75</sup> While Brazil does face technology challenges, the internal deficiencies that exist within the economy stem from other internal and external causal factors; therefore, technology does not seem to be the primary cause of deindustrialization in Brazil.

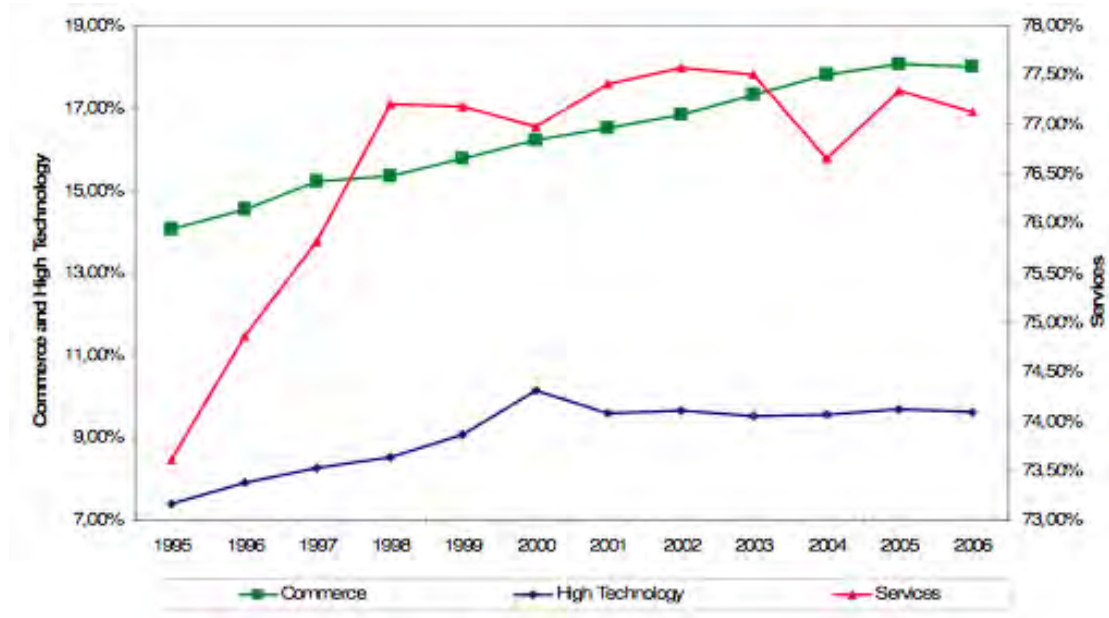


Figure 3. Participation of Subsectors in Employment in the Service Sector, Grouped by Technological Intensity (1995-2006).<sup>76</sup>

## 2. Currency

Brazil's Economic Outlook Report for the fourth quarter of 2011 directly attributed the process of deindustrialization to the rampant appreciation of the Brazilian real exchange rate.<sup>77</sup> According to the report, the strong real is reducing competition within the manufacturing sector, damaging trade, and forcing a reliance on foreign

<sup>75</sup> Pierre Salama, "China-Brasil: Industrialización Y Desindustrialización Temprana," *Revista Cuadernos de Economía* 31, no. 56 (2012): 241, <http://ideas.repec.org/a/col/000093/010033.html>.

<sup>76</sup> Figure from Cruz et al., *Structural Change and the Service Sector in Brazil*, 15. Authors elaborated data from RAIS-MTE.

<sup>77</sup> "Economic Outlook," *Brazil Commercial Banking Report*, no. 4 (Quarter 2011): 30, <http://libproxy.nps.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=65788898&site=ehost-live&scope=site>.

capital.<sup>78</sup> Another report details that the real appreciated in value by 36.2% between 2008 and 2011 creating a circumstance where foreign competitors were able to undercut domestic manufacturers in Brazil (see Figure 4).<sup>79</sup> When a country experiences a situation where competitors develop products in a more efficient manner, the effects can be seen in the undersold economy; exports in the manufacturing sector decrease while imports increase. Rowthorn and Ramaswamy attest that manufacturing jobs can decrease when an economy confronts large increases in exchange rates, such as Brazil encountered.<sup>80</sup> The case for currency-driven deindustrialization is a well-documented and convincing argument. It is highly likely that Brazil's currency dilemma has helped to create and continues to exacerbate the economic situation; however, it is difficult to pin it as a singular cause of the phenomenon. Currency appreciation is often dependent upon other driving factors, such as domestic policy, foreign trade agreements, and the global economy.

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<sup>78</sup> Ibid.

<sup>79</sup> "Brazil: Assessing the Impact of the Strong Real," *Emerging Markets Monitor* 17, no. 8 (May 23, 2011): 10.

<sup>80</sup> Rowthorn and Ramaswamy, "Deindustrialization: Its Causes and Implications," 5.



Figure 4. Brazilian Real Exchange Rate against U.S. Dollar 2008–2013.<sup>81</sup>

### 3. Outsourcing

James Petras looks at a new international division of labor and outsourcing as possible causes of manufacturing decline within an economy.<sup>82</sup> This theory is a legitimate possibility when considering the amount of trading that occurs between Brazil and China. Niu Haibin ascribes increased trade with China as the reason for a decrease in Brazilian manufacturing and exports. Haibin reveals that in 2010, the ratio of Brazilian companies importing from Brazil, compared to Brazilian companies exporting to China, was a staggering 10:1.<sup>83</sup> While the hypothesis of outsourcing undoubtedly has affected the production numbers of Brazilian manufacturing, it is difficult to view the phenomenon as the prime source of deindustrialization; instead, outsourcing appears to be only a part of the equation to help explain Brazil's situation. The rest of the equation includes trade relationships and a shift in primary exports, as seen in the next two theories.

<sup>81</sup> Chart from "Brazilian Real," *Trading Economics*, accessed August 7, 2014, <http://www.tradingeconomics.com/brazil/currency>.

<sup>82</sup> Petras, "A New International Division of Labor?," 28.

<sup>83</sup> Niu Haibin, "'Deindustrialization' and Sino-Brazilian Ties," *Contemporary International Relations* 23, no. 4 (2013): 23, [http://www.eastviewpress.com/Files/CIR\\_4\\_2013\\_Current.pdf](http://www.eastviewpress.com/Files/CIR_4_2013_Current.pdf).

#### **4. North-South Relationships**

João Augusto de Castro Neves and former Brazilian minister of finance, Luis Carlos Bresser-Pereira believe that the connection between China and Brazil has become a North-South relationship causing some to think that the imbalance is causing dramatic changes in the Brazilian economy that are leading to deindustrialization.<sup>84</sup> André Cunha, Marcos Lélis, Julimar Bichara, and Manuela de Lima are among those who believe the North-South relationship is one of the main sources of Brazil's economic trouble; they explain that the trade relationship between China and Brazil is leading to regressive specialization and over-exploitation of natural resources.<sup>85</sup> The concept of regressive specialization in this theory aligns with an outsourcing argument. The belief is that cheap Chinese imports are driving down the output of the Brazilian manufacturing industry, which then forces Brazil's focus to shift toward commodity-based exports. The theory is a double-edged sword; while Chinese outsourcing is damaging Brazil's manufacturing industry, the Asian superpower's high demand of natural resources is driving up the production of Brazilian commodity exports.<sup>86</sup> The theory of regressive specialization as the result of a North-South relationship with China seems like it may provide a more logical cause of deindustrialization in Brazil, but it is difficult to fault the nature of the relationship when the Brazilian government was responsible for the trade policies that have created the situation. It is possible that there may be more to regressive specialization than strictly a North-South relationship. Brazil's shift toward natural resource export dependency in this theory is a link to the last hypothesis that best explains deindustrialization in Brazil—"Dutch disease."

#### **5. The Resource Curse (Dutch Disease)**

"Dutch disease" incorporates both internal and external factors as it encompasses aspects of each of the previously listed theories. First, the process is directly linked to,

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<sup>84</sup> João Augusto de Castro Neves and Carlos Pereira, "Brazil and China: South-South Partnership or North-South Competition?" Foreign Policy Paper No. 26, The Brookings Institution, March 2011, 16, accessed June 30, 2014, <http://www.brookings.edu/research/papers/2011/04/03-brazil-china-pereira>.

<sup>85</sup> Cunha, et al. "Brazil in Face of Chinese Rise: The Risks of Regressive Specialization," 161.

<sup>86</sup> Ibid., 152–155.

and actually creates currency overvaluation. Second, the theory provides a better explanation for regressive specialization that occurs in Brazil. Third, the process creates an environment where low-tech industries cannot survive. Finally, the decline in the manufacturing industry results in outsourcing in order to produce products more cheaply. To be clear, each of the other theories can be contributing factors in other examples of deindustrialization that are not resource based; however, in the case of Brazil, “Dutch disease” is the most convincing explanation for a possible cause of premature deindustrialization.

*a. Brazil’s Disease*

In the case of Brazil, “Dutch disease” is the most convincing explanation of premature deindustrialization. In contrast to other countries that have experienced the resource curse due to the over production of one particular resource (typically oil) the Brazilian case is a little more difficult to diagnose because the phenomenon is spread across many different resources. Brazil is one of the world’s top producers and exporters of beef, chicken, coffee, soybeans, sugar, tobacco, orange juice, iron ore, and ethanol.<sup>87</sup> With so many commodities driving the exchange rate, it is difficult to recognize the traditional symptoms of the resource curse in Brazil and be able to link them to any one export. The resulting process occurs at a slower pace than it has in countries with strictly petroleum-caused “Dutch disease.”<sup>88</sup> Throughout the literature, scholars highlight subtle variances regarding the exact nature of the “Dutch disease” that Brazil is experiencing, but those differences are inconsequential in this paper.

Luis Carlos Bresser-Pereira and Nelson Marconi claim that the evidence of the disease’s presence in Brazil is apparent in the current exchange rate overvaluation, the

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<sup>87</sup> Claudia Baumgart and Péter Erdős, “The Effects of Commodity Dependence on the Brazilian Economy a Test of the Dutch Disease Hypothesis” (master’s thesis, Fundação Getúlio Vargas Escola de Administração de Empresas de São Paulo, 2012): 1, <http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/10795/Merged%20thesis%20including%20RESUMO%20FINAL.pdf?sequence=1>.

<sup>88</sup> Ueno, “Can Dutch Disease Harm the Export Performance of Brazilian Industry?” 25.

low wages in low-tech industry, and the rise of prices in commodity exports.<sup>89</sup> The authors also reveal that “Dutch disease” is affecting the high-technology sectors the most as it is those industries that should be leading the country in economic development, but are instead lagging behind. Looking at the breakdown of exports percentages between 1997 and 2008 explains the situation; they show that during that time period, exports of primary products (resource commodities) grew 366 percent while manufactured goods exports only increased 244 percent.<sup>90</sup> The difference equates to a 35 percent growth advantage of primary exports over manufactured exports. Looking at imports over the same timeframe, the difference is substantial, primary imports only increased 26 percent while manufactured goods increased 154 percent.<sup>91</sup> Figure 5 shows the shift in manufactured and primary exports from 2000–2010.

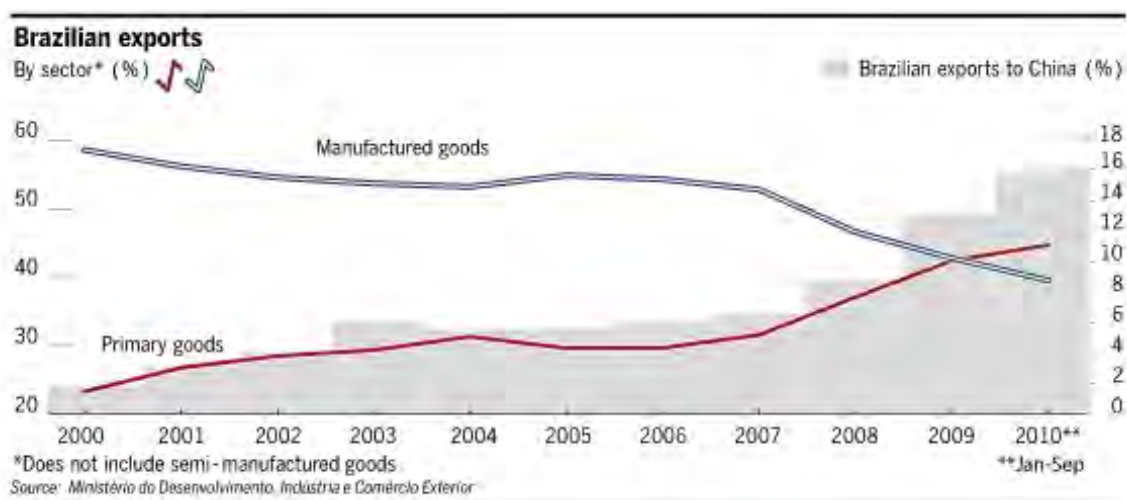


Figure 5. Shift in Brazilian Exports 2000–2010.<sup>92</sup>

Rick Eyerdam provides further insight; he breaks down Brazilian exports into three categories: basic products, semi-manufactured products, and manufactured

<sup>89</sup> Luiz Carlos Bresser-Pereira and Nelson Marconi, “Dutch Disease and De-Industrialization,” *Valor Econômico*, November 25, 2009, 1–2, [http://www.bresserpereira.org.br/Articles/2009/09.11.25.Dutch\\_disease\\_and\\_de-industrialization.pdf](http://www.bresserpereira.org.br/Articles/2009/09.11.25.Dutch_disease_and_de-industrialization.pdf).

<sup>90</sup> Ibid., 3.

<sup>91</sup> Ibid.

<sup>92</sup> Graphic from “Chart of the Week: Brazil’s Shifting Export Structure,” *Financial Times*, accessed August 7, 2014, <http://blogs.ft.com/beyond-brics/2010/11/01/chart-of-the-week/>.

products.<sup>93</sup> Basic products account for resource commodities, while semi-manufactured products are refined commodities such as iron and pulp. Manufactured products account for exports that the manufacturing industry produces. Looking at results from 2007, manufactured products accounted for \$84 billion in exports, an increase of 11.4 percent from the previous year. Basic products accounted for \$51.6 billion with a 27.6 percent increase over 2006.<sup>94</sup> Although the statistics only account for one year, the data are congruent with what Pereira and Marconi show from 1997–2008. The numbers display a significantly higher percentage of growth in the resource sector than in the manufacturing industry. Eyerdam also looks at overall exports to imports in the same year. In 2007, exports grew 16.6 percent above 2006 levels while imports increased 32 percent.<sup>95</sup> An increase in imports is due to the decrease in the manufacturing industry as Pereira and Marconi showed. The evidence not only supports existence of “Dutch disease” in Brazil, but also that deindustrialization is occurring. In figure 6, the decline in manufacturing is seen as a decrease in value added to GDP.

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<sup>93</sup> Eyerdam, “The Tulip and the Steer,” 8.

<sup>94</sup> Ibid.

<sup>95</sup> Ibid., 7–8.

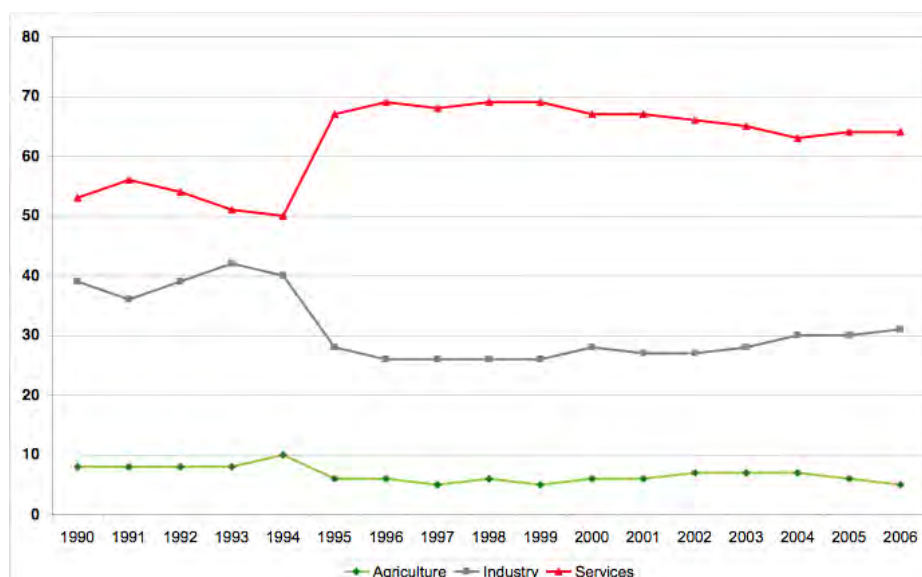


Figure 6. Percentage of value added to GDP 1990-2006.<sup>96</sup>

### ***b. Solutions***

Although it seems that the Brazilian government is aware of the dangers that exist with deindustrialization, the chosen courses of action are not altogether reassuring. The current policies in place are designed for economic growth, not for neutralizing “Dutch disease.” According to Bresser-Pereira, there are only two ways to neutralize the effects of the resource curse. The first way is for the government to establish complete control over the exchange rate, the way that China does; however, this solution is not applicable to floating exchange rates for obvious reasons. Brazil would have to shift back to a fixed exchange rate. The second solution is to tax the exports that cause the disease in an amount that is proportional to the overvaluation of the currency. This tax is compatible with a floating exchange rate, varies with market fluctuations, and would change from commodity to commodity. In the present case of Brazil, the tax should be between 20 and 25 percent of the commodity’s export costs in order to neutralize “Dutch disease.”<sup>97</sup>

<sup>96</sup> Chart from Ueno, “Can Dutch Disease Harm the Export Performance of Brazilian Industry?,” 18.

<sup>97</sup> Luiz Carlos Bresser-Pereira, “Exchange Rate War and Dutch Disease,” *Valor Econômico*, October 14, 2010, 2, [http://www.bresserpereira.org.br/Articles/2010/146.Guerra\\_cambial-doenca\\_holandesa-trad.pdf](http://www.bresserpereira.org.br/Articles/2010/146.Guerra_cambial-doenca_holandesa-trad.pdf); Bresser-Pereira, “The Value of the Exchange Rate and the Dutch Disease, 33, No. 3 (2013): 372, 382.

#### **D. CONCLUSION**

Based on the research conducted, the evidence is convincing that Brazil is indeed suffering from “Dutch disease,” which, in turn, is slowly causing the country to deindustrialize prematurely. After reviewing the possible endogenous and exogenous causes of deindustrialization in Brazil, the country does suffer from a lack of technology, overvalued currency, outsourcing, and regressive specialization; however, the real source of Brazil’s problems stem from a resource curse. A review of Brazil’s political history since neoliberal reforms shows how each administration tried to handle economic reform issues in order to sustain growth, but all efforts led directly to the present situation that the country now struggles with. The current administration has put forth efforts to ensure continued economic growth, but the only way that Brazil will truly succeed is to recognize the dangers of the current dilemma. Once the government acknowledges the presence of “Dutch disease,” the neutralization process can be applied to reverse the effects of deindustrialization and true economic growth can prevail. Developing states can learn many lessons from Brazil’s history of mismatched economic policies, current trade patterns, and trade agreements. How Brazil chooses to handle premature deindustrialization could determine its economic success, and those choices could also influence the decisions of other regional developing states.

## **IV. MEXICO'S DISGUISED DILEMMA**

### **A. INTRODUCTION**

Since the neoliberal reforms of the Mexican economy, the state has experienced a dissimilar path of economic development than Brazil. While some contend that Mexico's path has not led the country to experience premature deindustrialization, others maintain that Mexico is experiencing the phenomenon. The situation in Mexico however, is a different set of circumstances than what is seen in Brazil. To show that Mexico is prematurely experiencing a form of deindustrialization, it is helpful to examine the country's trajectory since neoliberal reforms. An analysis of political and economic policies of the past and a look at the effects of the North American Free Trade Agreement (NAFTA) assists in understanding Mexico's current situation. Finally, despite the different paths Mexico and Brazil took during neo-liberal reforms, applying the theories of de-industrialization to this case study reveal that the countries are experiencing similar hardships associated with the phenomenon.

### **B. BACKGROUND**

To better understand the situation, it is helpful to recognize the similar economic histories of Brazil and Mexico. Peter Hakim writes that the two states followed similar paths for 60 years; each country experienced high growth rates during the period of 1940–1980, followed by debt burdens, economic decline, and gradual recoveries.<sup>98</sup> After establishing neoliberal reforms that opened the economies to global markets, the countries followed different paths for continued growth. While Brazil took a limited approach to economic liberalization and exporting, Mexico made exporting and open trade the centerpiece of the economy.<sup>99</sup>

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<sup>98</sup> Hakim, "Two Ways to Go Global," 149.

<sup>99</sup> Ibid., 150.

## 1. From ISI to FDI

Prior to opening markets to the global economy, Mexico experienced about 40 years of economic success during a period known as the Mexican Miracle.<sup>100</sup> During this time, the Mexican government focused on substitution of imports and maintained sound economic policies. The import substitution industrialization period produced stable real gross domestic product growth rates in Mexico that averaged 6.3 percent throughout the 40-year phase from the 1940s to the early 1980s.<sup>101</sup> The policies in place during the Miracle also maintained low inflation rates and limited foreign dependency.<sup>102</sup> Government subsidies and incentive for industries within the domestic market effectively generated steady growth. An oil boom in the 1970s and early 1980s helped add to the success; however, as oil production increased, the economy relied heavily upon oil revenues. Poor fiscal mismanagement in the 1970s during the Escheveria administration created a fiscal deficit in the balance of accounts. As oil profits continued, domestic borrowing also went up and the deficit increased. Inflation of the Mexican peso skyrocketed, causing the government to implement harsh economic reforms that further damaged the economy.<sup>103</sup>

In 1982, the Mexican Miracle came to an end, as the import substitution policies in place could not sustain government expenditures or continued growth of the economy. Norio Usui makes the point that the revenues from the oil boom of the 1970s and 1980s had created signs of “Dutch disease” in Mexican economy.<sup>104</sup> Instead of putting oil revenues toward strengthening other industrial exports, the government reinvested windfalls back into the state owned oil company, PEMEX, to build up the infrastructure

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<sup>100</sup> Santaella, *Economic Growth in Mexico: Searching for Clues to Its Slowdown*, 3, <http://www.iadb.org/regions/re2/santafin.pdf>.

<sup>101</sup> Ibid., 4.

<sup>102</sup> Enrique Cardenas, “Historical Roots of Contemporary Economic Development in Mexico,” in *Development in the Age of Liberalization: Egypt and Mexico*, ed. Dan Tschirgi (Cairo: The American University in Cairo Press, 1996), 32.

<sup>103</sup> Ibid., 32–36.

<sup>104</sup> Norio Usui, “Dutch Disease and Policy Adjustments to the Oil Boom: A Comparative Study of Indonesia and Mexico,” *Resources Policy* 23, no. 2 (1997): 151, <http://www.sciencedirect.com/science/article/pii/S0301420797000238>.

of the oil industry. The sudden increase in GDP also led to excessive foreign borrowing, which helped contribute to the macroeconomic mismanagement and the encounter with “Dutch disease.”<sup>105</sup> The ensuing economic slowdown of the early 1980s that Mexico experienced showed the telltale signs of the resource curse. To recover from the 1982 debt crisis, Ebrima Faal conveys that Mexico established economic and structural reforms to include tax system reforms, trade liberalization, privatization of enterprises, and currency exchange rate reforms.<sup>106</sup> With the election of Miguel de la Madrid in 1982, new structural reforms opened the markets to the private sector to increase capital and technology, entice foreign investment, and eliminate regulations that stifled competition.<sup>107</sup> The trade reforms removed restrictions on foreign trade and Mexico became a member of the General Agreement on Tariffs and Trade/ World Trade Organization (GATT/WTO) in 1986.<sup>108</sup> Reforms introduced with the Pacto de Solidaridad Económica in 1986, sought to halt inflation with fiscal policies such as privatization of publicly owned enterprises, and increasing cuts to government spending.<sup>109</sup> Francisco Gonzalez points out that the Salinas presidency in the early 1990s attempted to further combat inflation by fixing the peso to the U.S. dollar, a weak macro-economic policy effort to stabilize inflation rates.<sup>110</sup> The Salinas administration was able to lower the inflation rate to 6.4 percent, a vast improvement over the 1987 rate of 187.8

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<sup>105</sup> Usui, “Dutch Disease and Policy Adjustments to the Oil Boom: A Comparative Study of Indonesia and Mexico,” 160.

<sup>106</sup> Ebrima Faal, “GDP Growth, Potential Output, and Output Gaps in Mexico” (IMF Working Paper No. WP/05/93, May 2005): 4, <http://www.imf.org/external/pubs/ft/wp/2005/wp0593.pdf>.

<sup>107</sup> U.S. Library of Congress, Congressional Research Service, *Mexico’s Political History: From Revolution to Alternation, 1910-2006*, by K. Larry Storrs, CRS Report RS22368 (Washington, DC: Office of Congressional Information and Publishing, January 26, 2006).

<sup>108</sup> Faal, “GDP Growth, Potential Output, and Output Gaps in Mexico,” 10.

<sup>109</sup> Geoffrey J. Bannister, “The Economic Context of the Mexican Crisis,” *Latin American Business Review* 1, no. 1 (March 2000): 30, <http://libproxy.nps.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=27926642&site=ehost-live&scope=site>.

<sup>110</sup> Francisco E. González, “Mexico: Emerging Economy Kept on a Leash by Mismatched Monopolies,” in *Handbook of Emerging Economies*, ed. Robert E. Looney (New York: Routledge, 2014), 291.

percent; however, despite the reforms, real GDP growth did not return to the levels seen during the Miracle years.<sup>111</sup>

In January of 1994, Mexico further liberalized the economy and joined together with the U.S. and Canada in the North American Free Trade Agreement, marking a distinctive shift in economic trajectory that has, since then, defined Mexico's economy.<sup>112</sup> That same year, however, Mexico faced more financial and political issues. Concurrently, the peso was pegged to the U.S. dollar, which resulted in it being extremely overvalued and led to a severe increase in Mexico's current account deficits. In an attempt to get the growing debt under control, the government was forced to devalue the peso.<sup>113</sup> The Mexican government was out of money and had no choice but to shift to a floating exchange rate; the economy plunged into a deep recession as the inflation rate soared once again (see Figure 7).<sup>114</sup> In addition to the financial crisis of 1994, which later became known as the Tequila Crisis, a great amount of political turmoil erupted. The assassination of presidential candidate Luis Donaldo Colosio, corruption in the 1994 presidential elections, and an armed Zapatistas rebellion in Chiapas (which coincided with the January First NAFTA enactment) all helped to create a high level of uncertainty for foreign investors.<sup>115</sup> The result was a reduction in foreign investments and a sharp decline in foreign reserves. As Joseph Whitt describes the shock, "almost overnight, Mexico lost its reputation for maintaining a stable exchange rate and sound financial

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<sup>111</sup> Congressional Budget Office, "The Effects of NAFTA on US-Mexican Trade and GDP" (The Congress of the United States, May 2003): 2, <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/42xx/doc4247/report.pdf>.

<sup>112</sup> González, "Mexico: Emerging Economy Kept on a Leash by Mismatched Monopolies," 291.

<sup>113</sup> Joseph A. Whitt Jr., "The Mexican Peso Crisis," *Economic Review* 81, no.1 (1996): 14, [http://www.frbatlanta.org/pubs/economicreview/econ\\_review-vol\\_81\\_no\\_1-index.cfm](http://www.frbatlanta.org/pubs/economicreview/econ_review-vol_81_no_1-index.cfm).

<sup>114</sup> U.S. Library of Congress, Congressional Research Service, *U.S.-Mexico Economic Relations: Trends, Issues, and Implications*, by M. Angeles Villarreal, CRS Report RL32934 (Washington, DC: Office of Congressional Information and Publishing, July 1, 2014): 13.

<sup>115</sup> González, "Mexico: Emerging Economy Kept on a Leash by Mismatched Monopolies," 291; Congressional Budget Office, "The Effects of NAFTA on US-Mexican Trade and GDP," 14; Bradford De Long, Christopher De Long, and Sherman Robinson, "The Case for Mexico's Rescue," *Foreign Affairs* 75, no. 3 (June 5, 1996): 11, <http://www.foreignaffairs.com/articles/52034/bradford-delong-christopher-delong-and-sherman-robinson/the-case-for-mexicos-rescue-the-peso-package-looks-even-b>.

policies.”<sup>116</sup> To halt the economic decline, Mexico accepted a \$50 billion bailout from the United States.

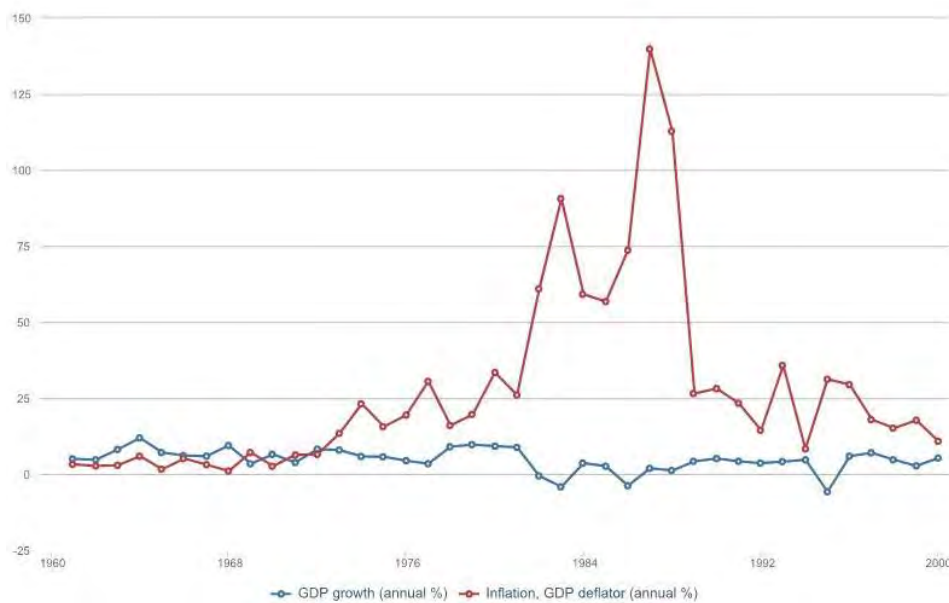


Figure 7. GDP Growth and Currency Inflation, 1960–2000.<sup>117</sup>

## 2. NAFTA

The NAFTA union between Mexico, the United States, and Canada went into effect January 1, 1994; but the origins of the arrangement stem from various framework agreements throughout the late 1980s and early 1990s.<sup>118</sup> The purpose of the agreement was to gradually eliminate tariffs between the three members over a 15-year period and to reduce nontariff barriers such as import licenses and Mexico’s restrictive auto decree.<sup>119</sup> Some tariffs were eliminated immediately while others were slowly phased-out allowing

<sup>116</sup> Whitt Jr., “The Mexican Peso Crisis,” 14.

<sup>117</sup> Chart from The World Bank, *World Development Indicators 2014* (Mexico: GDP Growth and Inflation), accessed May 29, 2014, <http://databank.worldbank.org/data/views/reports/chart.aspx>.

<sup>118</sup> M. Ayhan Kose, Guy M. Meredith, and Christopher M. Towe, “How Has NAFTA Affected the Mexican Economy? Review and Evidence.” (IMF Working Paper number WP/04/59, April 2004): 6, <http://www.imf.org/external/pubs/ft/wp/2004/wp0459.pdf>.

<sup>119</sup> U.S. Library of Congress, Congressional Research Service, *NAFTA at 20: Overview and Trade Effects*, by M. Angeles Villarreal and Ian F. Fergusson, CRS Report R42965 (Washington, DC: Office of Congressional Information and Publishing, February 21, 2013): 5–6.

for a gradual increase in trade activity between members. The liberalizing trade agreements that were created in the late 1980s between Mexico and the U.S. shaped a trade relationship where 50 percent of Mexican exports were already entering the U.S. market at the time NAFTA went into effect. Bradford DeLong, Christopher DeLong, and Sherman Robinson argue that because of preexisting trade agreements, NAFTA “did not greatly expand Mexico’s access to the U.S. market.”<sup>120</sup> Despite the lack of expansion, M. Ayhan Kose, Guy M. Meredith, and Christopher M. Towe contend that of the three countries, Mexico still had a considerable advantage in the agreement as U.S. imports from Mexico increased 35 percent between 1993 and 2001.<sup>121</sup> The authors also assert that future stability of the Mexican government benefitted from NAFTA because “the agreement formally linked Mexico’s domestic economic reform program to an international agreement and made it unlikely for future governments of Mexico to abandon it.”<sup>122</sup> Interestingly, DeLong et al. believe that had the Mexican government foreseen the 1994 financial crisis, “the case for NAFTA would have been stronger, not weaker” as Mexico’s access to the U.S. market would have provided greater reassurance for foreign investors.<sup>123</sup>

The literature maintains that neoliberal reforms, including entering into NAFTA, reshaped the Mexican Economy towards an export led model of development and assisted in rescuing the state from the financial disaster of 1994. Aside from the initial advantages that Mexico gained, NAFTA continued to benefit the Mexican economy; but overall, scholars agree that the results could have been better. M. Angeles Villarreal and Ian F. Fergusson describe the effects of NAFTA to be “positive but modest” when referring to a World Bank study.<sup>124</sup> The study assessed that NAFTA caused Mexico to

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<sup>120</sup> DeLong, DeLong, and Robinson, “The Case for Mexico’s Rescue,” 9.

<sup>121</sup> Kose, Meredith, and Towe, “How Has NAFTA Affected the Mexican Economy? Review and Evidence,” 8.

<sup>122</sup> Ibid., 7.

<sup>123</sup> DeLong, DeLong, and Robinson, “The Case for Mexico’s Rescue,” 10.

<sup>124</sup> Villarreal and Fergusson, *NAFTA at 20: Overview and Trade Effects*, 15; Daniel Lederman, William Francis Maloney, and Luis Servén, *Lessons from NAFTA: For Latin American and the Caribbean* (The World Bank, Washington DC: Stanford University Press, 2005), <http://siteresources.worldbank.org/DEC/Resources/BookNAFTAWorldBank.pdf>.

converge with U.S. and Canada development levels, specifically accrediting some of the success to Mexican manufacturers adapting to U.S. industrial technology advancements. In addition to progressive moves in manufacturing, foreign direct investment flows to Mexico increased dramatically as a result of improved access to U.S. markets that NAFTA facilitated.<sup>125</sup> Kose et al. highlight that Mexican GDP also improved after the agreement, rising to an average annual rate of four percent between 1996 and 2002.<sup>126</sup> Figure 8 shows the dramatic increase in GDP from Mexican imports and exports in comparison with other Latin American countries. The statistics are convincing, but there is another side to the NAFTA argument.

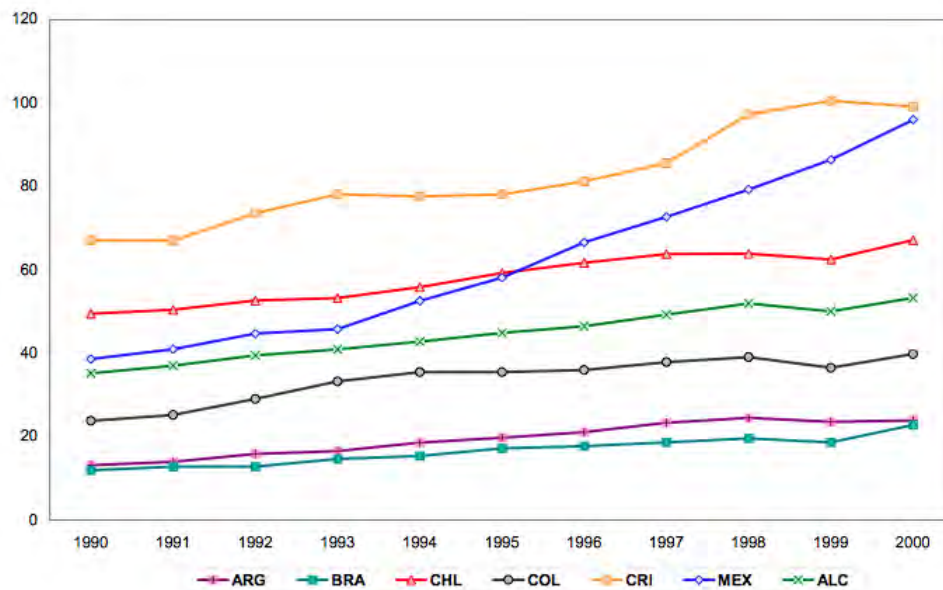


Figure 8. Latin American Imports plus Exports over GDP.<sup>127</sup>

<sup>125</sup> Kose, Meredith, and Towe, Christopher M., "How Has NAFTA Affected the Mexican Economy? Review and Evidenc.," 16.

<sup>126</sup> Ibid., 25.

<sup>127</sup> Chart from Lederman, Maloney, and Servén, *Lessons from NAFTA: For Latin American and the Caribbean*, 11.

### 3. The Wage Gap

The other side of the NAFTA argument contends that the wage gap remained a problem under NAFTA even though advancements in trade liberalization increased FDI (with added access to U.S. markets), induced economic convergence (as the result of adapting to technology), and increased GDP (while Mexico restructured to an export led economy). Gerardo Esquivel and José Antonio Rodríguez-López use wage inequality between skilled and unskilled laborers as an economic indicator to make their point that NAFTA failed in closing the wage gap. The authors admit that a large increase in trade activity, like what Mexico experienced with NAFTA, creates an expectation for a decrease in wage inequality, but that decrease was never seen.<sup>128</sup> Their argument reveals that the technological changes brought about through NAFTA are actually responsible for an increase in demand of high skilled workers, thus creating an expansion of the wage gap.<sup>129</sup> Despite the advances in the manufacturing industry, NAFTA did not have positive effects on the wage gap due to the large amount of unskilled laborers in Mexico.

#### Maquiladoras

Raúl Delgado-Wise and Humberto Márquez Covarrubias extend the wage gap argument, focusing on the increased use of cheap labor since the inception of NAFTA. The authors pose an argument that instead of a traditional export-led growth model, Mexico is actually caught up in what they term a “labor export-led model.”<sup>130</sup> Centering the model on three mechanisms—the maquiladora industry, disguised maquiladoras, and labor migration—the authors contend that NAFTA created an environment in which U.S. corporations increased the exploitation of cheap Mexican labor through the maquiladora industry.<sup>131</sup>

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<sup>128</sup> Gerardo Esquivel and José Antonio Rodríguez-López, “Technology, Trade, and Wage Inequality in Mexico Before and After NAFTA,” *Journal of Development Economics* 72, no. 2 (2003): 545, doi:10.1016/S0304-3878(03)00119-6.

<sup>129</sup> Ibid., 562–563.

<sup>130</sup> Raul Delgado-Wise and Humberto Márquez Covarrubias, “The Reshaping of Mexican Labor Exports under NAFTA: Paradoxes and Challenges,” *International Migration Review* 41, no. 3 (Fall 2007): 657, DOI: 10.1111/j.1747-7379.2007.00089.x.

<sup>131</sup> Ibid.

The maquiladora industry developed from the Border Industrialization Program when the Mexican government sought to provide jobs in the neglected northern regions after the Bracero Program ended in the 1960s (see figure 9).<sup>132</sup> The concept of a maquila allows foreign investors to capitalize on cheap labor in a tax free zone, while in return, supply an employment source for an area with a large population of unskilled laborers. The design was meant to be a win-win scenario for both Mexico and the United States, but the corporations undoubtedly ended up with the better hand. A quote from the website of the Made in Mexico Inc. company does not even attempt to mask the true purpose of a maquiladora:

Maquiladora: (mäkelädo'ra ) n. Synonymous with Mexico manufacturing, Maquiladoras are Mexican assembly plants that manufacture finished goods for export. Maquiladoras are generally owned by non-Mexican corporations that take advantage of low-cost Mexican labor, advantageous tariff regulations, and close proximity to U.S markets. Maquiladoras are one of Mexico (sic) primary sources of foreign exchange.<sup>133</sup>



Figure 9. Maquiladora Locations and Production in Billions (Pesos, 2003).<sup>134</sup>

<sup>132</sup> James Cypher M. and Raul Delgado-Wise, *Mexico's Economic Dilemma: The Developmental Failure of Neoliberalism* (New York: Rowman & Littlefield, 2010), 79.

<sup>133</sup> "Maquiladora Services" *Made In Mexico*, accessed June 18, 2014, <http://www.madeinmexicoinc.com/maquiladora-services/>.

<sup>134</sup> Graphic from "The Impact of NAFTA on Urban Growth in Mexico," *Geo-Mexico, the Geography and Dynamics of Modern Mexico*, June 19, 2010, <http://geo-mexico.com/?p=1617>.

International corporations largely control the production of exports from maquiladoras, which simply serve as assembly facilities. The parent companies import all the machines, technology, equipment, and products used to manufacture the exported goods.<sup>135</sup> After assembly in a tax free zone, the products are then exported back to the same country, usually the United States. This process allows for the parent company to keep import costs to around 80–90 percent of the product’s export value, leaving the workers’ wages as the main source of increased value that is integrated back into the domestic economy.<sup>136</sup> The secluded production trend reduces the need of national manufactured goods for assembly of the final product and forces local companies in the national manufacturing industry to go out of business. As a result, the rate of imported manufactured items increases to make up for the loss of nationally produced products that are no longer available in the domestic market. In sum, this phenomenon of the maquiladora industry imports a high percentage of productive process inputs, makes Mexican labor the largest portion of the manufacturing industry’s value added to the GDP, and has closed the doors of at least 40 productive chains in the national manufacturing industry; for these reasons, Delgado-Wise and Márquez contend that Mexico is de-industrializing.<sup>137</sup>

Another critic of Mexico’s labor-export model is James M. Cypher, who agrees that instead of helping the backwards economy recover, NAFTA actually created the burdensome low-wage export strategy that has limited employment growth and constrained the markets.<sup>138</sup> Although the manufacturing industry (technically the maquiladora industry) has been on the rise in Mexico over recent years, and accounts for a large majority of the country’s exports, Cypher also makes the argument that Mexico has actually de-industrialized under NAFTA.<sup>139</sup> After the 1993 agreement, the amount of

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<sup>135</sup> Delgado-Wise and Márquez Covarrubias, “The Reshaping of Mexican Labor Exports under NAFTA: Paradoxes and Challenges,” 660.

<sup>136</sup> Ibid., 662.

<sup>137</sup> Ibid., 663.

<sup>138</sup> James Cypher M., “Mexico Since NAFTA: Elite Delusions and the Reality of Decline,” *New Labor Forum* 20, no. 3 (Fall 2011): 62, doi:10.4179/NLF.203.0000009.

<sup>139</sup> Ibid.

maquiladoras increased along with the levels of maquila employment, production, and exports resulting in foreign firms accounting for 80 percent of Mexico's total exports.<sup>140</sup> Cypher refines the argument, linking the decline in national manufacturing and raise in maquiladoras with wage trends in both industries. Under NAFTA, Maquila wages increased three percent while real manufacturing wages declined 12 percent; the net result is that Mexico experienced a decline in GDP per capita between 1980 and 2005, despite the increased production of exports.<sup>141</sup> This rationale, combined with the reduction of national manufacturing facilities, and the decline of manufacturing contributions to GDP, provides convincing evidence of deindustrialization in Mexico.

In 2006, the Mexican government incorporated what Cypher calls “disguised maquilas” (corporations that operate outside of the maquiladora regime but are still highly dependent on exports, such as the auto and electronics industries) and maquilas under one category known as the Manufacturing, Maquiladora and Export Services Industry (IMMEX).<sup>142</sup> In 2008, the IMMEX firms were responsible for 76 percent of Mexico's product, and in 2007, 90 percent of IMMEX products were exports delivered to the United States.<sup>143</sup> Looking at Figure 10, it is clear that manufactured exports skyrocketed with the signing of NAFTA, yet the level of manufactured imports has remained above the level of exports. One explanation could be the increased amount of imports needed to make up for the decline in small-business national manufacturing; once local manufacturing businesses close, the maquiladora industry has to import products that were previously available on the domestic market. Additionally, the chart shows that while manufactured exports have continued to grow, the percentage of GDP that the manufacturing industry provides has slowly, yet steadily declined. The numbers confirm what Cypher, Delgado-Wise, and Márquez all agree upon; Mexico has become a cheap-labor export-led economy, and the national manufacturing industry is declining because of it.

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<sup>140</sup> Cypher M., “Mexico Since NAFTA: Elite Delusions and the Reality of Decline,” 62.

<sup>141</sup> Ibid.

<sup>142</sup> Cypher and Delgado-Wise, *Mexico's Economic Dilemma: The Developmental Failure of Neoliberalism*, 10.

<sup>143</sup> Ibid.

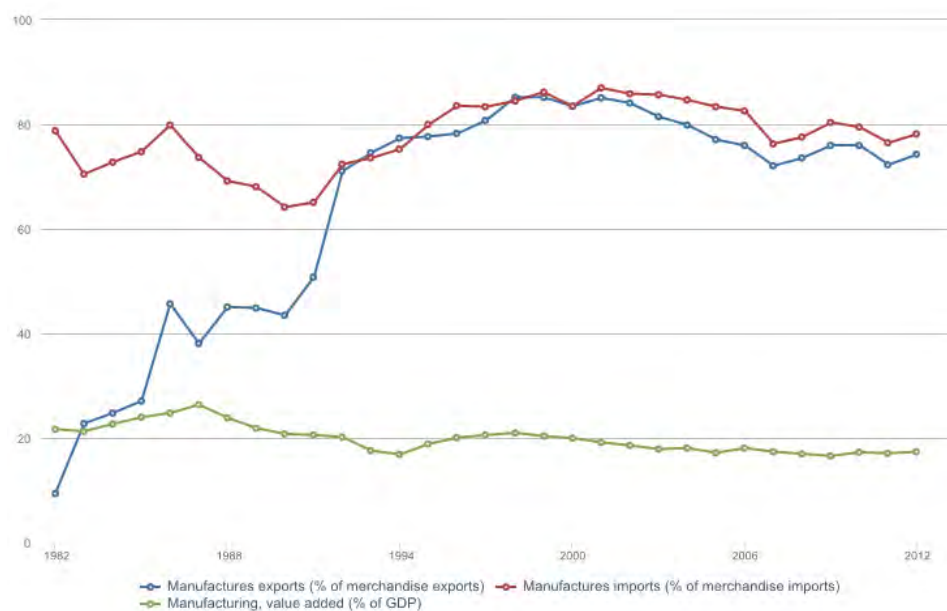


Figure 10. Mexico Manufacturing Imports and Exports vs. percentage of GDP.<sup>144</sup>

#### 4. The Resource Curse

Aside from the NAFTA affect, another perception of Mexico's economic stagnation is based on beliefs that Mexico was, in recent years, stuck in the oil trap. In Gabriel Farfán-Mares' view, despite Mexico's growth in manufacturing exports and successfully "de-petrolizing its export sector and national economy," the fiscal policy of the government was oil-supported for the last 40 years.<sup>145</sup> As a result, he writes that Mexico "is an oil-rentier state that, from a comparative standpoint, suffers from some of the maladies associated with the oil curse."<sup>146</sup> Unlike traditional cases of the resource curse, Farfán-Mares' argument does not assert that Mexico's oil curse affects the manufacturing industry; instead he claims that the problem is centered on political

<sup>144</sup> Chart from The World Bank, *World Development Indicators 2014* (Mexico: Manufacturing Exports, Manufacturing Imports, Manufacturing Value Added), accessed June 18, 2014, <http://databank.worldbank.org/data/views/reports/chart.aspx>.

<sup>145</sup> Gabriel Farfán-Mares, "Mexico's Curse" (Perspectives on the Americas: University of Miami Center for Hemispheric Policy Paper, December 10, 2010): 1–2, <http://umshare.miami.edu/web/wda/hemisphericpolicy/FarfánMares-MexicosCurse-FINAL.pdf>.

<sup>146</sup> *Ibid.*, 2.

spending habits, which directly affect public policy and the economy.<sup>147</sup> His suggestion is for the government to not rely on oil production windfalls, but instead, “take advantage of this development to transition to a more productive, efficient and modern economy that will be more responsive to, and make better use of, its citizens’ talents and capabilities.”<sup>148</sup> Such changes have recently occurred in Mexico; new reforms for the oil industry promise change for the state. The reforms will privatize much of PEMEX and reduce government dependency on the oil industry, creating new opportunities for foreign investment.<sup>149</sup> This change navigates the country away from what scholars in the late 1990s feared—that Mexico’s oil-induced resource curse would increase exchange rates, draw resources from tradable sectors, and result in diminished production in manufacturing.<sup>150</sup> Even though the manufacturing industry in Mexico has gone the route of *maquiladoras* (giving the appearance of success) Farfán-Mares argues that the oil-rentier mentality has taken a toll on Mexico, and the economy will continue to stagnate until better macro-economic policy is in place. It is too soon to determine what affect the new oil reforms will have, but if successful, Mexico’s government should be able to reduce its dependency on oil profits in the coming years.

## 5. Remittances

Another argument that the resource curse has affected the Mexican economy is found in the issue of remittances from Mexican workers in the United States (figure 11 shows Mexico’s remittances compared to all other Latin American countries). As Matur Rahman, Andrew Foshee, and Muhammad Mustafa explain the scenario, the remittances that Mexican workers in the U.S. send home to their families in Mexico end up strengthening the Mexican peso. As the peso appreciates, it hurts exports from Mexico

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<sup>147</sup> Farfán-Mares, “Mexico’s Curse,” 2–4.

<sup>148</sup> *Ibid.*, 5.

<sup>149</sup> “Mexico Approves Oil Sector Reforms,” *BBC News Business*, August 7, 2014. <http://www.bbc.com/news/business-28685504>.

<sup>150</sup> Usui, “Dutch Disease and Policy Adjustments to the Oil Boom: A Comparative Study of Indonesia and Mexico,” 151; Stephen Everhart and Robert Duval-Hernandez, “Management of Oil Windfalls in Mexico: Historical Experience and Policy Options for the Future” (Policy Research Working Paper 2592, The World Bank, Mexico Country Management Unit and International Finance Corporation Economics Department, April 2001): 6, <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-2592>.

and induces higher demand of non-traded goods (labor). In turn, the increase of non-tradable goods leads to further appreciation of the exchange rate and further reduction of export activity of tradable goods. The result is a phenomenon with similar characteristics to “Dutch disease.”<sup>151</sup> A study conducted for the Federal Reserve Bank of Atlanta confirms that increased inflow of remittances into a developing economy could lead to a decline in the manufacturing of tradable goods.<sup>152</sup> The report maintains the position that remittances can be good for a developing economy, but without proper exchange rate policies, the possibility of inducing “Dutch disease” is a legitimate threat.

Another report for the Federal Reserve Bank of Dallas agrees that remittances can be good for growing economies and reveals that the amount of remittances in Mexico are higher than any other developing country (see Table 1) and that remittance flows are the second largest source of external funding in developing countries after FDI.<sup>153</sup> When examining the percentages in Table 2, it is clear that developing countries in Central America heavily depend on remittances as a significant portion of GDP. For this reason, Mexico serves as an important role model for smaller developing states when it comes to handling remittances. Ensuring sound fiscal policy and establishing strict exchange rate guidelines are vital for avoiding the pitfalls of “Dutch disease” and it provides a good example for developing neighbor states.

Other areas of interest throughout the literature may assist in understanding Mexico’s current economic state but do not explain the entire story by themselves. Some think that Mexico’s economic growth problems do not stem from deindustrialization or any type of resource curse. Gordon Hanson does not believe the oil curse has hit Mexico, but instead highlights Mexico’s economic stagnation as stemming from other

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<sup>151</sup> Matiur Rahman, Andrew Foshee, and Muhammad Mustafa, “Remittances-Exchange Rate Nexus: The U.S.- Mexico Case,” *The Journal of Developing Areas* 47, no. 1 (Spring 2013): 64, doi:10.1353/jda.2013.0003.

<sup>152</sup> Pablo A. Acosta, Emmanuel K.K. Lartey, and Federico S. Mandelman, “Remittances and the Dutch Disease,” (working paper 2007-8, Federal Reserve Bank of Atlanta, April 2007): 1, <http://www.frbatlanta.org/filelegacydocs/wp0708.pdf>.

<sup>153</sup> Robert Coronado, “Workers’ Remittances to Mexico,” *El Paso Business Frontier*, no. 1 (2004): 3, <http://www.dallasfed.org/assets/documents/research/busfront/bus0401.pdf>.

problems.<sup>154</sup> Interestingly, three of the problem that Hanson's highlights (competition with Chinese exports, Mexico's informal workers, and lack of new technology) are all closely linked to the theoretical causes of deindustrialization previously mentioned in this thesis (Each theory in relation to Mexico is addressed later in this paper).

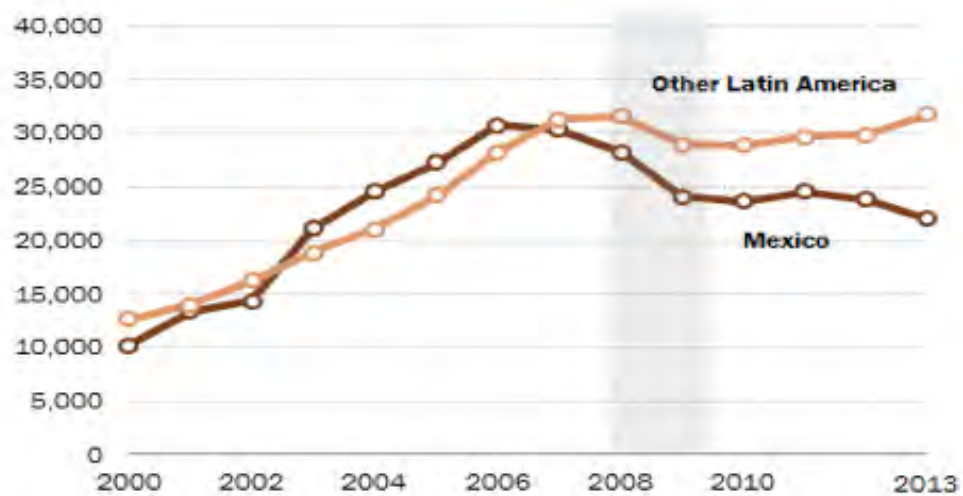


Figure 11. Total Remittances Received in Latin America and Mexico, 2000–2013 (millions, U.S. dollars). <sup>155</sup>

<sup>154</sup> Gordon H. Hanson, “Why Isn’t Mexico Rich?” (working paper, National Bureau of Economic Research, October 2010): 4, <http://www.nber.org/papers/w16470>.

<sup>155</sup> Chart from “Total Remittances Received in Latin America and Mexico, 2000-2013,” *Pew Research Center’s Hispanic Trends Project*, November 14, 2013, <http://www.pewhispanic.org/2013/11/15/remittances-to-latin-america-recover-but-not-to-mexico/ph-remittances-11-2013-1-01/>.

Table 1. Remittances Received 2013 estimates (millions, U.S. dollars).<sup>156</sup>

| <b>Country</b>     | <b>Total<br/>Remittances</b> |
|--------------------|------------------------------|
| Mexico             | 22,000                       |
| Guatemala          | 5,412                        |
| Colombia           | 4,642                        |
| El Salvador        | 4,217                        |
| Dominican Republic | 3,706                        |
| Honduras           | 3,165                        |
| Peru               | 3,012                        |
| Ecuador            | 2,571                        |
| Bolivia            | 1,260                        |
| Nicaragua          | 1,108                        |
| Paraguay           | 760                          |
| Argentina          | 613                          |
| Costa Rica         | 610                          |
| Panama             | 495                          |
| Venezuela          | 123                          |
| Uruguay            | 108                          |
| Chile              | 0                            |

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<sup>156</sup> Table from “Remittances Received, 2013 Estimates,” *Pew Research Center’s Hispanic Trends Project* (November 14, 2013), Accessed August 7, 2014, <http://www.pewhispanic.org/2013/11/15/remittances-to-latin-america-recover-but-not-to-mexico/ph-remittances-11-2013-1-05/>.

Table 2. Remittances as a Share of GDP, 2012 (percentage).<sup>157</sup>

| Country            | Share |
|--------------------|-------|
| El Salvador        | 16.5  |
| Honduras           | 15.7  |
| Guatemala          | 10.0  |
| Nicaragua          | 9.7   |
| Dominican Republic | 6.1   |
| Bolivia            | 4.1   |
| Ecuador            | 2.9   |
| Paraguay           | 2.5   |
| Mexico             | 2.0   |
| Peru               | 1.4   |
| Costa Rica         | 1.2   |
| Colombia           | 1.1   |
| Panama             | 1.1   |
| Uruguay            | 0.2   |
| Argentina          | 0.1   |
| Venezuela          | 0.0   |
| Chile              | 0.0   |

### C. GROWTH OR STAGNATION?

Although the purpose of this chapter is to determine whether Mexico is experiencing signs of premature deindustrialization, a legitimate argument cannot be made without looking at the opposite side of the dispute. Some scholars view Mexico as a hotspot of economic growth that provides abundant opportunities of future prosperity for investors. One of the leading advocates for Mexico's potential is Shannon K. O'Neil, who provides an optimistic view of Mexico's recent successes and considers it one of the top markets to watch in coming years.<sup>158</sup> Despite the positive outlook, she brings to light

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<sup>157</sup> Table from "Remittances as a Share of GDP, 2012," *Pew Research Center's Hispanic Trends Project*, November 14, 2013, <http://www.pewhispanic.org/2013/11/15/remittances-to-latin-america-recover-but-not-to-mexico/ph-remittances-11-2013-1-03/>.

<sup>158</sup> O'Neil, "Six Markets to Watch: Mexico," 12.

some valid points for further research concerning areas that are bridling Mexico's progress; she admits that "economically weak infrastructure holds the nation back" and believes that the economy is "still handicapped by institutional weakness."<sup>159</sup> O'Neil also identifies the challenge of economic inequality in Mexico, which mirrors the wage gap argument that Esquivel and Rodríguez-López make concerning NAFTA's failure in the manufacturing industry.<sup>160</sup> Lastly, O'Neil recognizes that the oil industry has given way to the manufacturing industry, which now accounts for 75 percent of Mexico's export. Just looking at the numbers of the manufacturing industry however, does not tell the whole story.<sup>161</sup> What O'Neil is missing is that 76 percent of manufactured products come from IMMEX corporations, which Cypher has labeled as mostly maquiladoras and disguised maquiladoras and are the source of the labor-export led model that Cypher and Delgado Wise claim to be deindustrializing Mexico.<sup>162</sup>

#### **D. APPLYING THE FIVE THEORIES OF DEINDUSTRIALIZATION**

With a foundational history of Mexico's policies, the five theories of deindustrialization may now be applied to the case study in order to determine what issues (if any) are contributing to the deindustrialization of Mexico.

##### **1. Technology**

The first theory that can be applied to the Mexican case is Palma's theory that advancements in technology can result in decreases in the manufacturing industry.<sup>163</sup> While this theory primarily assumes that advances in technology reduce the demand for manual labor in manufacturing, thus leading to de-industrialization, some aspects can be applied to Mexico. Gerardo Esquivel and José Antonio Rodríguez-López's wage gap

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<sup>159</sup> O'Neil, "Six Markets to Watch: Mexico," 15; O'Neil, "Mexico on the Brink," *Legatum Institute*, 11, accessed June 27, 2014, <http://www.li.com/publications/mexico-on-the-brink>.

<sup>160</sup> O'Neil, "Mexico on the Brink," 13; Esquivel and Rodríguez-López, "Technology, Trade, and Wage Inequality in Mexico Before and After NAFTA," 545.

<sup>161</sup> O'Neil, "Six Markets to Watch: Mexico," 12.

<sup>162</sup> Cypher and Delgado-Wise, *Mexico's Economic Dilemma: The Developmental Failure of Neoliberalism*, 10, 98-99.

<sup>163</sup> Palma, "Four Sources of De-Industrialization and a New Concept of the Dutch Disease," 74.

argument places blame on advancements of technology in the manufacturing sector, since the inception of NAFTA, for a failure to close the wage gap. In this scenario, in addition to technology directly taking the place of human workers, the advanced equipment being used in manufacturing also demands more skilled labor. The result is a reduction in the demand for unskilled labor, which affects a large majority of the Mexican work force. While some similarities are present, advancements in technology are only a part of Mexico's economic problem; therefore, it is unlikely that this theory is the main driving force for any deindustrialization in the country.

## **2. Currency**

The second theory that deindustrialization is a currency-driven phenomenon relates closely to the Mexican situation. Rowthorn and Ramaswamy reveal that large increases in exchange rates can cause a country to lose manufacturing jobs.<sup>164</sup> The phenomenon is analogous to Rahman, Foshee, and Mustafa's argument that the exchange rate policy is creating a decrease in tradable goods as a result of increased remittances; however, similar to the theory of advanced technology, this theory does not provide a complete explanation for Mexico's situation as the theory only exhibits some similarities with the state's economic problems. Additionally, all circumstances of deindustrialization inevitably have some degree of exchange rate fluctuation, making this theory a useful tool to help describe the phenomenon, but does not serve as a sole cause.

## **3. Outsourcing**

The third hypothesis refers to Petras' new international division of labor and outsourcing as the origins of manufacturing decline. The theory is based on the idea that cheap labor-intensive manufacturing decreases in industrializing countries once less expensive alternatives to manufacturing are discovered; cheap imports increase and manufacturing within the country decreases.<sup>165</sup> This theory applies directly to the maquiladora industry, but in a non-traditional sense. As the maquila parent corporations

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<sup>164</sup> Rowthorn and Ramaswamy, "Deindustrialization: Its Causes and Implications," 5.

<sup>165</sup> Petras, "A New International Division of Labor?," 28.

continuously seek to lower production costs and take advantage of tax free areas and government subsidies, more and more of the equipment and materials required for production are shipped into the facilities. The increase of imports takes a toll on domestic suppliers and many are eventually forced out of business. While production of exports continues to boom for the maquilas, only a small portion of each corporation's profits are pumped back into the Mexican economy, most of which are in the form of worker's wages. Most traditional cases of this theory are strictly issues of outsourcing and supply and demand; however, the maquiladora industry is unique to Mexico and has created a disguised version of this theory that is only affecting domestic manufacturing production while internationally controlled manufacturing thrives and continues to attract more FDI.

#### **4. North-South Relationships**

The fourth theory overlaps with the Petras' argument. Former Brazilian minister of finance, Luis Carlos Bresser-Pereira views one cause for deindustrialization as the result of an imbalance in North-South relationships where the larger country in the relationship causes regressive specialization to occur in the smaller economy.<sup>166</sup> Mexico's relationship with the United States has undoubtedly created some semblance of regressive specialization within the Mexican economy. What makes Mexico's case different though is where a standard example of regressive specialization would normally look like a country focusing a majority of its manufacturing efforts into producing a specific product, Mexico's regressive specialization is in low-skill labor. Delgado-Wise and Márquez's argument that the maquiladora industry has created a labor export-led economy aligns with Bresser-Pereira's North-South regressive specialization theory.<sup>167</sup> The Maquiladora industry creates a situation where U.S. corporations continue to increase profits while unskilled Mexican workers are exploited for minimal wages, thus trapping Mexico in an economic cycle of dependency with a workforce of low-skill laborers.

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<sup>166</sup> Neves and Pereira, "Brazil and China," 16.

<sup>167</sup> Delgado-Wise and Márquez Covarrubias, "The Reshaping of Mexican Labor Exports under NAFTA: Paradoxes and Challenges," 657.

## **5. “Dutch Disease”**

The final theory to apply to Mexico is the resource curse, or “Dutch disease.” While it appears that in the past, Mexico has encountered some brushes with the resource curse in the form of oil exports, recent reforms bring hope that the government will be less dependent on the commodity in the near future. Oil revenues currently play a large role in government spending, accounting for 34 percent of the budget in 2013, but the new policies should correct for the errors of the past and optimistically reduce government dependency on oil revenues to only 27 percent of the budget by 2018.<sup>168</sup> The other argument for “Dutch disease” is centered on the positions of Rahman, Foshee, and Mustafa regarding remittances. The case for a remittance curse is best paired with the currency-based deindustrialization theory; the two arguments combined, increasing remittances and poor exchange rate policy, make a debatable case for deindustrialization in Mexico.

## **E. CONCLUSION**

A close examination of past economic and political policies, and a look at the effects of NAFTA on the economy has revealed that Mexico has followed a different trajectory than Brazil since neoliberal reforms. Despite the differences, some suggest that Mexico is encountering signs of premature deindustrialization, but for different reasons than Brazil experienced. Applying the theories of deindustrialization to the Mexican case reveals that there is not a specific example that clearly demonstrates a textbook illustration of the phenomenon; instead, the study presents a situation of disguised deindustrialization using a combination of regressive specialization and a remittance-driven resource curse. Overall, the circumstances in both Brazil and Mexico are subtle; each country is experiencing different forms of premature deindustrialization, which provides an area for further research as a possible cause of stagnation in each economy.

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<sup>168</sup> Eric Martin and Nacha Cattán, “Mexico Unexpectedly Cuts Rate as Pena Fails to Boost Growth,” *Bloomberg*, June 6, 2014, <http://www.bloomberg.com/news/print/2014-06-06/mexico-unexpectedly-cuts-key-rate-to-3-on-economic-weakness.html>.

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## V. COMPARATIVE ANALYSIS AND FINAL CONCLUSIONS

This thesis has highlighted two cases of deindustrialization that have afflicted Brazil and Mexico; one is a clear case of the resource curse, while the other is a much less obvious case of disguised deindustrialization seen in labor exports and remittances. The cases are only two examples of how deindustrialization can take hold of an economy, and conceivably add to overall economic stagnation. This chapter looks at the two cases of Mexico and Brazil and compares the two countries' paths since neo-liberal reforms and the deindustrializing properties associated with each state. The chapter concludes with a few lessons learned from each situation that could assist developing nations in avoiding similar pitfalls that Mexico and Brazil experienced.

### A. TWO WAYS TO GLOBALIZE

Mexico and Brazil took dissimilar approaches to globalization, resulting in easily recognizable economic variations between the two states. Brazil developed a restricted approach to economic growth, causing the state to be one of the least open economies in Latin America.<sup>169</sup> Mexico exhibited full openness to free trade agreements while displaying a complementary economy to the United States; as a result, Mexico is “the most open of the world’s leading economies.”<sup>170</sup> In the World Bank’s *Doing Business* 2013 report, Mexico ranked 43rd in the world for ease of doing business, while Brazil came in at 130th out of 185 countries.<sup>171</sup> To understand why there is such divergence in economic performance, it is helpful to turn to the countries’ paths of development.

There are three contributing factors that can explain the varying economic development; Peter Hakim writes that geography, domestic politics, and national ideology each account for what made the two states pursue contradictory agendas in their

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<sup>169</sup> Hakim, “Two Ways to Go Global,” 150.

<sup>170</sup> Adam Thomson, “Open Economy Brings Rewards,” *Financial Times*, April 16, 2012, <http://www.ft.com/intl/cms/s/0/ddb23a18-8479-11e1-b4f5-00144feab49a.html#axzz3BeWnyKid>.

<sup>171</sup> The World Bank, *Doing Business 2013* (Washington, DC: The World Bank, 2013), 3, <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB13-full-report.pdf>.

quests for open economies.<sup>172</sup> Geographic influence to economic policies is the first example of how Mexico and Brazil differed in pursuing globalization. The commercial center of Brazil is physically separated from most neighboring countries by the Amazon Jungle, isolating the majority of the population on the Grand Escarpment along the Atlantic coast, which constrains economic expansion and challenges advancements in infrastructure.<sup>173</sup> Ranking 7th in world economies for annual GDP, Brazil is the major economic power in the South America, and it leads by a long shot; the next closest-ranking economy is Argentina, which brings in less than a third of Brazil's GDP, ranking 21st in the world.<sup>174</sup> The United States is the only economic power that outranks Brazil in the Western Hemisphere, and with 2,400 miles between the two countries, it is arguable that geography played a significant role in Brazil's isolative tendencies for protective trade agreements while seeking regional leadership.<sup>175</sup>

Mexico exhibits quite a different scenario; the country "sits in the shadow of the world's richest and most powerful nation," and has coastal access to the Pacific Ocean and the Gulf of Mexico.<sup>176</sup> Such ample access to global markets helped Mexico to implement a fully open economy with a multitude of FTAs, including complete immersion in the U.S. economy through NAFTA. Mexico's alignment with the U.S. economy has led to complementary market fluctuations between the two neighbors.<sup>177</sup> Despite Mexico's access to world markets and exclusive relationship with the United States, the country ranks behind Brazil in GDP with the 15th largest economy in the world, bringing in the equivalent of about 50 percent of Brazil's annual GDP.<sup>178</sup>

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<sup>172</sup> Hakim, "Two Ways to Go Global," 148.

<sup>173</sup> "The Geopolitics of Brazil: An Emergent Power's Struggle with Geography," Stratfor Analysis, no. 23 (May 13, 2012): 5, <http://libproxy.nps.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=67469614&site=ehost-live&scope=site>.

<sup>174</sup> The World Bank, *World Development Indicators 2014* (2013 GDP Ranking).

<sup>175</sup> Hakim, "Two Ways to Go Global," 148.

<sup>176</sup> Ibid.

<sup>177</sup> M. Angeles Villarreal, *Mexico's Free Trade Agreements* (CRS Report R40784) (Washington, DC: Congressional Research Service, July 3, 2012), 20.

<sup>178</sup> The World Bank, *World Development Indicators 2014* (2013 GDP Ranking).

Domestic politics may have a greater effect on each state's path than geopolitics. Brazil's long history of oligarchic tendencies has created a state that is not only difficult to conduct business with, but has also created a disorganized political system with a restrictive constitution.<sup>179</sup> Policies that Brazil has adopted, such as the Plano Real, aim to stabilize the economy, limiting inflation and thereby also limiting growth. Such policies promote protectionist ideals, limiting trade volume and drawing the government's focus toward remedying domestic economic issues, while paying less attention to international objectives.<sup>180</sup> This could help explain why Brazil has taken a less open approach toward trade agreements than Mexico.

In contrast to Brazil, Mexico's government during neo-liberal reforms was more centralized with less sway from populist politics. In the early 1990s, Mexico shifted from a protective stance against the United States, to embracing an economic alliance with the global giant. The policy shift opened the doors of Mexico to free trade. Hakim writes that Mexico's decisions were "based on technocratic judgments, without serious opposition from Mexico's congress, labor unions, or the press."<sup>181</sup> The Mexico of today is more democratic than when Salinas brought about economic reforms, but those domestic political decisions of the early 1990s guided Mexico to become a world leader in free trade today. Currently, Mexico is active in 12 agreements between 44 countries, and just within the last year, expanded the list by becoming a member of the Pacific Alliance.<sup>182</sup>

Much like the governing bodies, the national ideologies of Brazil and Mexico are also vastly different with respect to global aspirations. Brazil's interests lay in avoiding "any semblance of submissive compliance to the United States."<sup>183</sup> The South American giant views itself as a major world power and continually seeks global recognition as

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<sup>179</sup> "The Geopolitics of Brazil," 9; Hakim, "Two Ways to Go Global," 157.

<sup>180</sup> Hakim, "Two Ways to Go Global," 157.

<sup>181</sup> Ibid.

<sup>182</sup> Villarreal, *Mexico's Free Trade Agreements*, 3; "Join the Club," *The Economist*, April 29, 2013, 1, <http://www.economist.com/blogs/americasview/2013/04/growing-pacific-alliance>.

<sup>183</sup> José Augusto Guilhon Albuquerque, "Brazil: From Dependency to Globalization," in *Latin American and Caribbean Foreign Policy*, ed. Frank O. Mora and Jeanne A. K. Hey (Lanham, MD: Rowman & Littlefield, 2003): 268.

seen in attempts to obtain a permanent seat on the United Nations Security Council, Directorship-General of the WTO, and presidency of Inter-American Development Bank (IDB).<sup>184</sup> The country also seeks global recognition of its economic strength by engaging in South-South partnerships such as BRICS and MERCOSUR, and has been eager to show the world its military capabilities as seen when Brazil took the lead in the UN Stabilization Mission in Haiti (MINUSTAH).<sup>185</sup> The country has focused efforts on global goals without first attaining respect as a regional leader; Brazil's somewhat erratic attempts to earn regional respect have caused neighboring states to act against Brazil in fear of the giant gaining regional superiority.<sup>186</sup>

Mexico's national ideologies have resulted in foreign policy that is far less ambitious than Brazil's.<sup>187</sup> Ana Covarrubias contends that for Mexico, "an active role in the international system was not a priority."<sup>188</sup> For Mexico, the relationship with the U.S. has created an ideology of "intermestic" consciousness, focusing on not allowing U.S. economy dependency to interfere with other aspects of Mexican national interest.<sup>189</sup> The unique relationship led Mexico to develop a foreign policy with sentiments of an "agreement to disagree" with the United States in order to avoid serious confrontations in the bilateral relationship, while simultaneously protecting national interests.<sup>190</sup> While the bilateral agreement does loom large, Mexico's ideologies have not been completely immersed with the U.S.; the country has also sought to serve as a "bridge between North and South America," actively engaging in Central American issues such as infrastructure development, and advocating human rights and democracy.<sup>191</sup>

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<sup>184</sup> Andrés Malamud, "A Leader without Followers? The Growing Divergence between the Regional and Global Performance of Brazilian Foreign Policy," *Latin American Politics & Society* 53, no. 3 (Fall 2011): 19, doi:10.1111/j.1548-2456.2011.00123.x.

<sup>185</sup> Ibid., 10, 16.

<sup>186</sup> Ibid., 6, 9.

<sup>187</sup> Hakim, "Two Ways to Go Global," 159.

<sup>188</sup> Ana Covarrubias, "Mexico: The Challenges of a Latin American Power in the U.S. Backyard," in *Latin American and Caribbean Foreign Policy*, ed. Frank O. Mora and Jeanne A. K. Hey (Lanham, MD: Rowman & Littlefield, 2003), 14.

<sup>189</sup> Ibid., 22.

<sup>190</sup> Ibid.

<sup>191</sup> Hakim, "Two Ways to Go Global," 152.

## **B. DIFFERENT, YET SIMILAR**

Comparing the vast differences in the economic growth of Brazil and Mexico make it easy to overlook that the two states came from similar backgrounds. The successful growth rates of both countries throughout much of the 20th century gave way to debt burdens and recessions in the 1980s. Each state then initiated economic reforms that aligned with the “Washington Consensus” of “fiscal discipline, privatization of state-owned businesses, and foreign trade liberalization.”<sup>192</sup> From there, the paths split (as outlined earlier in this chapter); however, the two states continue to share a similarity—economic stagnation. While Brazil and Mexico confront their own individual economic issues, they display two separate types of deindustrialization that could be a contributing source to the less-than-expected performance of their economies. The remainder of this chapter will compare the differences in the phenomenon that each state is encountering, and attempt to highlight key points that developing nations could learn from.

## **C. TWO WAYS TO DEINDUSTRIALIZE**

The second chapter of this thesis reveals that there are multiple causes of premature deindustrialization that can lead to economic stagnation. The five studied causes reveal that premature deindustrialization can occur as the result of 1) insufficient technology in the industrial sector 2) currency based problems in the economy 3) outsourcing of labor 4) North-South relationships 5) the resource curse, or “Dutch disease.” The focus of this thesis is on two case studies with differing causes of the phenomenon. Research shows that Brazil is experiencing a form of “Dutch disease” due to the country’s focus on natural resource exports, while Mexico is encountering a disguised version of deindustrialization created from a unique combination of labor-led regressive specialization, and a remittance based resource curse. Although these studies do not provide an all-inclusive look into all potential causes of deindustrialization, the examples tell the story of the two largest economies in Latin America; therefore, the case studies serve as illustrations for other developing states in the region and are

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<sup>192</sup> Ibid., 149.

comparatively reviewed here for the purpose of highlighting potential developmental pitfalls.

Chapter three reveals that Brazil suffers from a lack of technology in the manufacturing sector, overvalued currency in the economy, outsourcing to the Chinese economy, and regressive specialization of natural resource exports. Although all of these problems can lead to deindustrialization in a country, the prominent source of Brazil's premature deindustrialization is a resource curse. Traditional cases of the resource curse usually involve one commodity, typically oil, which becomes an economy's main export, causing a decline in the manufacturing industry. Brazil's case is a non-typical example because the problem is spread out over the export of many natural resources.

In Chapter four, the case for premature deindustrialization in Mexico is subtle, but present. The country suffers from a large wage gap, troubled exchange rate policy, and is on the lesser side of a North-South relationship; however, these problems do not solely account for Mexico's deindustrialization. The source of Mexico's troubles are linked to regressive specialization that has created a labor-export led economy, and remittances that have a similar effect of a resource curse. Mexico's case of deindustrialization is a non-standard example; where normal cases show the decline of the entire manufacturing industry, Mexico's case only applies to the national manufacturing industry. Trade agreements with the U.S. create a unique situation of the Maquiladora industry and as a result Mexico's international manufacturing industry is one of the leading exporters in Latin America. The nature of the Maquiladora industry though, has reduced dependency on domestic manufacturing as imported goods and machinery are used in the factories that produce Mexico's manufactured exports. The result is a decrease in domestic manufacturing businesses and an increase in low skilled labor at the Maquiladoras. In addition to this problem, remittances from the U.S. have strengthened the Peso, which in turn reduces demand for labor, appreciates the exchange rate, and reduces export activity of tradable goods. The effects are similar to that of a resource curse.

#### **D. FINAL CONCLUSIONS**

Developing countries can benefit from the experiences that Brazil and Mexico have encountered. While it is unlikely that developing states in Latin America will achieve the same economic stature and global recognition that Brazil and Mexico have, it is useful to understand how each country's path to a globalized economy led to situations that spawned premature deindustrialization. Being able to recognize pitfalls could assist developing states in avoiding a fate similar to Brazil and Mexico and possibly spare potential economic stagnation.

Brazil's path to a globalized economy has been hindered by aspirations of regional and global recognition. The constant struggle to attain regional leadership, while avoiding any U.S. dependency, has caused Brazil to follow a relatively protectionist strategy and to engage in South-South trade partnerships.<sup>193</sup> Brazil's problems are also exacerbated by geographical constraints on industrial growth. The terrain of the Grand Escarpment makes it difficult to integrate local infrastructure, leading to bottlenecked economic growth.<sup>194</sup> The restricted industrial growth (combined with Brazil's trade relationships with resource hungry nations like China) has left Brazil with "little choice but to focus on the production and extraction of primary commodities."<sup>195</sup> Ultimately, these events have caused Brazil to encounter a resource curse that has endangered the economy with premature deindustrialization. Other developing states could learn from Brazil that restrictive trade policies, combined with economy-restricting geographic features, can result in the state being tunneled into a non-sustainable export strategy.

Mexico's situation also holds valuable lessons for developing states. Mexico's open market strategy is a compelling example of how to conduct business; but small economies should exercise caution. Entering into a relationship with a large economy, like the U.S., can open up many opportunities for growth in a developing nation. Mexico has benefited from NAFTA, but the Maquiladora industry has hamstrung Mexico's

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<sup>193</sup> Malamud, "A Leader Without Followers?," 10, 16.

<sup>194</sup> "The Geopolitics of Brazil," 7.

<sup>195</sup> *Ibid.*, 11.

manufacturing industry, forcing a dependency on the United States, specifically in areas of foreign investment and international corporations. The toll is seen in the decline of domestic manufacturing, a lack of skilled labor, and increased remittances. Developing countries should be wary of entering into North-South relationships so as not to get caught in a trap of dependency, which can lead to premature deindustrialization and economic stagnation.

For a country to avoid deindustrialization (before its economy is prepared to endure the process), the key is awareness and early recognition of the warning signs. Learning from other countries' misfortunes is a valuable tool in determining the early signals of economic stagnation. A situation like Brazil's is a difficult one to avoid, but with early recognition, steps to correct the problem can be implemented. Following the advice of Bresser-Pereira (as detailed in chapter three) could help a country with "Dutch disease" to reverse the process and restore prosperity to the manufacturing industry. Mexico's issues are not as easy to fix; the uniqueness of the maquiladora industry does however, provide a good example of potential dangers of dependency. Additionally, many Latin American states depend on remittances to enhance their economy; such states are not likely to have a manufacturing industry as robust as Mexico's and therefore should realize that their economies could be more susceptible to a remittance curse.

The possibility that premature deindustrialization can lead to economic stagnation is real and this thesis has argued that Brazil and Mexico have both suffered from the phenomenon. A series of definitions and five theoretical causes of deindustrialization have created a foundational knowledge of the topic, but this study has shown that each occurrence is unique to the country experiencing it, and can be the result of many factors. Further research in the Brazil and Mexico cases would not only help to bring recognition to the situations in both countries, but could also assist in the correction of their problems, and provide valuable guidance for other developing Latin American economies.

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