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# Economic Inequality meets Social Stratification: An Application of Stratification Economics to Mexico


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# **Economic Inequality meets Social Stratification: An Application of Stratification Economics to Mexico**

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## **Abstract**

This paper argues that explaining both the level and the changes in the inequality of the distribution of economic resources in society requires complementing explanations based on human capital theory with insights from social stratification theory. The integration of both allows explaining horizontal inequalities and explaining the aggregate levels of economic inequality in a society. We exemplify the potential of this integration through a reinterpretation of the literature on economic inequalities in Mexico during the XXIst century. This reinterpretation focuses on how institutions stratify the access to the different components of human capital and how said components are valued in the labour market. We argue that a complete understanding of distributional dynamics in societies with persistent inequalities can be achieved through this interdisciplinary exercise.

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Keywords: Stratification economics, Mexico, Inequality, Income distribution.

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## **Introduction**

In this paper, we argue that explaining the magnitude and dynamics of the distribution of economic resources in any society requires complementing the insights from human capital theory with those of social stratification theory. The integration of both allows explaining horizontal inequalities (Darity Jr., 2005), which have been so far the focus of stratification economics, while at the same time explaining the aggregate levels of economic inequality in a society. We exemplify the potential of this integration through a reinterpretation of the literature on economic inequalities in Mexico during the XXIst century. This reinterpretation focuses on how social structures and their institutions stratify access to the different components of human capital and how said components are valued in the labour market. Thus our contributions are twofold. Firstly, we highlight how stratification theories can supplement human capital theory when explaining distributional dynamics in societies with persistent inequalities. Secondly, we provide the first interpretation of economic inequality in Mexico during the XXIst century from the lens of stratification economics.

As we focus on how access to education, healthcare and occupations is stratified according to sex, ethnicity and economic origin in Mexican society, our analysis follows the tradition of stratification economics as developed by Darity Jr., Hamilton and Stewart (2015) and Davis (2019). Stratification economics emerged as a subfield in economics from the recognition that atomistic explanations are incapable of adequately explaining the systematic differences in economic outcomes observed between societal groups. By introducing the hierarchies observed in other aspects of society back into the workings of the economy, stratification economics seeks to explain how those hierarchies produce a specific income distribution, how they change, and how the new distribution is characterised. This paper focuses on the first two parts of this process, describing how the stratification structures produce the observed levels of inequality in Mexico and how they limit how much change can be produced due to changes in the supply or demand for specific types of labour.

### **The role of human capital in explaining inequality of income.**

A fundamental notion of all neoclassical economic theories of income distribution is that the income received by an individual depends on the productivity of the factor of production (land, capital or labour) in her possession<sup>1</sup>. Under the assumption of a given supply level, factors with higher productivity will be more demanded than those with less productivity, which leads to the former having a higher price than the latter. What is left to explain is the variability in the productivity between different factors of production and between individuals who own the same factor. In the case of labour, the second element implies explaining why, when compared under the same production technique, are there differences in workers' productivity. The theory of human capital seeks to answer this last question.

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<sup>1</sup> For a thorough survey on the different mainstream economic theories of income distribution, we recommend Sandmo (2015).

Human capital is defined as the stock of marketable skills of a person on which she can decide to invest to increase them. Although the idea of skill improvement has been in economics since the writing of its founders, the modern form of human capital theory was first presented by Schultz (1961); Mincer (1958) and Becker (1962, 1964, 1966). Under this framework, individuals invest in their or their children's education, health and training to adjust their productivity to that of the wage level consistent with their desired welfare. The underlying assumption is that healthier, more educated, and skilled workers are more productive than their peers with less health, education or skill. Thus, under this framework, differences in labour income across individuals reflect differences in their human capital.

Under this framework, a rational individual would invest as necessary to obtain her desired human capital level. Consequently, there are only two sets of factors that would explain the existence of differences in human capital levels: differences in the preferences of individuals or restrictions to their investment capabilities. Differences in preferences are differences in the components (and their weights) of the definition of welfare pursued by the individual. If a person values future consumption less than present leisure, then the desired future income is smaller, and the implicit human capital investment is also smaller. However, these differences are not observable and less likely to play a significant role as the range of marketable goods (and thus the need for a monetary income) expands.

This has made restrictions to investment in human capital the most common way to explain differences in the levels of human capital across persons. The type of restrictions analysed in economics frequently refers to a person's inability to use the expected income stream derived from the investment in human capital as collateral. Thus, they are restricted to their current pool of resources to finance their investments. This allows us to explain why poverty might persist: in the face of credit constraints, due to market imperfections, persons in poverty are unable to invest the necessary amount in human capital formation to escape poverty (Balboni et al., 2021; Hai and Heckman, 2017).

However, these explanations do not account for heterogeneity in the returns to human capital or the incidence of the constraints across different societal groups. The variability in the returns to education has been studied in the context of differences in the tasks performed by specific occupations and their relationship with technology and capital (Acemoglu and Restrepo, 2018; Autor, 2013; Goldin and Katz, 2008). However, the theory still fails to explain why specific groups of the population *systematically* end up in specific occupations or why membership to a group implies facing a different structure of returns to education.

We argue that any theoretical framework that seeks to explain persistent inequalities needs to explain these elements. As such, we consider that supplementing human capital based explanations with the insights from sociological stratification theories is a fruitful exercise that allows for a better understanding of the dynamics of inequality in modern societies.

### **Social stratification and inequality**

The sociological study of social stratification is interested in analysing how individuals are placed in certain positions and how the corresponding distribution of opportunities and rewards is socially organised (Erickson and Goldthorpe, 2002). Under this framework, it is necessary to include variables that go beyond individual attributes or capabilities. That is, to consider people's

membership in broader social groups and to analyse the social relations they establish with other members of their own group, with other social groups and with the social structure.

From a sociological perspective, the study of inequality requires a relational approach as it seeks to simultaneously explain the magnitude of the disparity in the distribution of a good given a specific social position and the categories, hierarchical processes, and institutional mechanisms that produce it. The sociological study of inequality is based on the assumption that the form of stratification that structures a society also organises its disparities in allocating a wide variety of goods under a given hierarchical order (Tilly, 2000). In this structure, the position of individuals and their roles define their access to “packages” of rewards of different nature and value (Grusky et al., 2008). From this perspective, inequality consists of the asymmetrical distribution of advantages and disadvantages in society due to power relations mediated by culture<sup>2</sup>. That is to say, for inequality to exist, it is not enough that a difference is produced but that it is combined with a hierarchical ordering that translates distinctions into an inequitable distribution of valuable goods.

Although there is a wide variety of differentiation criteria, some categories mark systematic distinctions in allocating socially valued resources. Some are simple biological markers or birth ascriptions -such as sex, age, or ethnic origin-. However, when these categories acquire meaning in a specific social and cultural organisation that orders and hierarchises them, they produce inequalities that Tilly identifies as persistent since they endure throughout a lifetime or an institutional trajectory (Tilly, 2000). According to this author, persistent inequality arises and perdures because the people who control access to value-producing resources resolve conflicts or distributive dilemmas through categorical distinctions that establish, inadvertently or not, systems of closure or exclusion. This process is consolidated when multiple organisations - whether groups, organisations, or entire social structures - adopt these categorical distinctions as criteria for assigning benefits or disadvantages (Tilly, 2020).

This approach implies recognising several things. First, that, contrary to what some discourses claim, inequality is not a natural feature of societies but a socially produced and reproduced condition. Secondly, although stratification and its disparities are organised according to individual attributes, inequality is a relational process. It is a process where a group’s condition is related to that of its categorical opposite through mechanisms that, directly or indirectly, exclude one of them from the distribution of specific opportunities or goods -even if they participated in their production. Third, inequality is not a random circumstance. It is a historical process entrenched by the institutionalisation of disparity-producing practices that follow the same hierarchies, almost independently of the distributive sphere in question.

In other words, stratification theories show that some of the inequalities interpreted as individual differences in the accumulation of goods, benefits, or skills are actually due to the social organisation of categories (Tilly, 2000). We document this with evidence for the Mexican case in the following sections. First, we will present a general overview of the state of the dependent variable explained by such social processes: income distribution.

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<sup>2</sup> In these asymmetries, power is a form of social relationship that defines the differentiated control of significant resources (Reygadas, 2008: 37-38).

## What do we know of the income distribution in Mexico during the XXIst century?

The dynamics of income distribution in Mexico directly challenge the traditional Kuznetian interpretation of the relationship between economic growth and income inequality (Kuznets, 1955). Instead of an inverted U-shape, the historical evidence for the Mexican case provided by Arroyo-Abad and Astorga-Junquera (2017), Castañeda-Garza and Bengtsson (2020) and Bleynat, Challú and Segal (2021) shows persistence in high levels of income inequality before, during and after the beginning of the process of structural transformation. Although inequality increased during the decades of accelerated industrialisation (1940-1980), it failed to diminish in the two decades before the start of the XXIst century.

According to the empirical literature, the coming of the XXIst century did not represent a turning point in the subject. The literature that corrects for the underestimation of capital income in the household surveys has identified that the distribution of total income in Mexico during the XXIst century remains very unequal<sup>3</sup>. Although the point estimates vary depending on the correction methodology employed, the Gini coefficient for total income in Mexico during the first two decades of the XXIst century remained between 65 and 70 points (Reyes, Teruel and López, 2017; Del Castillo-Negrete-Rovira, 2017a; Bustos and Leyva, 2017; Campos-Vázquez, Chávez and Esquivel, 2018, De Rosa, Flores and Morgan, 2020). This represents a gap of between 10 and 15 points with respect to the estimates originating from the survey raw data.

The reason for such a large gap lies in the degree of concentration of capital income among the top income earners of the distribution (Ranaldi, 2021). In aggregate terms, it is worth noting that the share of total value added in the Mexican economy paid as retribution to capital represents about two-thirds of the total product in the economy per year. This share also increased constantly through the first two decades of the XXIst century (Samaniego, 2017; Ros, 2018; Ibarra y Ros, 2019). The high degree of concentration of capital income and the large share of the total product that it represents can be partially explained by the high degree of concentration of productive capital in a small percentage of firms and the high degree of concentration of the financial assets in the Mexican stock market (Del Castillo Negrete Rovira, 2017b)<sup>4</sup>.

Although income derived from capital represents the largest share of total income in the Mexican economy, most of the population relies on their labour income. During the first half of the first decade of the XXIst century, the inequality in this type of income distribution decreased (Lustig, López-Calva and Ortiz-Juárez, 2013). However, by the second decade of the XXIst century, inequality returned to the levels of the century's beginning (Campos-Vázquez and Lustig, 2019)<sup>5</sup>.

Underlying these changes in the distribution of labour income are a series of dynamics in the Mexican labour market regarding the workers' average education level and their work experience. Specifically, the literature has found a systemic increase in the relative supply of highly educated workers throughout the XXIst century. Consequently, the wage premia obtained

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<sup>3</sup> On the different problems present in household income surveys and the different correction methods in general we point the reader to the review by Lustig, (2020). For the particularities of the Mexican case, we recommend the survey by Cortés and Vargas, (2017).

<sup>4</sup> Due to the scarcity of disaggregated information on capital, it is not possible to analyse how access to it is stratified across gender and ethnic lines, as Petach and Tavani (2021) do for the US case

<sup>5</sup> Going from a Gini coefficient of 0.50 in 2006 back to 0.55 in 2014.

from high school and college education fell, which propelled the reduction in inequality from 2000 to 2006. However, after the Global Financial crisis, although the wage premium kept falling, the labour income at the bottom of the distribution fell more than proportionally, increasing inequality. (Lustig, López-Calva and Ortiz-Juárez, 2013; Campos-Vázquez, Lustig and Scott, 2021). This decrease in the wage premium has affected particularly older workers, which, following a human capital-based interpretation, leads Campos-Vázquez, López-Calva and Lustig, (2016) to conclude that this more significant effect represents the effect of skill obsolescence among these workers.

By focusing on the shifts in the relative supply of highly educated workers, the literature can explain the changes in labour income inequality of the last two decades. However, focusing on the changes in the returns on an aggregate level fails to provide a compelling explanation about the *level* on which those changes took place. We argue that a complete understanding of the roots of that 0.55 Gini coefficient requires looking into the stratification that underlies the distribution of human capital from the beginning. We do so in the following section.

### **The stratification of the access to human capital in Mexico**

In the last twenty years, Latin America has experienced significant political, social, and economic changes. During this period, several political projects with left and centre-left platforms that placed economic and social inequality at the centre of government agendas emerged, marking the beginning of a so-called “post-neoliberal era”. In Mexico, 2000-2020 was characterised by political alternation between three parties with different political orientations, recently taking a turn to the left.

The new millennium found the region with lower poverty levels and more favourable education, health, and housing conditions. However, the disparities in income became more profound due to the characteristics of the growth experienced (Kessler, 2014; Kessler y Benza, 2020; ECLAC, 2021) and the concentration of income in political and economic elites (Reygadas, 2008). The case of Mexico is representative of these trends.

This situation has led some analysts to affirm that what took place in the region during these years was more of an anti-exclusion agenda than a pro-equality one. Although there were efforts to incorporate excluded groups into development, there were no significant changes in the structural bases of inequalities, such as labour, agrarian, environmental, or tax reforms<sup>6</sup> (Kessler y Benza, 2020). Together with the current dynamics of insecurity and violence, the absence of structural transformations generated new forms of inequality expressed in the fragmentation of the quality of services, residential segregation, among others.

In the following sections, we will see how these relationships have manifested themselves in Mexico over the last twenty years, focusing on how the three key components of human capital -education, health and labour- interact with three principles of structural differentiation: gender, ethnicity and economic position. As it is known, the basis of gender inequality is the hierarchical distinction that transforms a biological difference into hierarchies of power, status and economic

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<sup>6</sup> The case of Mexico is relevant in this regard. In 2011, the country's Political Constitution was amended, obliging the State to safeguard the full exercise of human rights not only in terms of national regulations, but also in terms of the international instruments that the country has ratified.

resources that favour the inequitable distribution of burdens, opportunities and rewards. Asymmetries in terms of ethnicity have deep roots in Latin America that go back to historical processes of colonisation that continue to mark racist patterns of exclusion symbolically. Economic position, defined as belonging to an occupational stratum, is accompanied by economic rewards -typically, income- which in a market society are fundamental for subsistence and participation in practices that bring status and prestige through consumption.

In everyday life, these categories overlap, forming complex configurations that intensify advantages or disadvantages in resource distribution. Nowadays, the “classic” inequalities of gender, race and class intersect in spaces that form relatively new inequalities accentuated by the old categories (Reygadas, 2010). For instance, this is the case of poor working women facing emergent labour precarisation that functionally merge with poverty and the burdens of reproductive work.

### **Access to education**

Mexico’s education system is complex and large. Compulsory education covers preschool, primary, secondary and, since 2013, higher secondary education. In 2018, its total enrollment amounted to more than 30 million students. Most of the system’s funding comes from the State, which in 2017 allocated 6% of gross domestic product (GDP) to this item, of which the public sector contributed 75%. The former figure has been declining since 2014 when it peaked at 6.9% (INEE, 2019).

In the last 20 years, illiteracy dropped below 5% of the total while the percentage of the 15 years or older population without schooling dropped from 10% to 5%. The universalisation of basic education at the primary level is a reality (INEE, 2019), while participation in higher secondary education increased from 16.6% in 2000 to 24% in 2020. At the same time, that of higher education doubled from 10% to 20%<sup>7</sup>. According to the National Council for the Evaluation of Social Development Policy (CONEVAL), educational lag<sup>8</sup> decreased from 21% to 16% between 2008 and 2018<sup>9</sup>. Although completion rates are still a challenge -only two out of three high school students graduate-, the schooling of the Mexican population is a consolidated process at the basic levels, and there are signs of expansion towards higher levels. However, the Mexican educational system faces challenges of availability, access, and quality crossed by hard categories of structural inequality such as gender, ethnicity, and class.

In terms of gender inequalities, Mexico has made significant progress in reducing educational gaps related to attendance, permanence, and school cycle completion among women. The distribution of school attendance at the primary level is practically equal between men and women, and women are majority at the upper secondary and higher education levels (CONEVAL, 2018a). Governments have promoted this change mostly with cash transfer programs conditional on school attendance, with more significant scholarships for women’s education<sup>10</sup>. Adolescence, however,

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<sup>7</sup> Estimates based on the 2000 and 2020 Population Censuses.

<sup>8</sup> The percentage of people in schooling age who do not attend school or did not conclude the educational level corresponding to school regulations when they were of school age (CONEVAL, 2018c).

<sup>9</sup> Statistical annex of poverty measurement in Mexico.

<sup>10</sup> Until 2020, this function was fulfilled by the PROSPERA program (formerly PROGRESA or OPORTUNIDADES), an intervention that emerged in 1997 and lasted through different governments, until it was



continues to be a difficult period for women's education, particularly for those who accumulate economic and social disadvantages. Mexico ranks first in teenage pregnancies among OECD countries; together with marriage, they are among the leading causes of school dropout among adolescents, only after lack of economic resources (CONEVAL, 2018b).

Ethnicity adds a layer of structural exclusion. Geographic isolation and poverty defy the expansion of education. Although the Mexican State has created intercultural and distance education models, the educational performance of native groups is still the lowest of the entire population. Among this population, illiteracy levels are higher than those of their non-indigenous peers, attendance rates are the lowest at all levels, and their educational lag, although reduced over time (37.6% in 2008 to 31.1% in 2018), duplicates that of the non-indigenous population (20.1% and 15.4%, respectively). The lack of physical and economic accessibility, the scarcity of educational materials in native languages, and the discontinuation of intercultural models discourage longer educational trajectories among the indigenous population (CONEVAL, 2018a; INEE, 2019).

Economic conditions are the most important factor in access, permanence, and achievement in education. According to the now-disbanded National Institute for the Evaluation of Education (2019), among the population living in extreme poverty, attendance rates go from 77.5% between 12 and 14 years of age to 48.4% between 15 and 17. In 2010, four out of every ten people in the first income quintile attended upper secondary education, while in the highest quintile, the proportion rose to three out of every four. In 2018 the gap narrowed, but the difference was still striking: five out of ten versus eight out of ten, correspondingly. In higher education, the trend is similar, but the gaps are even more extensive and showed no reduction in the referred period: only 16% of the first quintile received higher education, while almost half of the wealthiest quintile did the same<sup>11</sup>.

Finally, the quality of education services is a generalised problem that challenges the right to education. According to standardised tests, in 2018, only 23%, 13.7% and 10% of primary, secondary and high school students, respectively, obtained satisfactory results in mathematics. The satisfactory percentages rose to 18%, 26%, and 38%<sup>12</sup> in language and communication skills for the education levels above. Although low student performance is a general problem, results tend to worsen in regions with higher concentrations of poverty. The expansion of private education in the country, concentrated in higher school levels, does not necessarily improve the quality of education, as it is more of an expanding market that has found a profitable business in the need for educational credentials amongst the middle and lower-middle classes (Cuevas, 2015).

## **Access to health**

Mexico's health system was born with a fragmented institutional design that has favoured the reproduction and exacerbation of inequalities. From its origins nearly a century ago, public health care is divided between those who had legally defined health rights, subjects of the State's

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dismantled in the current administration. In its place various scholarship programs were created, without distinctions between men and women.

<sup>11</sup> Data from the Social Rights Information System (SIDS) of the National Council for the Evaluation of Social Development Policy (CONEVAL).

<sup>12</sup> Data from the Social Rights Information System (SIDS) of the National Council for the Evaluation of Social Development Policy (CONEVAL).

assistance, and those with no affiliation (Gómez and Frenk, 2019). Therefore, public health care is characterised by differentiated infrastructure, multiple sources of financing, different coverage packages, and the absence of a national health information system that brings together data from both the public and private sectors (Coneval, 2018b). Over time, the population lacking access to health services has decreased significantly due to the creation of a set of institutions and programs designed to address the health of economically, socially, and territorially disadvantaged populations (Gonzalez and Scott, 2010; Ruelas, 2012). However, one out of every six Mexicans suffers deprivation of access to health services (compared to four out of every ten in 2008).

Low levels of public health spending in the country, which represents 5.5% of GDP, partially explain this myriad of shortcomings. Since 2017 over half of all health care was funded by the government, well below the OECD average at 73%. Moreover, the country has the second-highest proportion of out-of-pocket health expenditures, accounting for an additional 41% of health spending (OECD, 2019).

Although Mexico has advanced in the demographic and epidemiological transitions<sup>13</sup>, the interaction between these two processes has given way to new health profiles. These are marked by population ageing and the increase in chronic degenerative diseases such as diabetes, hypertension, ischemic heart disease, and malignant tumours, to which much of contemporary morbidity and mortality is attributed (OMENT, 2019; Mino-León et al., 2019; Soto, Moreno and Pahuá, 2016). In addition, Mexico ranks first in overweight and obesity in the world: almost three-quarters of the adult population are overweight or obese, and infants are the most likely to be overweight among children in OECD countries (37.7% and 31.4%, respectively) (OECD, 2019).

The structural problems of the national health system emerged clearly in the SARS-COV-2 health emergency, both on the demand and supply side (Nájera, 2020). At the beginning of June 2021, Mexico counted more than 2.4 million infections and more than 220 thousand deaths. The concentration of infections in sectors of greater socioeconomic and geographic vulnerability reflects the combined impact of the pandemic and structural inequalities. According to a recent study, 94% of deaths due to COVID-19 correspond to manual and operative workers, homemakers, retirees and pensioners with low incomes. Only 25% of those infected received hospital care in public institutions, where the availability of intubation and intensive care procedures was low. As a result, 92% of deaths occurred in the public sector (Cortés-Meda and Ponciano-Rodríguez, 2021).

As we can see, health outcomes in such a system are intertwined with structural inequality. Concerning women, one of the most pressing problems is maternal mortality. In 2018, 33 deaths related to pregnancy, childbirth, or puerperium occurred for every 100,000 live births, a figure far from the target set in the Millennium Development Goals of 22 deaths by 2015 (Argüello, 2020). Maternal mortality is higher in regions with lower economic development, among speakers of indigenous languages, and with less access to institutions that provide sexual and reproductive health services (Lazcano-Ponce et al., 2013). The causes of female mortality are also the result of inequities at various levels. Cervical-uterine and breast cancer are the first and third leading causes

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<sup>13</sup> The infant mortality rate dropped from 220 in 1992 to 12 per 1000 live births in 2015 (Soto and Pahuá, 2016) and life expectancy has increased to reach 75 years in 2019. The national vaccination system has virtually universal coverage among children under one year of age (CONEVAL, 2018b) and morbidity and mortality from common infections, reproductive problems or malnutrition-related diseases have decreased considerably.

of death among women between 30 and 59. Together with diabetes, which has doubled its lethality (from 42 deaths per 100 thousand inhabitants in 2000 to 86 in 2016) (Coneval, 2018b), they reflect the profile of a health system that has difficulties in targeting prevention and developing a gender component.

One of the significant challenges facing the national health system is to strengthen its presence in rural areas. In 2018, 4.2 million people living in rural localities still lacked access to health services; although this figure is half of what it was in 2008, the challenge is enormous. Likewise, the risk of dying from communicable diseases, malnutrition, or reproductive problems is 36% higher in the regions of the country with the highest percentage of the population in poverty, where the presence of rural and indigenous people is usually higher (Soto, Moreno and Pahuja, 2016).

Economic status is strongly related to physical and emotional well-being (Wilkinson and Pickett, 2011). The available information suggests that although affiliation to health services does not show notable disparities between income deciles -given the creation of complementary programs for more disadvantaged populations- the quality of services is fragmented. The close linkage of formal work with access to consolidated public health institutions reserves services of lower quality and resolution capacity for the informal working population (more than half of the employed population in the country) and their families (Nájera, 2020; Echarri, 2018).

### **The Insertion to the Labour Market**

A persistent characteristic of the Mexican labour market is the low rate of female labour force participation. By 2019, 44.7% of all women with more than 15 years of age<sup>14</sup> participated in the labour market, 7.7 percentage points below the Latin American average female labour force participation rate of 52.4% and among the lowest in the continent<sup>15</sup>. The low rates of female labour force participation have been a historical feature of the Mexican economy, even when both economic growth (Serrano et al., 2019) and increased educational attainment among women (López-Acevedo et al., 2020) have led to an increase in the participation of women in the labour market.

This can be linked to the effect that traditional social norms on female autonomy have on female labour market participation and the different ways they shape the insertion of women into the labour markets (Oliveira y Ariza, 2000; García and de Oliveira, 2004). By placing intrahousehold care work almost exclusively on the shoulders of women, these norms produce an environment adverse to the participation of women in the labour market. As a result, unless a woman can displace this burden to another household member, namely, another woman, the likelihood that she participates in the labour market diminishes (Anderson and Dimon, 1998; Gong and van Soest, 2002). The existing evidence suggests that female market work acts as a supplementary source of income during times of economic hardship and that it recedes as the situation improves (García, 2001; Pedrero-Nieto, 2003; Parker and Skoufias, 2004). This produces a counter-cyclical behaviour in the rate of female labour market participation in Mexico: expanding when the economy contracts and falling when the economy grows (Serrano et al., 2019). It is only when the income of the traditional income earner diminishes that women are incentivised to participate in the labour market.

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<sup>14</sup> 15 years of age is the minimum required age to be legally employed in Mexico.

<sup>15</sup> Data from the World Development Indicators, World Bank.

Studying the intergenerational transmission of these norms, Campos-Vázquez and Vélez-Grajales, (2014) identify that the critical factor in the transmission is the familiarity of the male partner with more equitable household arrangements. Where the male partner was exposed to a more equitable distribution of care work during childhood, the likelihood that in adulthood her partner participated in the labour market was higher than in the cases where this did not happen. This suggests that men in the household act as the enforcers of the norms, which is consistent with the existing evidence on intrahousehold violence (Beleche, 2019; García-Ramos, 2021)

A series of recent empirical analyses identifies that Mexican employers give importance to skin tone, body weight and gender when deciding which candidates to interview for a job position (Arceo-Gómez and Campos-Vázquez, 2014*b*, 2019; Campos-Vázquez and González 2020). Characteristics such as a darker skin tone (Arceo-Gómez and Campos-Vázquez, 2014*b*, 2019; Campos-Vázquez 2020) and an overweighted physical appearance (Campos-Vázquez and González 2020) are used to penalise the participation of women in the labour market, while in the case of men they are irrelevant.

The importance given to these characteristics shapes the probability of employment and affects the type of employment that a person ends up having. Consequently, systemic differences in occupation patterns arise according to the attributes used to distinguish between groups. It is worth noting that with the exemption of experimental designs, it is impossible to separate both effects of the stratification process empirically<sup>16</sup>.

In the case of the role played by sex in the stratification of the Mexican labour market, the evidence suggests that the labour income gap experienced by women with respect to men of similar qualifications corresponded to 9% of the total labour income (Mendoza González, Cardero García y Ortiz García, 2017). However, this does not consider the effect that stratification has on labour market participation. Once this effect is taken into account, the gap more than doubles (Arceo-Gómez y Campos-Vázquez, 2014*a*). Among the factors that explain this gap is the policing of female bodies, which leads to the penalisation of specific characteristics in women and not in men. This is the case of body weight (Campos-Vázquez y Núñez, 2019) and maternity (Aguilar-Gómez, Arceo-Gómez y de la Cruz Toledo, 2019). In terms of occupational segregation, both Calónico and Ñopo (2009) and Orraca, Cabrera and Iriarte (2016) identify systematic differences in the occupations performed by men and women in Mexico. Both studies point out that the difference in the returns to observed characteristics within the same occupation plays a major role in explaining the wage gap, which supports considering sex as a stratifying variable in the Mexican labour market.

In the case of skin colour, Campos-Vázquez and Medina-Cortina, (2019). identify the existence of an earnings premium for whiter skin tones even after controlling for several covariates related to work productivity. The systematic differences by skin tone are also observed when a broader definition of economic resources is considered (Monroy-Gómez-Franco and Vélez-Grajales, 2020). Using a linguistic approach to identify different ethnicities, a robust finding in the literature is an earnings penalty against Spanish non-speakers. The different decomposition analyses on this penalty identify that 40% of it cannot be accrued to the differences in observable characteristics. This implies that the returns to these characteristics

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<sup>16</sup> For the formal proof of why the inclusion as a control variable of a variable that is determined by the same process as the outcome variable we recommend Wooldridge, (2006).

are different depending on which linguistic group (Spanish speakers or non-speakers) a person belongs to (Cano-Urbina and Mason, 2016; Aguilar-Rodríguez, Miranda and Zhu, 2018; Canedo, 2019). In the case of occupational segregation, the evidence is less clear. Villarreal (2010) identifies evidence of a systematic concentration of dark-skinned workers at the lowest strata of the occupational distribution, but Flores and Telles (2012) find that this concentration is related more to the economic origin of the workers. As a whole, both provide evidence of the interlocking of both stratification processes: the one based on economic origin and the one based on ethnic origins.

In the case of economic origin, the literature has identified that the intergenerational transmission of earnings inequality in Mexico is substantial, ranging between 50%-70% of the inequality being transmitted between generations (Campos-Vázquez, Delgado-Barrera and Vélez-Grajales, 2020; Daza-Baez, 2021). The same occurs when household assets instead of earnings are considered (Vélez-Grajales and Monroy-Gómez-Franco, 2017). However, in terms of their effect on a person's occupation, the evidence suggests a low correlation between the position occupied in the occupational strata and the economic origin (Solis, 2018).

### **Analysing Mexican economic inequalities with a stratification lens**

The labour market constitutes the arena where the effects of the stratification processes that influenced earlier stages in a person's life come to fruition. It is also another layer where these processes exert their influence. This implies recognising that an exclusive focus on the dynamics of the labour market is only helpful to explain the short-run behaviour of the distribution of economic resources in a society. It is necessary to consider the institutional determinants of the social distributional arrangement to explain the long-run behaviour of inequality, and thus the level on which the short-run variations occur. The processes of social stratification are the expression of this social distributional arrangement, as they restrict the access of different social groups to specific sets of rewards.

The evidence on the evolution of the labour income distribution points to a general deterioration of the labour market conditions during the first two decades of the XXIst century. Although this deterioration had a larger effect on workers with more education, the evidence at the aggregate level suggests that workers with lower educational attainments were also negatively affected. The decline of the wage premia to upper education is associated with the reduction of the educational gap between men and women. This implies that although the educational capital stock of men and women equalised, the level of returns obtained by women who increased their educational attainment was lower than the preexisting one. Even when the gap between men and women in labour income terms was closing, the closure occurred in the context of a general precarisation of the labour market.

However, it is worth noting that these dynamics did not affect what seems to be the systematic disadvantage of ethnic minorities. The inequalities in terms of health and education with respect to the rest of the population persisted during the first two decades of the XXIst century and are compounded by the penalisation they suffer in the labour market. This indicates the persistence and prevalence of the stratification structures that constrain the space of development of Mexican indigenous people.

Among the dimensions of stratification that we surveyed, it is clear that economic resources play a crucial role in determining access to both health and education when either of those elements remains scarce. Thus, although factors such as the near universalisation of basic education have helped to decouple the access to that educational level from economic resources, progression to upper levels remains primarily determined by the number of resources available to the household. This explains part of the intergenerational persistence of earnings and economic rank. In relative terms, higher educational attainment implies a higher income. Consequently, economic origin as an enabler to perform specific educational transitions helps preserve the relative position of origin. It is worth noting that even when occupational stratification has diminished during the analysis period, the differences at the interior of each stratum remain substantial. Although the porosity of occupational echelons has increased, the weight of elements such as sex or economic origin at the interior of those echelons remains impervious.

These dynamics imply a series of mechanisms that preserve the relative position of certain groups in the distribution of economic resources in Mexican society. In particular, it highlights the role of the economic resources of origin in guaranteeing the attainment of enough “human capital” to retain the same relative position. Although changes in the labour market conditions have led to a more compact distribution of labour income due to the fall in the returns to education, the level of inequality in the distribution remains high. This implies that even in the face of a deteriorated labour market, the mechanisms that preserve the relative distances between groups depending on their conditions of origin are still largely at play.

The whole story of Mexican income inequality is one not only of technical determinants but more so of institutional ones. The interlink of the different stratification processes explains why even though the distribution of human capital in the country has become equalised, we still see significant levels of inequality. The weight of these stratification processes can be measured through the importance of inequalities in circumstances of origin on total income inequality<sup>17</sup>. Both Monroy-Gómez-Franco, Vélez-Grajales and Yalonetzky (2021) and Vélez-Grajales, Monroy-Gómez-Franco and Yalonetzky (2018) identify that differences in the circumstances of origin generate at least half of the total inequality observed in the country.

The implications of this discussion are critical in interpreting the economic performance of each member of the Mexican population. Differences in the accumulation of human capital and the possibility of exchanging it for a better social and economic position do indeed exist. However, contrary to what the classical human capital perspective and its methodological individualism suggest, they are not necessarily the product of individual decisions guided by different rationalities but by socially organised arrangements that contribute to defining the distribution of opportunities, advantages and rewards. The fact that these are systematically and historically concentrated in certain social groups forces us to think of human capital accumulation processes not only in individual but also in relational terms.

### **Future avenues of research.**

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<sup>17</sup> The economics literature on inequality of opportunity considers circumstances all those characteristics of the individual that are outside her sphere of control but that nonetheless, influence her life outcomes. For a methodological discussion on the subject see Ferreira and Gignoux, (2011).

The rationality of the distribution of socially valued resources has never been neutral nor coupled to perfect markets. Its logic passes through the sieve of culture and its multiple devices of valuation, classification, and hierarchisation. As a result, social processes of differentiation affect access to opportunities for well-being and development beyond the capabilities and control of individuals. It is not that their attributes, capabilities, and efforts are not important, but they do not operate in a vacuum. They are categories that acquire meaning within the framework of power relations that operates through personal interactions and institutional processes that organise inequality.

Acknowledging this requires alternative theoretical frameworks and analytical tools for more comprehensive explanations of economic inequality. Analysing the differences between personal trajectories in relational terms -as opposed to considering only individual attributes- is essential for several reasons. First, individual characteristics have a social origin; although they are biological traits, their meaning is socially and culturally constructed. Second, individual capabilities are deployed within the framework of interpersonal, institutional, and structural social relations. Third, analysing inequality only in terms of individual capabilities is tantamount to thinking that society is merely an aggregate of parts and not a structure with specific properties. Finally, the methodological individualism behind these approaches leaves out the analysis of inequality, processes of exploitation and opportunity-hoarding, which are the primary mechanisms for the production of social and economic inequality.

We consider that a promising area of research lies at the intersection between the literature on inequality of opportunity and that of social stratification. The economics literature on inequality of opportunity that sprung from the work of Roemer (1998) has focused on identifying the share of total inequality linked to inequalities in the circumstances of origin<sup>18</sup>. But so far, there has been little work on the mechanisms that sustain and generate those inequalities. The explanation of those elements lies squarely in the sphere of stratification theories. Thus, the cross-fertilisation of both bodies of literature seems like a natural extension of both research agendas, particularly in terms of developing a robust theoretical framework on how inequality persists across generations.

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<sup>18</sup> For a recent review of the literature see Roemer and Trannoy, (2015).

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