

IMPACT OF INTERNATIONALIZATION ON HUMAN DEVELOPMENT: A COMPARATIVE ANALYSIS OF MEXICO AND FRANCE, 2000–2019

IMPACTO DE LA INTERNACIONALIZACION EN EL DESARROLLO HUMANO: UN ANALISIS COMPARATIVO DE MEXICO Y FRANCIA, 2000–2019

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ABSTRACT

The objective is to determine the relationship between the openness of markets and human development in Mexico and France for the period 2000–2019. A comparative analysis is carried out by looking at the effect of migration (measured by the inflow of remittances) and the opening of capital markets and trade on the Human Development Index in both countries. Estimations are based on a Cointegrated Vector Autoregressive model. Results show that Foreign Direct Investments has a positive influence on HDI in both countries, but remittances seem to contribute more to human development, in Mexico, than trade and capital liberalization do.

Keywords: Human Development, Remittances, Foreign Direct Investment, Trade Openness.

RESUMEN

El objetivo es determinar la relación entre la apertura de los mercados y el desarrollo humano en México y Francia para el período 2000-2019. Se realiza un análisis comparativo observando el efecto de la migración (medida a través de las remesas) y la apertura de los mercados de capitales y el comercio exterior sobre el Índice de Desarrollo Humano en ambos países. Las estimaciones se basan en el método de Vectores Autoregresivos Cointegrados. Los resultados muestran que las inversiones extranjeras directas tienen una influencia positiva en el IDH en ambos países, pero las remesas parecen contribuir más al desarrollo humano, de México, que el comercio y la liberalización del capital.

Palabras clave: desarrollo humano, remesas, Inversión Extranjera Directa, apertura comercial.

JEL Classification / Clasificación JEL: O15, F21, F24, F10, O57.

1. INTRODUCTION

The world economy is embedded in a process of gradual and growing liberalization of markets, where no country is left on the sidelines. This liberalization has been sustained by Ricardo's comparative advantage model, where it is assumed that the greater the trade opening, the better the economic growth (Encinas Ferrer, Rodríguez Bogarín, & Encinas Chávez, 2012; Sánchez Iglesias & Sánchez Jiménez, 2019). This research is a comparative analysis between Mexico and France, two countries with free-market economies but with different levels of development. The opening of the Mexican economy has not only generated economic growth but also inequality, poverty, and migration. France, however, has faced greater internal demands for welfare programs, equality, social distribution, and social achievements, which are considered safety nets for free-market economies. These achievements can be attributed to both public policies and to the political awareness of civil society (Gill, Raiser, & Sugawara, 2015; Van Kersbergen, 2015).

This paper explores the effects of migration and market opening (capital and trade) on human development. Migration is measured through remittances, the capital market through Foreign Direct Investments (FDI) and Portfolio Investments (PI), and the market for goods and services through a Trade Openness Index (TOI). The aim is to analyze the opening of markets, which have been part of the neoliberal agenda (Hayek, 1960; Kuznets, 1955) in France and Mexico, and how this has affected the level of human development in both countries between 2000 and 2019.

Previous studies have focused on the openness of capital markets (mainly FDI) on growth (Bird & Choi, 2020; Driffield & Jones, 2013) and on the Human Development Index (HDI) in developing countries (Gökmenoglu, Apinran, & Taspınar, 2018; Reiter & Steensma, 2010), with findings suggesting an overall positive relationship. Other works have focused on the impacts of trade opening and HDI (Davies & Quinlivan, 2006; Kabadayı, 2013). In this matter, Davies and Quinlivan (2006) and Kabadayı (2013) found a positive effect, while Hamid and Amin (2013) found that trade has a significant and positive effect only on income-related categories of HDI, but not with other components such as longevity and education. The main techniques used by these authors is a panel linear regression for a different set of countries (Davis et al., 2010; Kabadayı, 2013; Reiter & Steensma, 2010).

Furthermore, there has been a considerable amount of research on the role of migration and internationalization and development (Hatzigeorgiou & Lodefalk, 2021; Massey et al., 1998; McKenzie & Yang, 2015), with some works considering that there is more to migration than only remittances (Clemens, Özden, & Rapoport, 2014). However, as mentioned by Yang (2011), since the 1990s, remittances sent home by migrants have surpassed official development assistance and portfolio investment, only to be compared with FDI. This could be interpreted also as a way for migrants to contribute to the economic development of their home countries (Damette & Gittard, 2017; Page & Plaza, 2006). Remittances are found to have a positive influence on growth (Giuliano & Ruiz-Arranz, 2009; Nsiah & Fayissa, 2013), reduce inequalities (Ebeke & Goff, 2010), and to raise per capita health expenditures and undernourishment and child rate mortality, while increasing school enrolment and competition in developing countries (Azizi, 2018).

A comparative analysis of two countries with different levels of development, but well integrated in the free-market global economy, will allow us explore the effects of openness and human development. The cases of Mexico and France were chosen for several reasons: i) they are both member of a free trade agreement area (NAFTA-North American Free Trade Agreement and EU-European Union, respectively), ii) however, the two areas differ in their labor mobility and travelling rules, as travel and labor movements are free without border controls in the EU, but restricted in among NAFTA members, and iii) Mexico is considered a low-wage country, more inclined to receive in-coming labor-intensive FDI, while France is considered a high-income country.

Our hypothesis is that migration is the weak link of the neoliberal and liberalization agendas, as remittances sent by migrants contribute more to the development of their home countries than trade and capital liberalization does. The movement of people is, however, not taken into consideration in such discussions. This paper seeks to provide empirical evidence on the impact of each of these variables on the differentiated development of both economies. The econometric analysis is carried by using a Cointegrated Autoregressive Vectors (CVAR) model, which allows us to identify the simultaneous interactions between the selected variables as explanatory variables in all the equations.

The rest of the article is organized as follows. Section 2 reviews the theoretical background on liberalization and HDI. Section 3 describes the dataset, empirical model and variables employed. The empirical findings are presented in Section 4. The last section concludes the paper and discusses its contributions.

2. THEORETICAL BACKGROUND

2.1. NEOLIBERALISM AND LIBERALIZATION AS THE BASES FOR GROWTH

The opening of trade and capital markets have been the main results of the neoliberal agenda and the capitalist paradigm in developing countries



(Friedman, 1962). Neoliberalism appears with Milton Friedman, first with the idea of 'Global governance institutions' of the postwar period, which have overviewed the economic and political activity of many countries, and later under the 'Washington consensus.' In the 1970s, Ronald McKinnon (1973) proposed the freeing of domestic financial markets and the opening of financial markets and trade as a necessary stage in the process of growth and development.

Friedman (1962) pointed out that the basis for this ideology is 'freedom,' fundamentally economic freedom within, and for, the market (as opposed to the economic regulations of the state). The market is a fair system because it gives everybody an exact proportion of what it offers, so it is a perfect space for the exchange of equivalents. He affirmed that the way markets organize society would be the only way to reconcile individual freedom and become a social result acceptable to each other. However, Smith (2018), citing Thomas Piketty, pointed out that if wealth is concentrated in a single sector, inequalities will continue to increase, and it will not help to prevent poverty and inequality, because inequality increases naturally unless a war or catastrophe intervenes to prevent it.

Neoliberalism and financial liberalization have set the stage for globalization, as the mechanism that articulates an important growth of international trade, strengthening free markets and giving greater freedom to capital and technology movements (Flores, 2016). These processes converge as long as the former achieves greater dissemination of technology and dissemination of ideas and that capital ends up moving in the right direction by articulating local industry (González Romo & López Pérez, 2018).

Behind this model, there is the idea of 'trickle-down'. The 'trickle down' effect (or theory, although is not really one) is the idea that economic growth by groups with higher income levels (such as entrepreneurs, investors, etc.), and the increase in wealth generated by these groups, will 'trickle down' and lead to a redistribution of income through the effect it will cause in all sectors. It is believed that people with higher incomes tend to save and invest and increase national income, which will generate jobs, and this in turn by the 'trickle-down effect' will be reflected in society in people with lower income levels (Gongora, 2013; Lozano, 2013).

This approach, envisioned by authors such as Kuznets (1955), Lewis (2003) and Polanyi (1957), maintains that in free market economies, as income increases, there is more savings and therefore more investment, which it should then increase economic activity. An economy whose financial system is well developed, manages to meet the needs for saving and finance of economic agents efficiently, and thus has a greater capacity to generate growth and economic development (Gongora, 2013).

The 'trickle down' effect is the ideological backbone of neoliberalism, which asserts that there should be little state intervention and a maximum of freedom for economic agents, in order for the economy to grow for a long period of time. This will translate into a general well-being for the entire population. By leaving

the economy to the 'free' will of 'supply and demand', the own inertia of growth will encourage the rest of society to wait for leftovers, and become a 'transitory but necessary' detail of the whole process (Fair, 2010). In this context, the role of the state is to create and preserve the appropriate institutional framework for these practices (Harvey, 2007).

This relationship between openness and development is at the center of this article. In the following section we will take a closer look at the Human Development Index as better tool to measure development.

2.2. BEYOND GROWTH, A MORE REALISTIC APPROACH TO DEVELOPMENT

Since 1990, the United Nations Development Program (UNDP) has published an annual Human Development Report, seeking to homogenize the concept and to show policymakers how to operationalize, in strategic terms, improvements in development and welfare (Dervis & Klugman, 2011).

The HDI is a summary measure of average performance in key dimensions of human development: a long and healthy life, having access to education and knowledge and having a decent standard of living. It is the geometric mean of standardized indices for each of the three dimensions. The dimension of health is evaluated by the life expectancy at birth, the dimension of education is measured by means of years of schooling for adults of 25 years or more and years of expected schooling for children of school age. The dimension of the standard of living is measured by the Gross National Income (GNI) per capita in Purchasing Power Parity (PPP) expressed in US dollars (UNDP, 2018). The HDI uses the logarithm of income to reflect the decreasing importance of income by increasing GNI. Scores for the three HDI dimension indices are aggregated into a composite index using the geometric mean (Pérez Mesa, 2008; UNDP, 2018).

The HDI aims to measure capabilities, understood as the set of options available to a person and, ultimately, the freedoms that it enjoys, which is why it immediately became an alternative indicator of widely accepted development. Different theories of development seek an explanation of why some countries are poor and others rich, and what the factors are that explain such differences. They do this by analyzing obstacles for development, such as a heterogeneous productive structure and industry, existing levels of unemployment and underemployment, low levels of productivity and wages, inadequate functioning of markets and the distributive structure of concentrated and unequal income (Ordoñez, 2014).

The evolution of the concept of human development has gone from the use of per capita income to a larger one proposed by Amartya Sen (1999) in the 1980s, which allowed understanding well-being in an integral way, but with an individual vision. The concept of development has been associated with freedom, as a much broader sense, where poverty and lack of economic opportunities limit the exercise of fundamental freedoms. For Amartya Sen (1999) the main challenges for Human Development, is that poverty and the lack of economic opportunities, are obstacles that limit fundamental freedoms, seeing development as the process of expanding individual capabilities. The most important being the lack of capabilities

for adequate development. Similarly, Sabina Alkire (1998) in her many works has sought to make poverty reduction activities operational, coherent and practical. Together with the Oxford Poverty and Human Development Initiative (OPHI) they have empirically implemented a Multidimensional Poverty Index (MPI), called the Alkire-Foster method, providing a tool capable of identifying who is poor by considering the range of deprivations suffered by the poor (Alkire & Foster, 2011; Alkire, Roche, Seth, & Sumner, 2015).

In Mexico, poor levels of Human Development Index materialize a process of social decomposition, poverty, marginalization, and social inequalities, which are in part the cause of large waves of migration. Social well-being can be expressed by the access to health services, education, housing, income, and employment, among others, and it is fair to say that it represents high levels of dissatisfaction among large sectors of the Mexican population (Plata-Pérez & Rosas-Méndez, 2015; Soloaga & Lara, 2007).

While economic growth is fundamental to human development, it is insufficient to guarantee the desired level of well-being. To this end, it is important to incorporate cooperation and the dissemination of freedoms and capabilities. Unequal societies, such as Mexico, have paid little attention to the problems of society, both in economic and sociocultural aspects, ignoring the adverse living conditions in which large sectors of the population find themselves. Public policies have failed to marginalize social inequalities, and with their preferences they have enriched a small group of society, while a majority do not achieve the minimums of well-being.

Even if the number of billionaires in Mexico has not grown in recent years, it remains constant at 16. As Gross Domestic Product (GDP) grows at 1% per year, the fortune of these families multiplies by five. In 1996, they amounted to USD25,600 million, and today that figure is USD142,900 million. In 2002, the wealth of four Mexicans represented 2% of GDP; between 2003 and 2014 that percentage went up to 9%. It is about one-third of the accumulated income of almost 20 million Mexicans (Esquivel, 2015).

In Mexico, corruption, illicit enrichment, and the lack of income redistribution policies limit the adequate development and transformation of society to offer opportunities to the neediest population. In the case of France, as in other developed countries, living conditions have improved over time, and poverty is not a burden in which to carry out the implementation of public policies. However, income distribution has been growing since the 1980s and is a major concern among the population. In 2014, the income group at the top 10% of the distribution owned 32.7% of the total income share (Garbinti, Goupille-Lebret, & Piketty, 2018).

Recent data shows that France is the 26th country in the HDI ranking worldwide¹. Life expectancy in France is 83 years of age and the mortality rate is 9.1%. France is considered one of the OECD countries with high levels of

¹ Human Development Report Office 2020.

development, where only one in 10 people is considered poor. The average net disposable household income per capita is US\$31,137 per year, higher than the OECD average of US\$30,563 per year. Although social inequalities exist, the gap between the richest and the poorest is such that the top 20% of the income scale earns about five times what the at the bottom 20% earns. In the work-life balance relationship (the time dedicated to work and entertainment), there is an important difference between the two countries. While the French have an indicator of 8.9, in Mexico it is 1.5. In Mexico about 30% of the employed population works 50 hours or more a week, while in France only 7.8% of employees work very long hours. In this country, full-time employees spend 68% of their day, that is, 16.4 hours, on personal care (eating, sleeping, etc.) and leisure (social life with friends and family, hobbies, games, use of the computer and television, etc.) (OECD, 2018).

3. DATA AND METHODS

To carry out the empirical analysis, data have been drawn from a period of 19 years from Mexico and France (2000–2019). The econometric analysis was carried out using a Cointegrated Vector Autoregression (CVAR) model, which allowed us to identify the simultaneous interactions between the selected variables as explanatory variables in all the equations. This method is better suited for our analysis because it is designed for non-stationary time series, it represents cointegration and error correction, and it can be used to test whether time series are endogenous or exogenous (Hoover, Johansen, & Juselius, 2008).

In the study, several variables have been considered: Human Development Index for Mexico and France (MDHI and FHDI, respectively). For the opening of capital markets, two variables have been considered: Portfolio Investments (MPI and FPI, respectively) and Foreign Direct Investments (MFDI and FFDI, respectively). The opening of trade of goods and services has been measured by using Trade Openness Index (with MTOI and FTOI, respectively). Finally, migration is taken into consideration through the inflow of remittances (MRE and FRE, respectively). The data sustaining the variables in the model have been gathered from the United Nations Development Program (UNDP), Banco de Mexico and Banque de France (see Table 1). The data have a quarterly frequency and correspond to the period 2000–2019.

3.1. HDI OF MEXICO AND FRANCE

The aim is to show the behavior and changes presented in both countries during this period. The idea is not about falling into a comparison of the obvious, but to point out how HDI in both countries is influenced by their differences in remittances, FDI, PI, and TOI.

Figure 1 shows the gap that remains in these 20 years of study between both countries in relation to the HDI, and the changes they show, which are



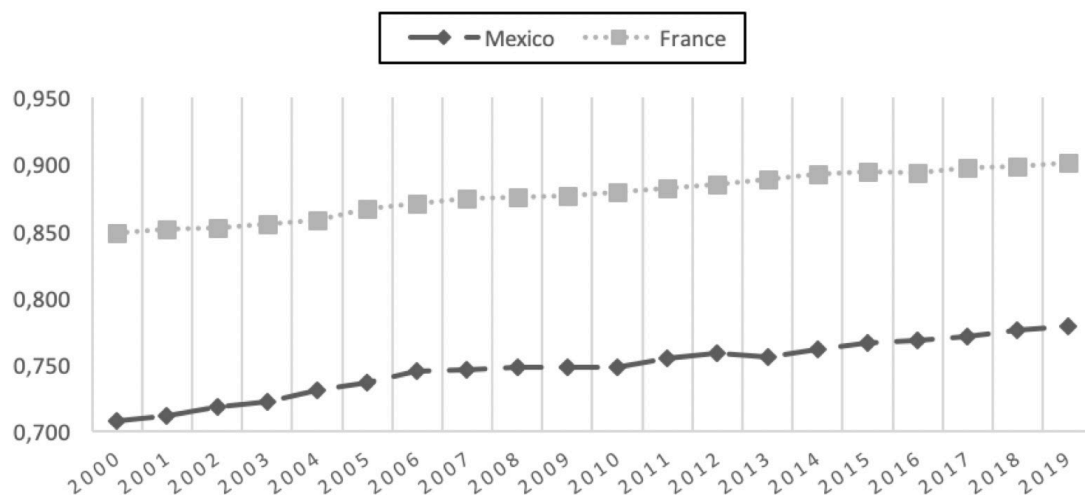
TABLE 1. DATA DEFINITION AND SUMMARY STATISTICS

Variable	Description	Source	Obs	Mean	SD	Min	Max
HDI	Human Development Index	UNDP	80 80	0.744 0.879	0.023 0.017	0.702 0.849	0.779 0.901
RE	Incoming personal remittances (millions of current USD)	Banco de Mexico	80	4 301.57	1 693.17	1 397.88	7 082.19
		Banque de France	80	199.09	61.29	114.83	302.35
PI	Portfolio investments, net inflows (millions of current USD)	Banco de Mexico	80	3 671.99	7 720.25	-20 473	22 795.5
		Banque de France	80	6 129.09	6 986.16	6 594.4	23 504.8
FDI	Foreign direct investment, net inflows (millions of current USD)	Banco de Mexico	80	7 056.82	3 360.54	2 350.82	21 009.12
		Banque de France	80	11 777.43	10 106.68	11 885.29	50 573.02
TOI	Trade openness (sum of exports and imports of goods and services as a share of GDP)	Banco de Mexico	80	51.82	21.64	22.81	95.07
		Banque de France	80	44.56	1.94	38.84	48.81

gradual and slow. While France went from place 68 in 2000 to 26 in 2019, Mexico went from 134 to 76.

In Mexico, 53,418 million people are considered poor because they have incomes below the poverty line (43.6% of the population in relative poverty) and of these 8.5% are in extreme poverty, considered absolute poverty (CONEVAL, 2018). Mexico has the highest child poverty rate in the Organization for Economic Cooperation and Development (OECD); in 2011,

FIGURE 1. HISTORICAL COMPARISON OF THE HDI IN MEXICO AND FRANCE, 2000-2019



Source: Human Development Reports, UNDP 2020.

almost one in four Mexican children lived in poor households (25.8%), well above the average of the OECD of one in eight (13.9%) (OECD, 2018).

In Mexico about 30% of the employed population works 50 hours or more per week, while in France only 7.8% of employees have a very long work schedule. In this country full-time employees dedicate 68% of their day, which is 16.4 hours, to personal care (eating, sleeping, etc.) and leisure (social life with friends and family, hobbies, games, use of the computer and television, etc.) (OECD, 2018).

Mexico is one of the countries in Latin America with the highest score of human development. However, inequalities still exist, especially between regions. However, it is important to point out that HDI does not include a dimension for inequality. The contribution made since 2011 by the UNDP shows that the index adjusted for inequality (IHDI) takes into account inequality, while the HDI can be seen as the potential index of human development that could be achieved if there were no inequality (UNDP, 2019). It could be interesting to use this composite indicator to see where the effects of the growing market economies, but since they do not have much impact on social welfare, we consider that it is valid to use only the HDI for this research, without underestimating the possible results that could be obtained in the other way when using the IHDI.

Some of the well-known examples are Benito Juárez municipality, which has levels of development similar to those of Germany, while in other places, there can be as low as sub-Saharan Africa, such as Cochoapa el Grande in the State of Guerrero. The contrasts of the highest to lowest levels are presented with respect to the education indexes, that is, of 0.945 in the Benito Juárez Delegation in Mexico City and 0.207 in the municipality of Cocoiyán de las Flores in Oaxaca. Regarding the health index, the highest is 0.925 in Morelos Coahuila, and the lowest in Mezquitic Jalisco with 0.323. Income rates are perhaps the least unequal where the index is 0.875, also in the Benito Juárez delegation in Mexico City, and 0.436 in San Simón Zahuatlán Oaxaca, Mexico (UNDP, 2018).

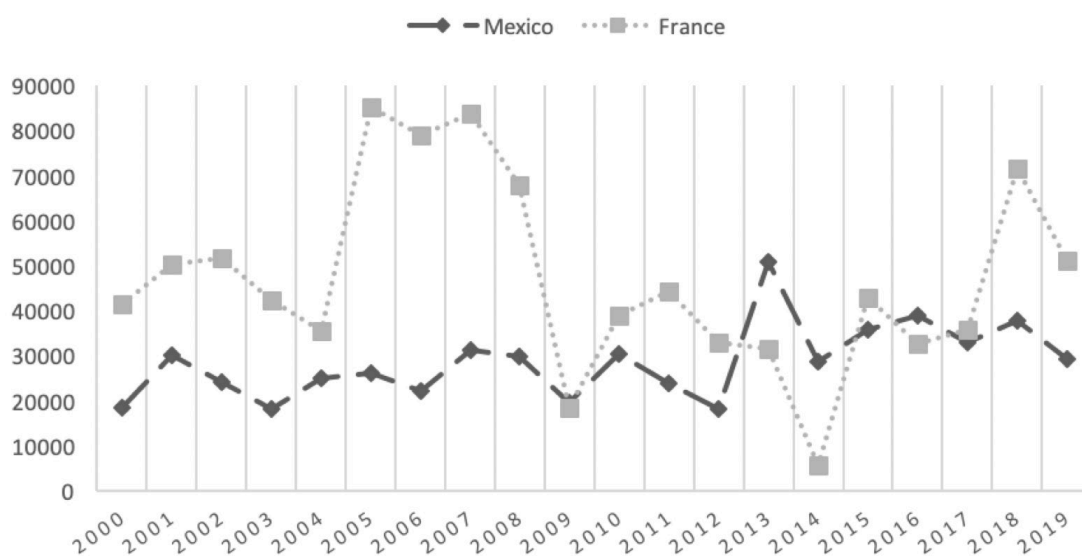
3.2. FOREIGN DIRECT INVESTMENT, PORTFOLIO INVESTMENT, TRADE OPENNESS, AND REMITTANCES

As shown in Figure 2,2 from 2000 to 2017, incoming FDI in Mexico increased 74.7%, that is, a growth of 4.2% per year, which corresponds to USD27,899.1 million, in annual average. There have been important growths, from 2000 to 2001 and from 2012 to 2013, the latter being the maximum historical growth of 168.7%. International problems are directly related to investments, with significant negative fluctuations, for example, 2008 decreases 2.7%, but 2009 compared to 2008 decreased by 39.5% (see Figure 2). FDI in Mexico is

2 For figures 2 through 5 we use annual data from the World Bank, World Development Indicators database.



FIGURE 2. EVOLUTION OF FDI IN MEXICO AND FRANCE, 2000-2017, NET INFLOWS (BALANCE OF PAYMENTS, MILLIONS OF CURRENT USD)



Source: Own elaboration with data from World Bank, 2020.

largely connected to the industrial and services sector and in low proportions to agriculture.

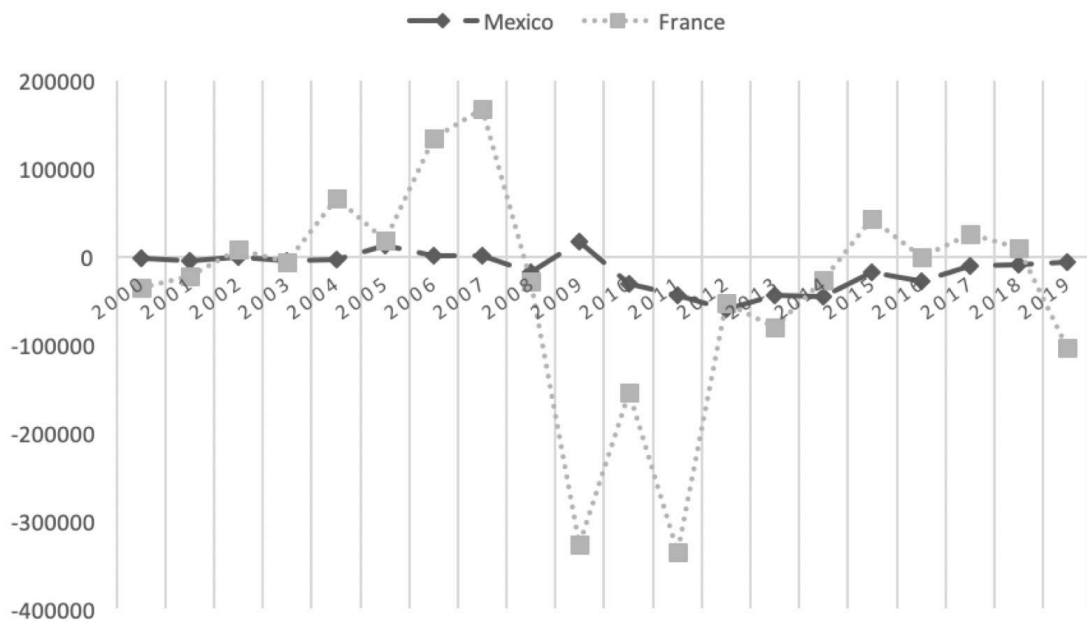
France is considered to be among the 10 largest economies in the world, with a highly developed tertiary sector, a qualified workforce, and a developed industry. Corporate taxes are among the highest in the world, and the cost of labor is also high (Bunn & Asen, 2019). The behavior of FDI shows a sharp growth, 2005 through 2008, with an increase from 2004 to 2005 by 139.4% (historical maximum).

From 2008 to 2009 the effect of the subprime crisis, at the origin of the general depression of the global economy, FDI fell 73%, and from 2013 to 2014, FDI fell from a record 82%, representing USD5,810 million, lower than the investments registered in Mexico in the 20 years of this study (Figure 2). For the year 2015, the investment was directed mainly at 23% to finance and insurance, 17% real estate, 5% manufacturing industry, 12% trade and maintenance, and 36% construction (Uri, 2019).

Portfolio investments are key mechanisms to maintain an adequate flow of currency in any country's economy. However, it could also be volatile to the capital and can cause the most damage when confidence is lost or high uncertainty exists about the state of the economy. These are usually investments in bonds or stocks, and they tend to be more volatile toward better security and performance.

Portfolio investments in France show sharp changes, but as its economy is more reliable, there is usually less instability. In Mexico, even though the movements are not so abrupt, the damage to the economy is much greater.

FIGURE 3. NET PORTFOLIO INVESTMENTS IN MEXICO AND FRANCE (BALANCE OF PAYMENTS, MILLIONS OF CURRENT USD)



Source: Own elaboration with data from World Bank, 2020.

Such is the case of the public debt, which increases as a way to control 'hot money' fluctuations (see Figure 3).

The US economic crisis in 2009, which extended to Europe, caused a recession in the Eurozone as many banks had invested in Asset Backed Securities (ABS). The ABS seemed to be a good option since they consistently obtained good rates and higher yields. Therefore, banks could be financed at low cost in the European Central Bank (ECB) and buy high-performance ABS. However, the subprime crisis unveiled how vulnerable these instruments were and resulted in a severe crisis in postwar Europe. In 2009, the economic crisis in Europe turned itself into the so-called Euro crisis, being both economic and political, but not of its currency per se (Weber, 2015).

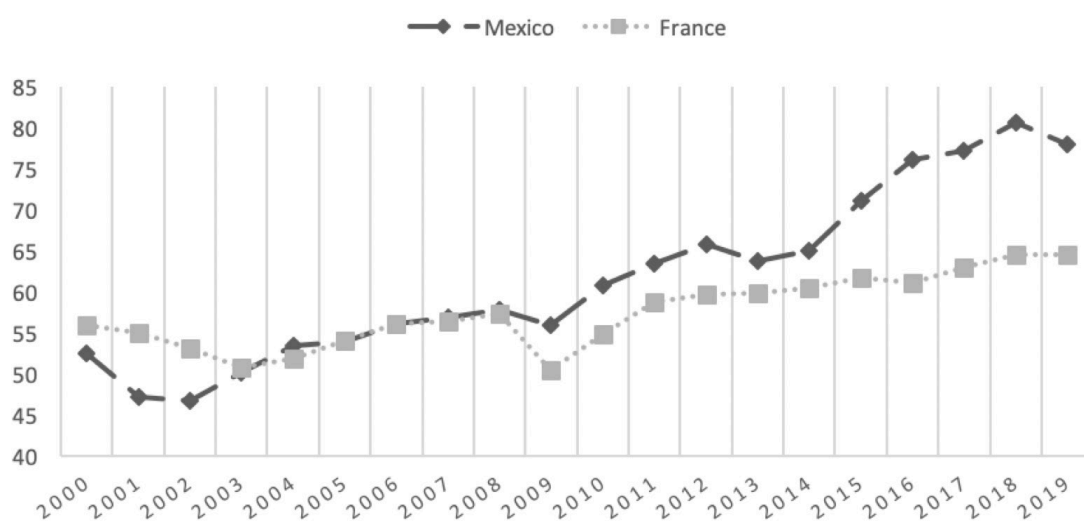
With regard to international trade, Mexico increased the openness of its markets of goods and services from 1994 with the signing of NAFTA, but beyond that, Mexico has 12 Free Trade Agreements with 46 countries, 32 Agreements for the Promotion and Reciprocal Protection of Investments with 33 countries, and nine agreements of limited scope (Economic Complementation Agreements and Partial Scope Agreements) within the framework of the Latin American Integration Association (ALADI) (Secretaría de Economía, 2015). For this reason, trade agreements are important for the Mexican economy, trade represented 52% of GDP in the year 2000, to reach 77.91% in 2019.

In this matter, Rosales (2017) points out that the processes of economic integration are important to strengthen competitiveness, insofar as they advance toward higher levels of integration, removing barriers to trade and

those of labor movements. These take place regardless of protectionist policies of the Trump administration in the United States, as well as Brexit.

The economic stability of France, however, allows them to maintain a TOI that does not vary much despite the current global crisis. The variation of the year 2000, which was of 55.86, increased to 64.52 in 2019, which shows that before a sudden change in international markets it affects the countries that

FIGURE 4. TRADE OPENNESS: MEXICO-FRANCE, 2000-2017 (SUM OF EXPORTS AND IMPORTS OF GOODS AND SERVICES AS PERCENTAGE OF GDP)



Source: Own elaboration with data from World Bank, 2020.

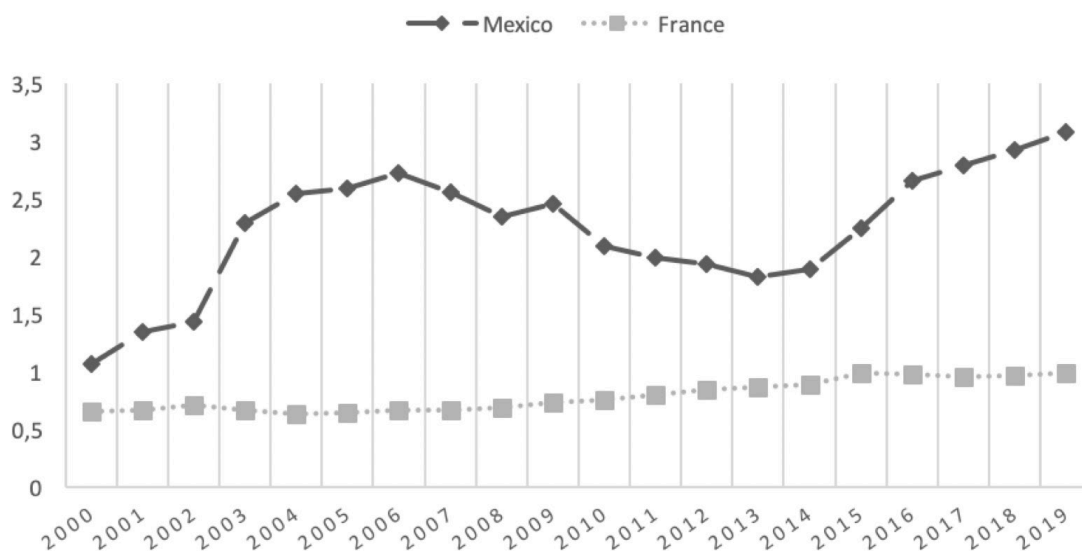
have greater commercial opening more, as is the case of Mexico, when strong economies manage to remain with a stable internal market.

Finally, for Mexico, remittances represent a key source of income, as migrant workers send part of their earnings to family members who have stayed in the country of origin. Different works on the impact of remittances on development have raised the subject to the discussion, which could lay the groundwork for better regulation and better understanding of their trends (Bettin & Zazzaro, 2012; Faini, 2002; Giuliano & Ruiz-Arranz, 2009; Nsiah & Fayissa, 2013).

The income received by families that stayed in their home countries represent an alternate (sometimes the only) source of income, especially for the most vulnerable. The destination of Mexican migration is mainly the United States, with a constant flow since the 1982–1983 crisis. The income received by relatives who stayed back home is in a certain way an 'escape valve' in face of the difficult situation for which they migrate. Migration is not exclusive for Mexico, as it can be observed all around the world. Many works have studied migration from North, West, and sub-Saharan African to Europe, and from South and Central America to North America (Holliday, Hennebry, & Gammage, 2019; Massey et al., 1998).

Remittances received by Mexico have increased from 1.02 percent of the country's GDP in the year 2000 to 3.07 percent in 2019. Even in times of crisis, as it was in 2007–2009, the level of remittances remained high. The year 2006 was one of significant growth, reaching 2.72 percent of Mexico's GDP. In later years there has been a gradual decrease, until it increased again reaching a historical maximum in the year 2019.

FIGURE 5. PERSONAL REMITTANCES RECEIVED FROM MEXICO AND FRANCE (IN PERCENTAGE OF GDP)



Source: Own elaboration with data from World Bank, 2020.

In the case of France, outgoing migration represents 3.3% of the population and is mainly carried out toward Spain, the United States, and the United Kingdom, consisting mainly of individuals who consider that their chances of professional success are higher abroad, with negative net migration of 845,000 from 2006 to 2013 (Dumont, 2016). Migrations occur mainly in the euro zone in such a way that they are allowed for members of the Schengen Area (with the exception of migration to the United States). Incoming remittances have had a small increase from increased from representing 0.65 percent of the country's GDP to 0.99 percent in 2019. The weight of remittances, as in many developed countries is relatively low and stable in the long run.

4. EMPIRICAL FINDINGS

4.1. EVIDENCE FROM MEXICO

The impact of the opening of markets on the development of Mexico is measured by estimating an econometric model of Autoregressive Vectors (VAR). The existence of unit roots in the variables for Mexico (MHDI, MPI, MFDI, MTOI, and MRE) is explored through the Augmented Dickey-Fuller Test,

for the sample time series of 2000–2019. The results are presented in Table 2. They show that all the series show unit root and become stable in the first difference, and the test indicates that the more negative the result, the stronger the rejection of the null hypothesis, and there is a unit root for a certain level of confidence (Cheung & Lai, 1995).

TABLE 2. UNIT ROOT TESTS USING AUGMENTED DICKEY-FULLER, MEXICO

Test for Unit Root in level					
	MHDI	MPI	MFDI	MTOI	MRE
Intercept	-0.84360	-1.78689	-1.54638	-1.98984	0.00234
	0.8679	0.3456	0.5789	0.1235	0.8698
Trend and intercept	-2.09467	-2.97456	-6.98347	-1.56743	-2.56780
	0.1456	0.0652	0.0234	0.0674	0.0845
None	-2.95234	0.57798	-0.04567	-0.98567	2.56789
	0.04562	0.7563	0.4702	0.2356	0.9854
Test for Unit Root in first difference					
	MHDI	MPI	MFDI	MTOI	MRE
Intercept	-8.98345	-2.76533	-7.94235	-18.43545	-7.98452
	0.02346	0.03709	0.00123	0.00235	0.00234
Trend and intercept	-9.23674	-1.95672	-7.92367	-19.23679	-7.57002
	0.0268	0.1845	0.0376	0.0027	0.0031
None	-7.257256	-1.67978	-7.45124	-16.82678	-3.49623
	0.0102	0.0056	0.0450	0.0000	0.0023

Source: Own elaboration.

To ensure that the residuals of the model are white noise,³ the determination of optimal number of lags for the VAR model is illustrated in Table 3; according to Final prediction error and the Akaike information criteria, the optimal number of lags will be six. Furthermore, to test the correct specification of the model, several tests were carried out: normality, autocorrelation, and heteroskedasticity (see Table A1 in the appendix).

To determine the existence of long-term relationships between the study variables, and to be able to transform the VAR model into a CVAR model, the Johansen Trace test was performed (Table A2), and according to the tests of the Trace and the Maximum Own Value, there are at least six cointegration vectors. Once the pertinence of the cointegration has been corroborated, it is necessary to corroborate the endogeneity of the system. Table A3 includes

³ It is white noise when no observation influences the zero mean and constant variance in a stationary series.

the results of the Granger causality test and affirms that the estimated model is endogenous; therefore, any of the variables are endogenous, and it is not imperative to perform tests of endogeneity.

TABLE 3. OPTIMAL LAG LENGTH OF VAR, MEXICO

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-128.346	NA	3.45e-06	3.92379	4.013678	4.08357
1	100.5795	42.23685	6.22e-04	-1.57808	3.570864	-1.56890
2	128.0689	49.53452	5.97e-08	-1.98002	-1.298578*	-1.57809*
3	179.8346	40.56789	5.66e-07	-2.85689	0.135680	-1.49768
4	183.9684	44.12468*	4.968e-07	-2.78578	0.692687	-1.39222
5	238.3575	41.58904	3.80e-08*	-3.389679*	1.23689	-1.34790

Information criteria: Akaike (AIC), Schwarz (SC) and Hanna-Quinn (HQ).

Source: Own elaboration.

The normalized cointegration vector was chosen at the significance level of 0.05, considering the most adequate relationship in economic terms and according to what is being tested; the estimation is chosen without intercept and with a linear deterministic trend, as follows:

MHDI	MRE	MPI	MFDI	MTOI
1.000000	-0.072367	-0.011347	-0.014794	-0.013579
	(0.00359)	(0.00046)	(0.00321)	(0.01886)

The first equation being:

MHDI	MRE	MPI	MFDI	MTOI
1.000000	-0.072367	-0.011347	-0.014794	-0.013579
	(0.00359)	(0.00046)	(0.00321)	(0.01886)

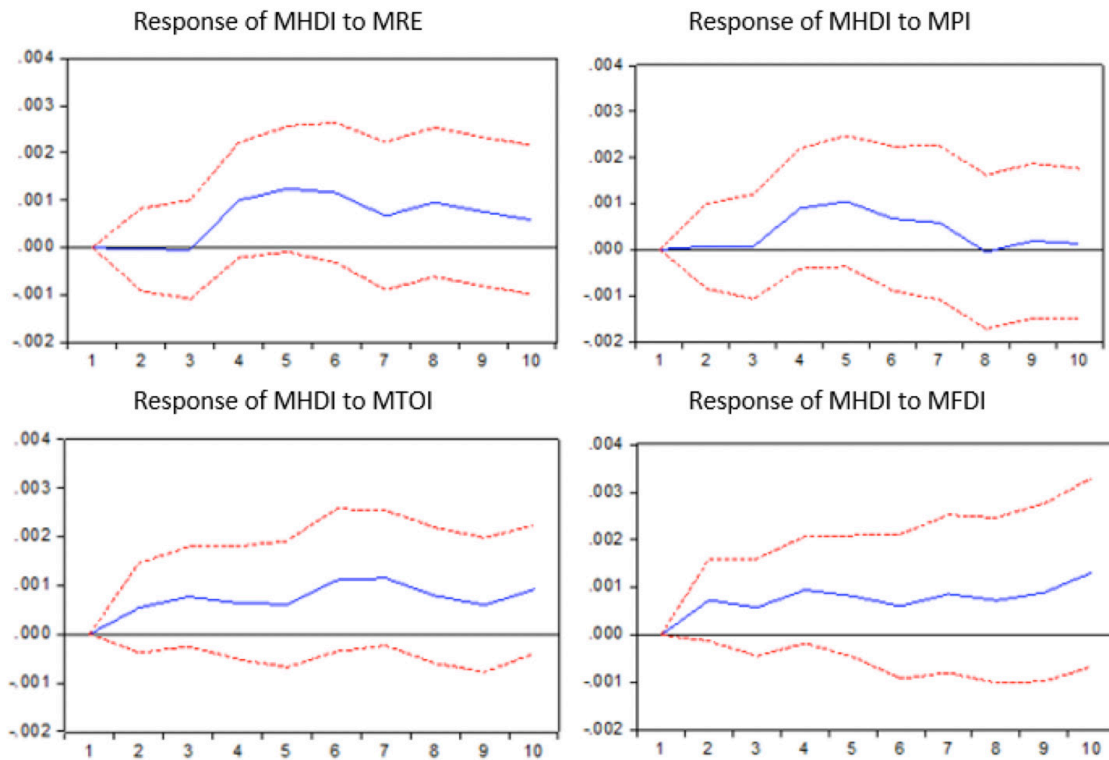
Clearing the equation:

$$\text{MHDI} = 0.072367 * \text{MRE} + 0.011347 * \text{MPI} + 0.014794 * \text{MFDI} + 0.013579 * \text{MTOI} \quad (1)$$

The results show a positive impact of the opening of capital markets, trade, and migration on the HDI for the period 2000–2019 in Mexico. It can be said that the elasticity is low for all the explanatory variables; the impact of each in the order of importance is, first, migration, represented by remittances (0.072367), FDI (0.014794), the trade opening (0.013579) and capital markets, symbolized by portfolio investment (0.011347). Consequently, the opening of markets and migration has a marginal positive impact on the development of Mexico. Finally, the dynamic interaction between the study variables is shown in Figure 6.

The increase in remittances has a positive effect on the MHDI, but the effect is not immediate; it occurs from period $t+3$. Trade opening also positively

FIGURE 6. RESPONSE IMPULSE FUNCTIONS, MEXICO



Source: Own elaboration.

impacts in a non-immediate way, and a shock in the MTOI generates a positive effect from the period $t + 3$ and vanishes in the period $t + 8$. The effects of the opening of financial markets are positive, but contrary to the previous ones, the effect is immediate and with a longer term.

4.2. EVIDENCE FROM FRANCE

Following the same method, this section seeks to determine the effect of internationalization on human development of France by looking at migration, capital markets, and trade. A VAR model was estimated, and Table 4 includes the results of the Dickey-Fuller Test applied to the variables FHDI, FRE, FPI, FFDI, and FTOI. The presence of unit roots is tested in all series, and it is evident that they become stable in the first difference.

The determination of the optimal number of lags for the model is shown in Table 5; the optimal number of lags ranges from one (Schwarz and Hannan-Quinn) to three (Final prediction error, Akaike, and sequential modified LR test statistic).

To stipulate the presence of long-term relationships between the analyzed variables and estimate a CVAR model, the Johansen Trace test was performed (Table A4); the Trace and Maximum Own Value tests denote the presence of at

least five vectors of cointegration. A test is carried on the specification of the model (Table A5) and the endogeneity of the system (Table A6).

Once the correct specification of the model, the endogeneity of the system, and the relevance of cointegration have been ratified, the different cointegration vectors normalized to the 0.05 level of significance are examined, and based

TABLE 4. UNIT ROOT TESTS USING AUGMENTED DICKEY-FULLER, FRANCE

Test for Unit Root in level					
	FHDI	FRE	FFDI	FPI	FTOI
Intercept	-0.402565	-0.345688	-1.547797	-0.036545	-1.434666
	0.4368	0.3579	0.0478	0.5679	0.0669
Trend and intercept	-3.578961	-3.578982	-1.789903	-6.246684	-4.668994
	0.3567	0.0235	0.0678	0.0023	0.0024
None	-2.46789	-1.45478	-0.85786	-1.590457	-0.046700
	0.0032	0.1722	0.3872	0.2355	0.5790

Test for Unit Root in first difference					
	FHDI	FRE	FFDI	FPI	FTOI
Intercept	-9.935773	-15.05678	-7.565785	-3.343654	-6.534657
	0.0034	0.0046	0.0000	0.0023	0.0001
Trend and intercept	-9.467890	-18.30785	-3.68909	-2.578980	-4.988865
	0.0001	0.0000	0.0002	0.0001	0.0021
None	-6.27989	-5.346789	-5.689000	-4.7987090	-8.32578
	0.0001	0.0000	0.0000	0.0001	0.0002

Source: Own elaboration.

TABLE 5. OPTIMAL LAG LENGTH OF VAR, FRANCE

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-31.46589	NA	1.35e-04	1.195478	1.567578	1.987423
1	122.54671	268.34689	4.56e-05	-2.906216	-2.994367*	-2.39571*
2	139.43673	32.801345	2.97e-06	-2.767989	-1.564478	-1.977745
3	176.35636	24.683744	2.67e-07*	-1.577965	-0.983356	-2.886123
4	201.79296	667.88712*	3.64e-06	-3.189057*	0.543298	-1.974547
5	205.68032	17.578975	4.65e-07	-2.798975	2.132476	-1.259009

Information criteria: Akaike (AIC), Schwarz (SC) and Hanna-Quinn (HQ).

Source: Own elaboration.



on the economic dynamics to be explored, the estimate with intercept and without trend is chosen, and the normalized vector looks like this:

FHDI	FPI	FTOI	FFDI	FRE
1.000000	0.000439	0.289546	-0.782345	0.032145
	(0.00005)	(0.00434)	(0.07414)	(0.003756)

with

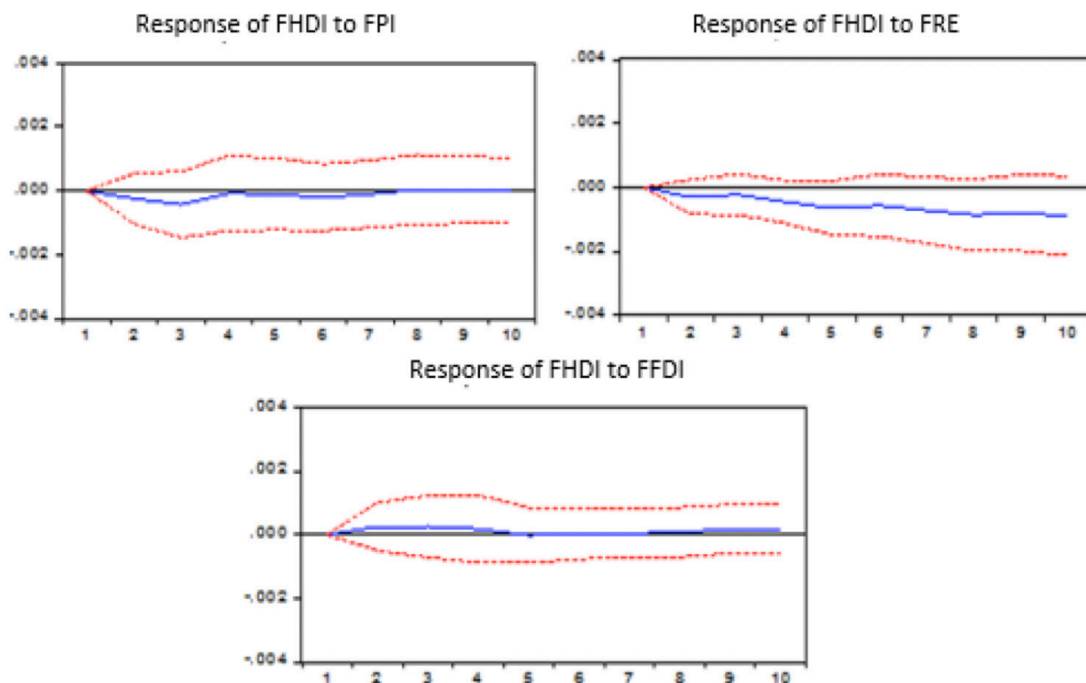
$$FHDI + 0.000439 * FPI + 0.289546 * FTOI - 0.782345 * FFDI + 0.032145 * FRE$$

Clearing the equation:

$$FHDI = -0.000439 * FPI - 0.289546 * FTOI + 0.782345 * FFDI - 0.032145 * FRE \tag{2}$$

The results of the estimation of the CVAR show, over the period 2000–20, a positive but marginal impact of the opening of capital markets measured exclusively by the inflows of FDI, while portfolio investment (FPI) has a negative impact. A negative impact of remittances (-0.032145) also appears, and although the coefficient of the TOI shows a negative sign, it is not statistically significant. Consequently, the HDI of France has only marginally benefited from the opening of capital markets. The dynamic interaction between the significant variables is shown in Figure 7.

FIGURE 7. RESPONSE IMPULSE FUNCTIONS, FRANCE



Source: Own elaboration.

5. CONCLUSION

Neoliberalism and liberalization have led to an increasing process of integration of national economies, with their own strategies followed by each of them to achieve growth and the appropriate level of human development. The objective of this paper was to show how migration, FDI, portfolio investments and trade openness influence Human Development. It was carried out in a comparative analysis between Mexico and France, knowing in advance their differences in terms of development. Nevertheless, the aim was to highlight how the different indicators have different effects in these two economies.

It is observed that FDI positively impacts the HDI in both countries. In France, trade openness is not significant. Remittances are still an essential component in the development of Mexico, contrary to what happens in France. The HDI is a key indicator that can help policymakers to implement measures aimed at improving living conditions and reduce existing inequalities, leading to an adequate level of well-being.

After comparing the results of the econometric estimations, they highlight that trade openness, capital markets, and migration have had differentiated effects in both countries. The converging factor is the FDI, which has a positive impact on HDI in both countries. In France, trade openness is not significant, probably because it has not reached the levels that Mexico has and shows a level of endogeneity of trade relationships. A positive shock on FDI generates a positive impact on the French HDI, while a similar shock on portfolio investment and remittances has the opposite effect. Trade opening in France has not been significant for its human development indicator.

Finally, remittances are still an essential component in the development of Mexico, contrary to France, mainly because Mexico is a “supplier” of undocumented labor, where migrants leave their families behind and commit to send part of their revenues home. Meanwhile, for France, migration is mainly documented to the countries of the Euro Zone and the United States. While migration is seldom considered in the neoliberal and liberalization agendas, remittances contribute more to human development than trade and capital liberalization does.

As the development literature points out, a change in the paradigm of the construction of local public policies is important, which assumes the idea of moving from growth to human development with a territorial (Boisier, 2005; Requier-Desjardins, 2011; Rionda Ramirez, 2010; Rodríguez González & Caldera Ortega, 2013; Vazquez Barquero, 2009). Policy implications need to be nuanced; it is not about discouraging remittances or increasing protectionism. Public policy objectives should focus on certain priorities, as it directly influences the accumulation of social capital, the increase of personal and collective capacities to improve productivity and competitiveness, as well as the increase of the opportunities for social mobility as opposed to trickle-down development.

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ANNEX

TABLE A1. TESTS OF CORRECT SPECIFICATION, MEXICO

Normality		
JARQUE-BERA TEST	11.05899	0.0478
Autocorrelation		
LM-TYPE TEST FOR AUTOCORRELATION with 6 lags		
1	14.67003	0.8749
2	42.56899	0.0524
3	21.45778	0.4812
4	20.00367	0.0985
5	25.68909	0.1192
Heteroskedasticity		
VAR Residual Heteroskedasticity Tests: No Cross Terms		
Chi-sq	Prob	
798.9823	0.5023	

Source: Own elaboration.

TABLE A2. JOHANSEN TRACE TEST, MEXICO

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	1	1	1	1
Max-Eig	1	1	1	1	2

Source: Own elaboration.



TABLE A3. VAR GRANGER CAUSALITY/BLOCK EXOGENEITY TEST, MEXICO

Dependent variable: MHDI				Dependent variable: MRE			
Excluded	Chi-sq	df	Prob.	Excluded	Chi-sq	df	Prob.
MRE	11.46845	5	0.0023	MHDI	17.13967	5	0.0578
MPI	4.386129	5	0.5872	MPI	14.98946	5	0.0078
MFDI	4.952673	5	0.2368	MFDI	8.246789	5	0.1968
MTOI	3.012467	5	0.1267	MTOI	26.90056	5	0.0792
All	35.043197	20	0.0526	All	80.47895	20	0.0591

Dependent variable: MPI				Dependent variable: MFDI			
Excluded	Chi-sq	df	Prob.	Excluded	Chi-sq	df	Prob.
MHDI	12.56890	5	0.0389	MHDI	4.79835	5	0.5034
MRE	9.246800	5	0.0658	MRE	2.98645	5	0.5467
MFDI	5.623561	5	0.2783	MPI	1.26889	5	0.7093
MTOI	14.782314	5	0.0012	MTOI	5.84673	5	0.1894
All	28.421794	20	0.1045	All	16.84504	20	0.7235

Dependent variable: MTOI			
Excluded	Chi-sq	df	Prob.
MHDI	2.38903	5	0.8324
MRE	4.92357	5	0.2005
MPI	8.94578	5	0.1134
MFDI	7.43679	5	0.1294
All	28.89057	20	0.1045

Source: Own elaboration.

TABLE A4. JOHANSEN TRACE TEST, FRANCE

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	1	1	1	1
Max-Eig	1	2	1	1	2

Source: Own elaboration.

TABLE A5. TESTS OF CORRECT SPECIFICATION, FRANCE

Normality		
JARQUE-BERA TEST	6.19578	0.0598
Autocorrelation		
LM-TYPE TEST FOR AUTOCORRELATION with 3 lags		
1	19.84013	0.8753
2	33.29467	0.0837
3	19.35789	0.1509
Heteroskedasticity		
VAR Residual Heteroskedasticity Tests: No Cross Terms		
Chi-sq	Prob	
459.0257	0.6544	

Source: Own elaboration.

TABLE A6. TEST VAR GRANGER CAUSALITY/BLOCK EXOGENEITY, FRANCE

Dependent variable: FHDI				Dependent variable: FPI			
Excluded	Chi-sq	df	Prob.	Excluded	Chi-sq	df	Prob.
FPI	1.896528	4	0.8765	FHDI	8.983231	4	0.0434
FTOI	2.609234	4	0.5499	FTOI	1.947757	4	0.3675
FFDI	1.103410	4	0.8234	FFDI	2.987666	4	0.6712
FRE	2.591024	4	0.2876	FRE	0.875325	4	0.8453
All	7.254667	16	0.7964	All	17.43678	16	0.2467

Dependent variable: FTOI				Dependent variable: FFDI			
Excluded	Chi-sq	df	Prob.	Excluded	Chi-sq	df	Prob.
FHDI	3.934612	4	0.2357	FHDI	3.967388	4	0.2467
FPI	3.680098	4	0.6744	FPI	2.436478	4	0.5324
FFDI	4.658890	4	0.1156	FTOI	3.467889	4	0.5846
FRE	3.574890	4	0.2312	FRE	1.578899	4	0.6787
All	17.46357	16	0.1044	All	19.09035	16	0.18678

Dependent variable: FRE			
Excluded	Chi-sq	df	Prob.
FHDI	0.658900	4	0.8688
FPI	2.976899	4	0.2045
FTOI	1.356789	4	0.2546
FFDI	3.267890	4	0.0985
All	10.46543	16	0.4256

Source: Own elaboration.