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## Mexican elderly, migration experiences, and consumption and asset distributions: An explorative analysis

Adultos mayores mexicanos, experiencias migratorias, y distribuciones del consumo y riqueza: Un análisis exploratorio

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### Abstract

In this paper we compare differences in the distributions of consumption and accumulated assets among Mexicans aged 50 and older in 2018 by migration experiences. First, we consider in particular the elderly's own U.S. migration history, and second, whether they currently have descendants in the U.S. For the analysis we use the 2018 edition of the Mexican Health and Aging Study (MHAS). The semiparametric decomposition technique of DiNardo, Fortin and Lemieux (1996) is applied to construct counterfactual distributions that mimic what the consumption and asset levels of those people with migration experiences would have been if they would not have migrated but stayed in Mexico. Results indicate that migratory experiences do not generally imply higher consumption levels. However, we find indications for negative selection effects; *i. e.*, without migration, consumption would have been lower. Therefore, we can generally conclude that consumption benefits from migratory experiences. For accumulated wealth, findings are less clear. Separate analyses for rural and urban areas highlight important heterogeneity. In rural areas, migration has advantages for consumption and assets at older age. For consumption, positive selection regarding own migration history: respondents who could benefit most did actually migrate. In urban areas, differences between migrants and non-migrants are small.

**Keywords:** Migration history, Migrant children, Consumption distribution, Accumulated wealth, Rural vs urban areas, Elderly, Mexico

**JEL classification:** F22, E21, D31, O15

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## Resumen

En este trabajo comparamos las diferencias en las distribuciones de consumo y activos acumulados entre mexicanos de 50 años o más en 2018 según sus experiencias migratorias. En particular, consideramos, primero, el historial migratorio de los adultos mayores hacia Estados Unidos, y, segundo, si actualmente tienen hijos en ese país. Para el análisis utilizamos la versión 2018 del Estudio Nacional de Salud y Envejecimiento en México (ENASEM). Se aplica la técnica de descomposición semiparamétrica de DiNardo, Fortin y Lemieux (1996) para construir distribuciones contrafactuales que simulan los niveles de consumo y activos de quienes tuvieron experiencias migratorias cuando no hubieran migrado sino permanecido en México. Los resultados indican que las experiencias migratorias generalmente no implican mayores niveles de consumo. Sin embargo, encontramos indicios de efectos de selección negativos; es decir, sin migración, el consumo habría sido menor. Por lo tanto, podemos concluir que el consumo generalmente se beneficia de las experiencias migratorias. Para la riqueza acumulada, los hallazgos son menos claros. Los análisis separados para áreas rurales y urbanas resaltan una heterogeneidad importante. En las áreas rurales, la migración tiene ventajas para el consumo y los activos en la vejez. En cuanto al consumo, se observó una selección positiva en función del historial migratorio propio: los encuestados que podían beneficiarse más, efectivamente, emigraron. En las zonas urbanas, las diferencias entre migrantes y no migrantes son pequeñas.

**Palabras clave:** Historial migratorio, Hijos migrantes, Distribución de consumo, Riqueza acumulada, Zonas rurales vs. urbanas, Adultos mayores, México

**Clasificación JEL:** F22, E21, D31, O15

## 1. Introduction

International migration is a phenomenon observed across the world. According to the United Nations (2025), the number of people living outside their country of birth increased from about 153 million in 1990, representing roughly 2.9% of the global population, to approximately 281 million people today, equivalent to around 3.7% of the world population. Although the share of migrants in the global population may appear as only a moderate increase, the absolute numbers of migrants are substantial, reflecting the increasing relevance of migration as a global socioeconomic phenomenon. An important share is labor migration induced by a search for better economic circumstances for the migrants or their families. The impacts of migration in general, and remittances in particular on a broad variety of social and economic outcomes for migrants' families remaining in the country of origin, have been widely studied in the literature, with generally, although not unambiguously, positive impacts on outcomes such as household income, poverty, income inequality, education enrollment, and health (Adams and Page, 2005; Acosta *et al.*, 2008; Adams, 2011; Williams, 2025).

The literature on this subject generally analyzes the impacts of migration or remittances on outcomes about the same time as the remittances have been received. Such studies, focused

on short-term or contemporaneous consequences, incompletely capture the impacts of migration decisions on families in the longer run. If remittances are used for investments, a family may be able to improve its well-being in the long run, even after the migrants have returned to their country of origin. However, if remittances are used predominantly for consumptive expenses, the impacts may disappear as soon as the remittances stop flowing. Although many studies have analyzed the impact of remittances on investment decisions including school enrollment (Amuedo-Dorantes and Pozo, 2010; Adams and Cuecuecha, 2010; Wassink and Viera, 2021; Hossain and Sunmoni, 2022), analysis of the long-term impacts requires longitudinal data, something that is often not available at individual or household-level.

The objective of this paper is to explore the long-term and intergenerational effects at the micro level and is guided by three central research questions. First, has the respondent's own migration history affected the distribution of consumption and accumulated assets at older age? Second, we complement the analysis by investigating whether current migration by the respondent's offspring affects the consumption and assets distributions among older adults in Mexico. Third, are these effects homogeneous across the distribution, or do they differ across it, reflecting heterogeneous life-cycle outcomes? In addition to the central questions, we also address to what extent differences can be attributed to selection into migration versus differences in the returns to characteristics, considering separately the roles of predetermined characteristics and life-course decisions. Finally, recognizing the long-standing tradition of migration from rural areas of Mexico, partly ignited by the Bracero program, we zoom in on the rural–urban distinction, as it may have importantly shaped both migration dynamics and economic outcomes, with possibly more profound impacts in the rural parts of Mexico.

For the analysis we use data for 2018 from the Mexican Health and Aging Survey (MHAS), a survey that traces elderly Mexicans over time through follow-up interviews. The MHAS is representative for Mexicans aged 50 years and older. Questions in the survey not only capture individual and household-level socio-economic characteristics but also permit to reconstruct the migration experiences of the household members. Acknowledging that migration decisions are unevenly distributed over the population, we apply a semiparametric decomposition approach following DiNardo *et al.* (1996), which allows us to construct counterfactual distributions and distinguish between composition and valuation effects across the entire distribution of outcomes.

This paper contributes to the literature in three ways. First, it provides micro-level evidence on the long-term and intergenerational effects of migration on economic outcomes at older ages, moving beyond the predominant focus on short-term remittance effects. Second, it adopts a distributional perspective, identifying heterogeneous impacts that are not captured by mean-based approaches. Third, by explicitly distinguishing between own and children's migration histories, it offers new insights into the intergenerational transmission of economic outcomes associated with migration decisions. We consider that the results are relevant beyond the Mexico–U.S. migration corridor, because the mechanisms behind the decisions to migrate to the U.S. and back are not exclusive for this international border but mimic situations in other parts of the world (ILO, 2024; McAuliffe and Oucho, 2024).

The next section briefly reviews the literature regarding the impacts of migration and remittances on economic and social outcomes. Section 3 introduces the data and addresses the empirical strategy. The nationwide results are presented in Section 4, while Section 5 zooms in on the differences between rural and urban localities. Section 6 concludes.

## 2. Background

The link between international migration and development has been the subject of extensive analysis in recent years. A huge literature analyzing impacts of migration, and in particular of the monetary flows sent by emigrants to their household members who remained at the location of origin has surged. Impacts of remittances on a broad variety of welfare indicators such as poverty (Nuñez and Osorio-Caballero, 2021), inequality (Acosta *et al.*, 2008), education (Zhunio *et al.*, 2012), health and healthcare expenditures (Akresh and Frank, 2008; Mora-Rivera *et al.*, 2024) and food security (Mora-Rivera and van Gameren, 2021) has been documented. Much of this literature has focused on the contemporaneous (short-term) impacts of received remittances on decisions, using (nationally or regionally) representative cross-section data, a set-up that limits the ability to assess the cumulative and long-term effects that migration can have on well-being later in life.

A macro-level-oriented literature has focuses on the long-term effects of migration. Evidence suggests that remittances can form a large share of the national income of low- and middle-income countries (Ratha *et al.*, 2024), and that countries can—but do not necessarily—benefit from remittances by reaching a higher growth path and improve economic performances (Chami *et al.*, 2005; Barajas *et al.*, 2009; Adams and Page, 2005; Cazachevici *et al.*, 2020).

The literature presents gaps in how remittances translate into differences in (short-term) consumption and (long-term) asset accumulation between migrants, return-migrants, and non-migrants. For the Philippines, Quisumbing and McNiven (2010) find that migration without remittances erodes assets and reduces immediate consumption, but that once received, remittances significantly increase investment in housing, durable goods, and education, with positive effects on intergenerational mobility. For Turkey, Eroğlu (2021) shows that return-migrants have the highest levels of wealth accumulation in housing, land, and businesses, while migrants settled in Europe have lower levels than even those who never migrated, showing that place of residence and the relative cost of assets strongly influence the use of remittances. These studies suggest that remittances play a dual role—mitigating short-term constraints while facilitating long-term asset accumulation. However, the extent to which these findings apply to the Mexican context is not straightforward. For example, migration between Mexico and the U.S. is predominantly characterized by geographic proximity and historically high circularity, which implies repeated migration spells and return episodes over the life cycle. This contrasts with the more permanent or contract-based migration for the Philippines and Turkey. As a consequence, in Mexico, migration has historically been male-dominated and closely tied to household survival strategies, whereas in other contexts migration may be more diversified across skill levels and household roles. Moreover, limited access to formal financial instruments and pension systems among older Mexican adults may have led to a stronger reliance on remittances as a mechanism for consumption smoothing rather than long-term asset accumulation. Hence, the relationship between migration histories, remittances, and economic outcomes in later life is context-dependent, and empirical evidence specific to Mexico adds to understand how migration shapes the distribution of consumption and assets among older adults.

## 2.1 Intergenerational decisions: theoretical context

Short-term individual decisions and long-run impacts on (household-level) wealth accumulation and (macro-economic) growth and development intersect when we consider that migration of one household member not only has immediate consequences but also an intergenerational component: parental migration decisions can influence whether their children decide to migrate in the future. Accordingly, the economic situation of an elderly household may be shaped both by their own migration decisions in the (recent or distant) past and by their offspring's migration decisions in more recent or current periods. At a macro-level, for instance, Chami *et al.* (2005) emphasize that remittances help stabilize household consumption but that their contribution to productive investment and aggregate growth is limited. Our analysis complements and extends this perspective by adopting a micro-informed approach that examines how past migration decisions continue to shape household's economic trajectories at older age.

In the context of long-run impacts of one's own migration decision earlier in life, the life-cycle hypothesis (Modigliani and Brumberg, 1954) provides a key analytical framework: it posits that individuals seek to smooth their consumption throughout their lives, saving during their productive years and dissaving in old age. Although this model has been criticized for not accurately reflecting empirical patterns of saving and consumption (Shefrin and Thaler, 1992), it remains useful for understanding how long-term decisions—such as migration—can influence a household's economic trajectory.

For example, in many developed economies, a public pension system enables intertemporal smoothing of consumption, providing certainty against longevity risk and alleviating poverty among the elderly (Barr and Diamond, 2006). However, in a country with a pension system that leaves large shares of the population uncovered and with high migration intensity, such as Mexico, remittances may accomplish the role that otherwise would have been fulfilled by pensions. For example, Rosenzweig and Stark (1989) highlight that migration can serve as an informal insurance mechanism, diversifying income risks across spatially distinct households and stabilizing consumption over time.

In that vein, people decide to migrate because they seek to maximize opportunities, comparing expected benefits with associated costs, while seeing migration as an intertemporal investment. Moreover, Dustmann (2003) demonstrates that return migration decisions are not solely based on wage differentials but also on life-cycle considerations, optimizing the length of stay abroad to maximize long-term household welfare. Migrants self-select by their own skills (Borjas, 1987), rely on networks that reduce costs (McKenzie and Rapoport, 2007), diversify family risks (Rosenzweig and Stark, 1989), plan temporary stays (Dustmann, 2003), and respond to educational incentives (de la Croix and Docquier, 2012). Nevertheless, from a behavioral perspective, it has been argued that remittance-receiving households may not allocate these resources efficiently toward long-term savings, due to biases such as present bias or overconfidence (DellaVigna, 2009; Thaler and Sunstein, 2008).

## 2.2 Migration and elderly: the Mexican context

Research for Mexico similar in spirit to ours is scarce. At the micro level, studies using the first two waves of MHAS data (Wong *et al.*, 2007; Wong and González-González, 2010) show that

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migration earlier in life is linked to greater wealth accumulation in old age, and this effect varies by gender with men benefitting more. Findings dated from 2001 may not be comparable to present times, given important changes in U.S. migration policies and Mexico's non-contributory pensions, among other factors. Similarly, Wong and González-González (2010) not only analyzed wealth but also found that for women disability is associated with having a migration history. Ponce and Beltran-Sanchez (2023), using more recent waves of MHAS but focusing on health outcomes, pointed out that migration background has modest effects on the prevalence of depressive symptoms in old age, with differences across time. Taken together, the evidence highlights both economic and psychosocial consequences of returning to the country of origin, although recent findings on economic impacts remain limited.

In the context of aging in Mexico, it is important to consider that changes in non-contributory pension programs have affected both consumption levels and wealth accumulation among older adults. The first program of this type was implemented in Mexico City in 2001 (Juárez and Rodríguez, 2021), followed by similar schemes in several other states, while a federal program focused on people aged 70 and over in localities with fewer than 2,500 inhabitants, since 2007 gradually expanded its coverage until it covered the entire country in 2012. Subsequently, in recent years, a universal model of non-contributory minimum pensions—including for return-migrants—has been consolidated, which has increased consumption in this segment of the population. Importantly, while retired formal sector workers in Mexico may receive a pension based on their social security contributions, migrants often return in a situation of vulnerability because of limited contributions into or transferability from the U.S. pension system.

Important for our sample of Mexicans aged 50 and above in 2018—hence, born in 1968 or well before—is that the U.S. immigration policy since World War II has undergone multiple changes. For the eldest—and also for the parents of the 'younger elderly'—the Bracero Program (1942-1964) allowed for the temporary migration of Mexican agricultural workers, filling labor shortages in the U.S. (Sheftel, 2023). Its termination left a legal vacuum in labor migration mechanisms, although the growing demand for low-wage labor in the U.S. kept channels of undocumented migration open, especially from rural areas of Mexico. That led to the Immigration Reform and Control Act (IRCA) of 1986, which combined sanctions on employers with the legalization of three million immigrants. With the enactment of the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996, penalties against undocumented migration were tightened, grounds for deportation were strengthened, and border control mechanisms were reinforced. From the September 11, 2001 terrorist attack onward, visa processes and border surveillance became a priority, which consolidated the perception of migration as a potential risk to the U.S. internal security (Cornelius, 2020).

These reforms imply that the elderly in our sample have faced very different circumstances for their own migration decisions—both to find opportunities in the U.S. and to return to Mexico at later age—than their children face. Importantly, it has not eliminated the structural vulnerability of a large part of the migrant workforce and return-migrants.

### **2.3 Intergenerational migration decisions: evidence**

While the previous subsection reviewed the consequences of migration for the elderly's own well-being, their migration also affected the next generation. For example, Antman (2011) finds that

paternal U.S. migration alters children's time allocation, reducing study hours and increasing labor participation, suggesting short-term adjustments that may shape human capital accumulation in the long-run. At the same time, parental migration and remittances can boost investment in education (Amuedo-Dorantes and Pozo, 2010; Wassink and Viera, 2021).

Moreover, network effects lower migration costs and risks for later cohorts, altering wealth selectivity and influencing local inequality dynamics as migration patterns evolve (Munshi, 2003; McKenzie and Rapoport, 2007). Monras (2020) studies how the peso crisis of 1995 caused a sharp increase in migration flows, mainly to destinations where Mexican communities already existed due to previous migration networks. Initial flows laid the foundation for intergenerational migration, supporting the view that migration is not a one-off event but a repeated, network-driven and risk-sharing strategy that extend beyond the first generation of migrants. Transnational families spanning at least three generations with migratory experiences open up a key field of analysis for understanding the economic conditions of older adults in Mexico. In particular, the presence of children and grandchildren in the U.S. influences the current economic situation their elderly parents in Mexico.

In a qualitative analysis in a rural part of Yucatan, Cruz Manjarrez (2021) noted that elderly with children in California do not receive remittances on a regular basis, but rather as support to purchase assets—such as housing or businesses—and to cover health expenses. In other cases, economic abandonment by migrant children is observed. At the same time, older adults without migrant children face situations of more marked poverty and abandonment.

Migration is more accessible when there is a history of migration among parents or grandparents, as this facilitates the creation of networks that open up opportunities for children. However, although remittances impact development and social welfare indicators, they have not constituted a sustained mechanism for social mobility or overcoming poverty and precariousness (Canales, 2007). In contrast, social mobility of the second generation in the U.S. is larger than among U.S.-born whites (Abramitzky *et al.*, 2021). Taken together, migration and migrant networks modify the educational and labor incentives of the next generation in a complex way.

### 3. Material and methods

#### 3.1 Data

For our analysis we use of the Mexican Health and Aging Study (MHAS), the first round of which was held in 2001 with a representative sample of Mexicans of 50 years and older. Follow-up interviews in 2003, 2012, 2015, 2018, and 2021 permit to trace the life paths the elderly had witnessed. In 2012 and 2018 refreshment samples were drawn in order to reestablish representativity. The point of departure for our analysis is formed by the Harmonized MHAS Data of 2018, a dataset that contains the core information of all 26,839 respondents interviewed in at least one of the waves.<sup>1</sup> We have to resort to the original data files of the various waves of the MHAS to reconstruct a broad set of indicators of earlier and current migratory experiences and other life events.

<sup>1</sup> The MHAS data and documentation are available from the website of the organizers, <https://mhasweb.org/>. We use release C.2 of 2018, available from <https://www.mhasweb.org/DataProducts/HarmonizedData.aspx>.

We focus on the respondents interviewed in 2018, the most recent round that can be considered as representative. Selecting the respondents aged 50 years or older results in a sample of 15,888 respondents belonging to 11,161 households. Given that consumption and wealth information is recorded at household level, and considering that the cohorts analyzed—individuals born before 1968—were exposed to migration regimes in which international migration was predominantly male, we restrict the empirical analysis to male respondents. Although this reduces the sample to 6,900 observations, this restriction aims to preserve comparability in the economic mechanism under study, that is, labor-oriented migration as an intertemporal investment decision. Female migration in these cohorts often followed different dynamics, including family reunification or joint migration decisions, which involve distinct economic incentives and selection patterns.

### *Consumption and wealth*

The first dependent variable for our analysis is the log of the households' monthly consumption in 2018. We opted for this because consumption is less dependent on fluctuations over time than income. Moreover, the reported income at older age is often zero after withdrawal from the labor market.<sup>2</sup> Although also consumptive expenditures fluctuate over time—*e.g.* due to in-kind transfers, auto-consumption and self-sufficiency—a more stable flow can be expected. In particular, the permanent-income hypothesis and consumption-smoothing through savings and investments over the life cycle may show its importance in our elderly households.

We perform the analysis also for the household's accumulated wealth in 2018, that is, the value of the assets owned by the respondents and their spouses. The stock of assets at elderly age reflects the decisions taken over the life course, including migration decisions and how earnings have been used for the immediate or longer-run needs of the households. Accumulated household wealth is measured using the imputed total net worth variable and aggregates 17 different asset components at the individual or couple level, including the net value of primary housing, additional real estate properties, business assets, capital assets, vehicles, and other assets, minus outstanding debts such as housing, mortgage, and business-related liabilities (Chen *et al.*, 2021).

**Table 1. Dependent variables**

|                                  | no. obs. | mean      | st.dev.   | Minimum    | median  | maximum    |
|----------------------------------|----------|-----------|-----------|------------|---------|------------|
| <i>In levels (Mexican pesos)</i> |          |           |           |            |         |            |
| Consumption                      | 6,889    | 6,450.78  | 12,975.25 | 15.54      | 4000    | 500,000    |
| Accumulated wealth               | 6,889    | 1,090,940 | 1,522,549 | -2,921,493 | 655,000 | 21,700,000 |
| <i>In logarithms</i>             |          |           |           |            |         |            |
| Consumption                      | 6,889    | 8.2492    | 0.9259    | 2.7433     | 8.2940  | 13.1224    |
| Accumulated wealth <sup>a</sup>  | 6,461    | 13.1738   | 1.6154    | 3.5553     | 13.4939 | 16.8905    |

Source: Author's elaboration using MHAS 2018.

<sup>a</sup> Households with zero or negative wealth are lost when taking logarithms

<sup>2</sup> Also, negative incomes are reported, mainly among private business activities (self-employment, family-owned stores, etc.), in about 20% of the households.

Table 1 shows that average consumption is about 6,450 pesos per month but varies widely across the households, as implied also by the median consumption equal to just 4,000 pesos. Average accumulated assets amount to 1.09 million pesos, but the median wealth of 655,000 pesos is far below the average. The wide ranges suggest that an analysis at the mean—as in standard econometric methods—may not reflect well individual decisions. Analyzing the logarithms helps to overcome the problem of influential observations, but will still hide that decision-making and relevant underlying determinants may vary over the distribution. Therefore, while taking logarithms, for our decompositions we do not focus at the mean but consider the entire distribution.

### *Migratory experiences*

We use the elderly respondents' own migration history—in particular, whether they have ever worked or lived in the U.S.—as the first variable for the decompositions. The own migration earlier in life can be expected to reflect the respondent's desired economic benefits including consumption smoothing for their livelihood after returning to Mexico.

The migratory status of the respondents' children at the time of the interview is the second variable used in our decompositions. Having one or more children abroad can serve as a proxy for the potential receipt of remittances. Even if migrant children have already established their own households and may direct remittances primarily toward them, their parental households can still benefit—either as direct recipients or as part of the extended family—especially given that caregiving responsibilities have traditionally remained with children.<sup>3</sup>

Table 2 shows the descriptive statistics of the two indicators. Approximately 70% of respondents report no migratory experience in either generation. In contrast, about 6% indicate to have ever lived in the U.S. while at least one child is currently living there. A larger share, around 11%, report never having migrated themselves but having children residing in the U.S. This points to an increase in migration among more recent generations, possibly as a strategy to sustain the economic well-being of extended families remaining in Mexico. Nevertheless, for roughly 12% of respondents, their own migration history has not translated into children currently residing in the U.S.—although those children may have migrated at some earlier stage of life.

**Table 2.** *Migratory experiences*

| <i>Respondent ever lived/worked in the U.S.</i> | <i>Children currently living abroad</i> |                  |                  |
|-------------------------------------------------|-----------------------------------------|------------------|------------------|
|                                                 | Yes                                     | No               | Total            |
| Yes                                             | 428<br>(6.2%)                           | 852<br>(12.3%)   | 1,280<br>(18.6%) |
| No                                              | 744<br>(10.8%)                          | 4,876<br>(70.7%) | 5,620<br>(81.4%) |
| Total                                           | 1,172<br>(17.0%)                        | 5,728<br>(83.0%) | 6,900<br>100%    |

Source: Author's elaboration using MHAS 2018

<sup>3</sup> The income obtained through remittances is not asked in the questionnaires.

Table 3 reports the descriptive statistics of the dependent variables by migration status. While mean and median consumption and assets in households where the respondent has lived in the U.S. are broadly comparable to those without such migration experience, the picture changes when considering children living abroad. Specifically, households with children in the U.S. report lower mean and median consumption than those without migrant children, yet they hold higher accumulated assets compared to households where none of the children currently reside in the U.S.

These findings provide a nuanced picture. The respondent's own migration history appears to yield limited, if any, long-term benefits in terms of higher consumption or asset accumulation at older ages. By contrast, the current migration of children—despite the potential inflow of remittances—does not translate into greater consumption for their elderly parents, although accumulated assets seem to benefit from having children abroad. Still, the standard deviations and distributional tails indicate that mean and median values may not fully capture the underlying heterogeneity.

**Table 3.** *Dependent variables by migratory experiences*

|                               | no. obs. | mean    | st.dev. | minimum | median  | maximum |
|-------------------------------|----------|---------|---------|---------|---------|---------|
| <i>Log Consumption</i>        |          |         |         |         |         |         |
| With own migration history    | 1,278    | 8.2348  | 0.8982  | 4.6052  | 8.2940  | 12.2061 |
| No own migration history      | 5,611    | 8.2525  | 0.9322  | 2.7433  | 8.2940  | 13.1224 |
| With children in U.S.         | 1,170    | 8.1490  | 0.9202  | 2.7433  | 8.1166  | 11.8086 |
| No children in U.S.           | 5,719    | 8.2697  | 0.9259  | 4.4430  | 8.2940  | 13.1224 |
| <i>Log Accumulated wealth</i> |          |         |         |         |         |         |
| With own migration history    | 1,208    | 13.2051 | 1.4811  | 5.7038  | 13.4674 | 16.3004 |
| No own migration history      | 5,253    | 13.1666 | 1.6447  | 3.5553  | 13.5008 | 16.8905 |
| With children in U.S.         | 1,109    | 13.2842 | 1.5397  | 5.2983  | 13.5555 | 16.2357 |
| No children in U.S.           | 5,352    | 13.1510 | 1.6298  | 3.5553  | 13.4842 | 16.8905 |

Source: Author's elaboration of MHAS 2018

### *Other determinants*

Both the economic outcomes and the migration indicators reflect interrelated decisions that depend on many other factors. The control variables used in the decompositions are grouped into three categories. The first group includes predetermined individual characteristics of each respondent, among them indicators of childhood living conditions. This group also reconstructs the migration history of the previous generation, that is, whether the respondent's father, mother, or both ever lived or worked in the U.S., providing insight into the inherited propensity to migrate. While this set is inherently exogenous, the second group of variables contains individual-specific and household-related characteristics that have been subject to the respondents' decisions made during their lifetime and may be considered endogenous at least for a certain extent. The final set describes the current living environment of the respondents, variables at a more aggregate level but also partially the consequence of decisions made over the course of life.

### 3.2 Decompositions

We use the technique proposed by DiNardo, Fortin, and Lemieux (1996) [DFL] to analyze the role of the migratory experiences on the households' economic situation at older age. This is a semiparametric method that decomposes differences in outcomes between groups into a composition effect—differences in the characteristics observed in the groups—and a valuation effect—difference in the values of characteristics for the outcomes in each group. Whereas the traditional Oaxaca-Blinder decomposition only addresses the differences and contributions of characteristics at the mean of the distribution, DFL captures and quantifies heterogeneity in the role of characteristics along the whole distribution of the outcome variable. See for example Chiquiar and Hanson (2005), Altonji *et al.* (2012) and Sarmiento *et al.* (2015) for applications in wage distributions of migrants, skill distributions, and in school exam scores, respectively.

The core idea of DFL's approach is the reweighting of distributions of the outcome variable—in our case, the observed consumption and asset distributions—by the probability of having a migration history or children in the U.S., respectively, conditional on various characteristics. The reweighting procedure establishes counterfactual distributions that describe the economic situation in households with migratory experiences, with the situation that would have prevailed would they not have had these migratory experiences. These counterfactual distributions based on a dichotomic characteristic of interest—migratory experience—come with the advantage of a visually attractive and insightful presentation, although we have to emphasize that it does not have a causal interpretation.

In particular, we observe the distributions of outcomes  $Y$  (consumption, assets) in the groups with migration experience ( $M$ ; return migrants, children in the U.S.),  $g_M(Y)$ , and without migration experience ( $N$ ),  $g_N(Y)$ . Furthermore, we observe characteristics  $X$  with distributions  $h(X | group)$ , for  $group \in \{M, N\}$ . The unobservable counterfactual distribution,

$$g_M^N(Y) = \int f^N(Y|X)h(X|M)dX.$$

mimics what the distribution of outcome among migrants  $M$  would have looked like if the observed distribution of characteristics  $h(X | M)$  had been subjected to the valuation of the characteristics as witnessed by the non-migrants  $N$ ,  $f^N(Y|X)$ .<sup>4</sup> In particular, certain skills or attributes may be more—or less—valued in the U.S. context than in Mexico, thereby leading to different outcomes for otherwise comparable respondents. No general equilibrium effects are considered, that is, valuations are assumed to be constant, while also absence of systematic variation in unobservable characteristics is assumed.

Using properties of conditional probabilities and Bayes' rule, applying the reweighting factor  $\psi(X)$  defined as

$$\psi(X) = \frac{Pr[M|X]/Pr[M]}{Pr[N|X]/Pr[N]},$$

gives the counterfactual distribution (Fortin *et al.*, 2011),

$$g_M^N(Y) = \int \psi(X)f^N(Y|X)h(X|N)dX.$$

Intuitively, multiplying the density of the outcome as found among non-migrant respondents ( $N$ ),  $g_N(Y)$ , by the reweighting factor  $\psi(X)$  replaces the characteristics found among non-migrants ( $N$ ) with those among migrants ( $M$ ). Doing so gives the counterfactual distribution

<sup>4</sup> Note that for the observed distributions for  $j=M, N$ , it thus holds that  $g_j(Y) = \int f^j(Y|X)h(X|j)dX$ .

of outcomes  $g_M^N(Y)$  that would have prevailed for those with migration experience ( $M$ ) if the valuation of their characteristics would have been as among non-migrants ( $N$ ). Loosely speaking, the counterfactual distribution tells us what the consumption and asset levels of the migrants would have been if they would not have migrated but stayed in Mexico.

In practice the reweighting factor  $\psi(X)$  is obtained from a probit regression of the incidence of migration,  $M$ , on characteristics  $X$ , for all respondents ( $M, N$ ). That gives us, for each respondent, a predicted probability of having migratory experience conditional on the characteristics,  $\widehat{Pr}[M|X] = \Phi(X'\hat{\beta})$ .

The comparison of the counterfactual of migrants and the observed density of non-migrants under the common set of valuations witnessed in a non-migrant setting,

$$\Delta_N^X = g_M^N(Y) - g_N(Y) = \int [\psi(X) - 1] f^N(Y|X) h(X|N) dX,$$

reflects the composition effect and captures how differences in characteristics between migrants ( $X_M$ ) and non-migrants ( $X_N$ ) shape the outcomes  $Y$ . A positive difference in consumption or asset level  $Y$  indicates that a higher density (or likelihood) of  $Y$  would have been observed if migrants had remained in Mexico. If such positive differences appear mainly at the upper end of the distribution, migrants would have been better off than non-migrants had they stayed in Mexico. That signifies a positive selection effect: those who had characteristics that would have benefitted them in Mexico, got even more favorable outcomes by migrating; loosely speaking, the better-abled have decided to migrate.

Successively expanding the set of control variables  $X$  provides insight into the relative contribution of each variable to the differences in the distributions of  $Y$  between respondents with migratory experience ( $M$ ) and those without migration experience or children living in the United States ( $N$ ). Kernel density methods are employed to estimate both observed and counterfactual densities, thereby smoothing the distributions presented (Fortin *et al.*, 2011).

#### 4. Migration decisions and economic consequences

In this section, we first briefly discuss the probit estimations of migration decisions underlying the construction of the counterfactual distributions (Section 4.1), followed by the decompositions based on these counterfactuals for elderly's consumption (Section 4.2) and accumulated wealth (Section 4.3) in the full sample.

##### 4.1 Determinants of migration

For our two migration indicators, the respondents' own migration history and their children's current migration status, we use the same sets of explanatory factors to generate the reweighting factors to construct the counterfactual distributions. As outlined above, the variables reflect the respondents' characteristics, in three blocks of predetermined circumstances (including the respondents' parental situation), more aggregate indicators reflecting the (historically formed) living environment, and information on the choices made over the course of the respondents' lives.

Each set of characteristics significantly contributes to the migration decisions of both generations, but not necessarily in the same size or even direction.<sup>5</sup> The migration history of respondent's parents remains an important determinant of their grandchildren's migration decisions, although its influence is weaker than on respondent's own migration, indicating sizeable and persistent intergenerational migratory traditions. Regarding (grand)parental education, completed primary school lowers the probability the respondent migrated but has no effect on the (grand)children's probability of migration. Better-educated respondents appear to provide improved economic circumstances that enable their children to find opportunities in Mexico rather than migrate to the U.S., underscoring the complex relationship between migration and education. While we encounter a U-shaped age pattern for the respondents' own migration, their children's migration decisions show an inverted U-shaped pattern with the respondent's age. This suggests that migratory flows have changed over the generations, partly reflecting opportunities generated by changes in U.S. immigration policies. Interestingly, indigenous origin—often associated with greater poverty—lowers migration, perhaps reflecting broader disadvantages such as discrimination or structurally different decision-making processes.

Regarding the living environment, residing in a (semi-)rural area is associated with a higher probability that the respondent has ever migrated, possibly reflecting both limited local opportunities and the persistence of migratory traditions in less urbanized areas. In Section 5 we delve deeper in the differences between rural and urban populations and their economic outcomes at older age. Migration also positively correlates with active social networks, which may have facilitated or motivated migration. The respondent's living environment is even more strongly correlated with their children's migration decisions than with their own historical decisions, indicating that ingrained habits play a significant role.

Receiving a pension and having health insurance coverage are associated with a lower probability the respondent ever migrated, suggesting a lack of employment-related social security contributions among those who migrated. In contrast, poor current health is associated with higher earlier migration rates. Neither is relevant for the children's migration decision. Household size however is strongly relevant for both generations' decisions

In the subsequent analysis, we investigate whether these background characteristics contribute differently in distinct parts of the consumption and asset distributions between respondents with and without migratory experiences. For this purpose, the probit estimations are used to construct counterfactuals, as outlined in Section 3.2, following the same successive expansion of the sets of controls.

## 4.2 Migration experiences and consumption at older age

Considering that the quest for better economic conditions is a major reason to migrate to the U.S., and presuming a long-term view with investments, savings, and consumption smoothing, one may expect that the respondent's own past migration has contributed to higher levels of current consumption and accumulated assets. The elderly's consumption may directly improve if migrant children send remittances, while assets may not change. Whereas Table 3 already cast doubt on this idea, its comparison at the means is not sufficient to conclude whether migration

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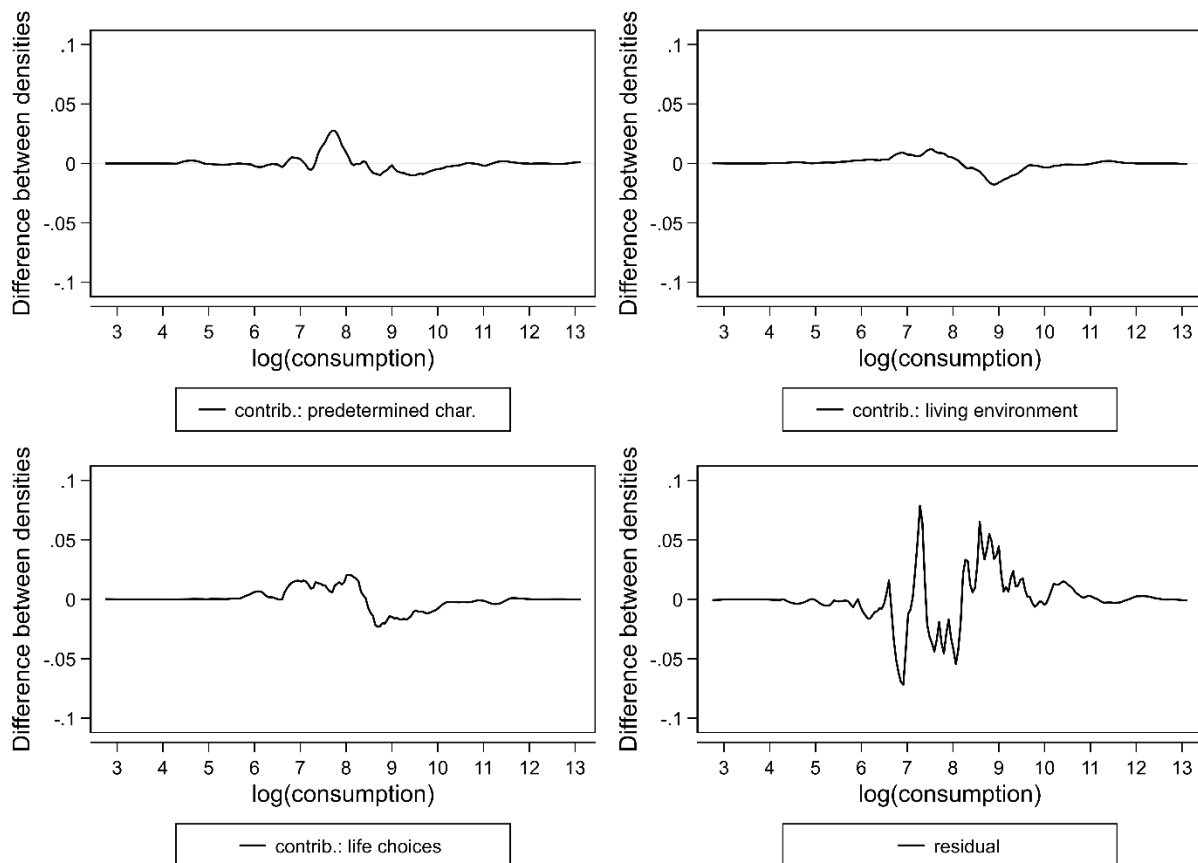
<sup>5</sup> Available upon request from the author.

has brought economic benefits, because historical disadvantages and decisions may be driving forces for any differences, moreover with impacts that may vary over the distribution.

### *Own migration*

In Figure 1 we see that the respondent's own choices in life (bottom-left panel) and to a lesser extent the living environment (top-right panel) negatively contributed to consumption levels at older age in 2018, while the predetermined characteristics including the living circumstances of the respondents' parents (top-left panel) have a less pronounced pattern. The decreased (increased) densities for the higher (lower) consumption levels—mainly at the central part of the distribution—imply that migrants' life choices would have resulted in lower levels of consumption if they had not migrated; hence their current consumption level benefitted from the earlier migration. The bottom-right panel of Figure 1, however, shows that the residual, the unexplained part, is larger than the identifiable differences. This implies that the respondents who never lived in the U.S. have lower consumption levels than the counterfactual of migrants using all observed characteristics of non-migrants. Unobserved (personal and societal) characteristics appear to be important determinants, overturning the identifiable factors.

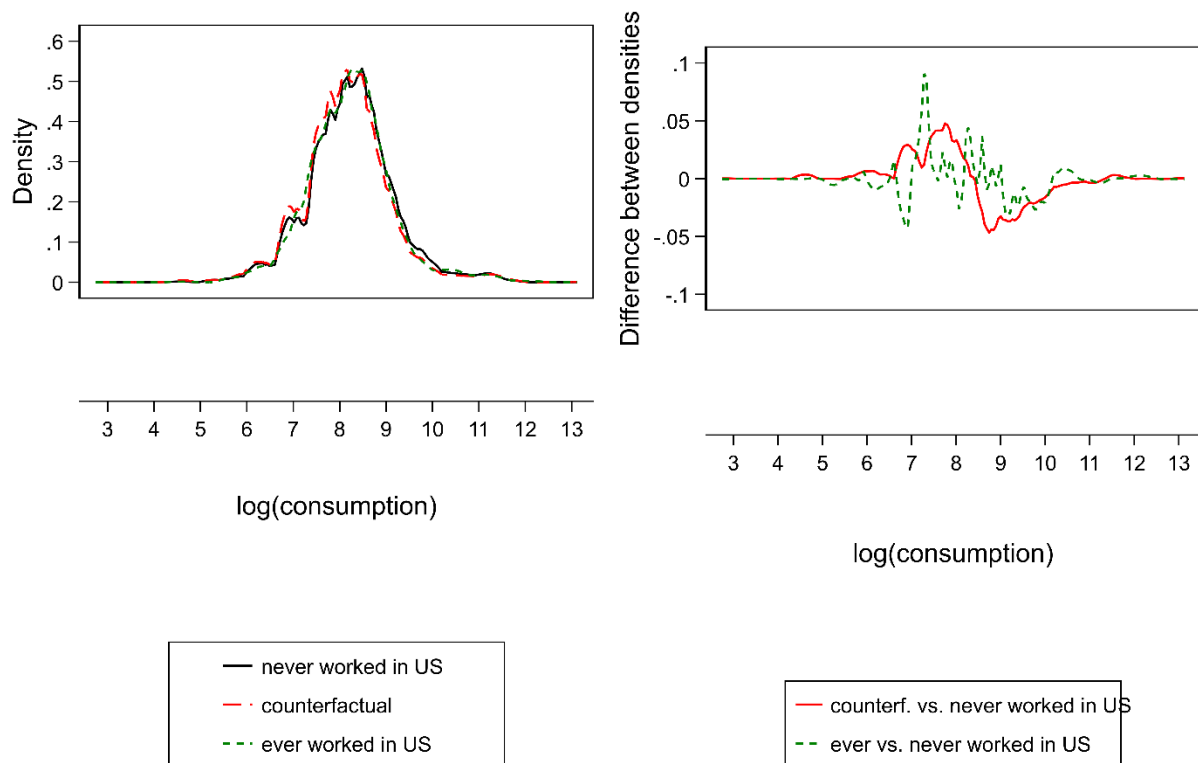
**Figure 1.** *Decomposition of consumption distribution (residuals), by own migration history*



Source: Author's elaboration using MHAS 2018

Figure 2 emphasizes that finding. In the left panel, the counterfactual consumption (red line) has a clear tendency towards the left. Hence, the migrants would have consumed less if they had not migrated but stayed in Mexico, implying a negative selection of migrants. The red line in the right panel of Figure 2, capturing all characteristics, is rather similar to what we see in Figure 1 (bottom-left) for the individual's choice characteristics. The residuals (Fig. 1, bottom-right panel), however, offset this effect, resulting in generally minor differences between the consumption levels of migrants and non-migrants that are difficult to interpret; the green line (Fig. 2, right panel) fluctuates between positive and negative values across the entire distribution.

**Figure 2.** Consumption distributions, by own migration history



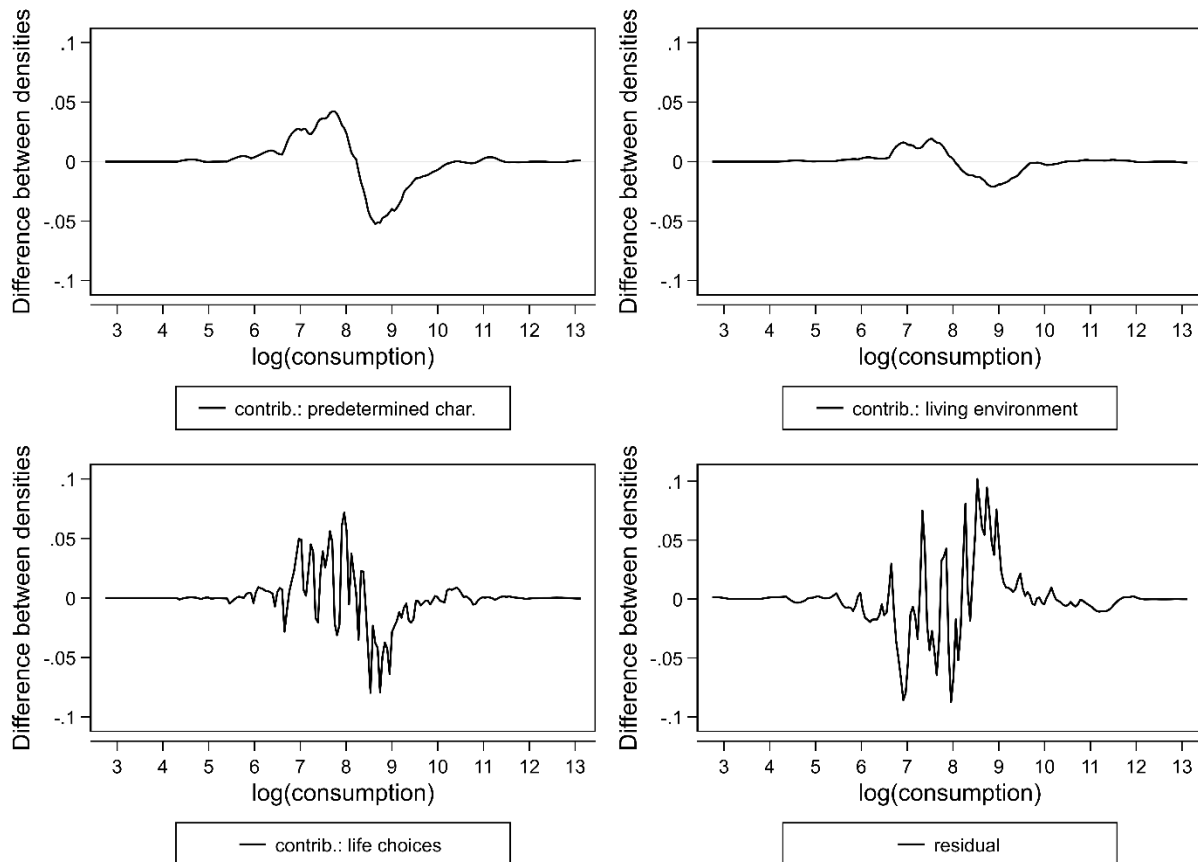
Source: Author's elaboration using MHAS 2018

### Children's migration

When analyzing the consumption distribution of the elderly respondents by their children's current migratory status, we get a partly different story. Figure 3 tells us that the respondents' early-life characteristics (top-left panel), together with the respondents' individual choices (bottom-left panel) are key factors that negatively contributed to the elderly's counterfactual consumption levels. The current living environment (top-right panel) contributes in the same directions but less pronounced. Hence, even stronger than for the own migration history, if the children living the U.S. would not have made this migration decision, the elderly respondents

would have fared worse. More so, not only do the individual characteristics lead to lower (higher) densities for the higher (lower) consumption levels, they do so in a stronger way than the respondent's own migration history (Fig. 1). Again, however, the bottom-right panel indicates that the unexplained residuals are large and generally work in the opposite direction. Hence, while the individual characteristics suggest that the elderly's consumption level benefitted from the current migration of their children, unobserved factors counterweigh these benefits.

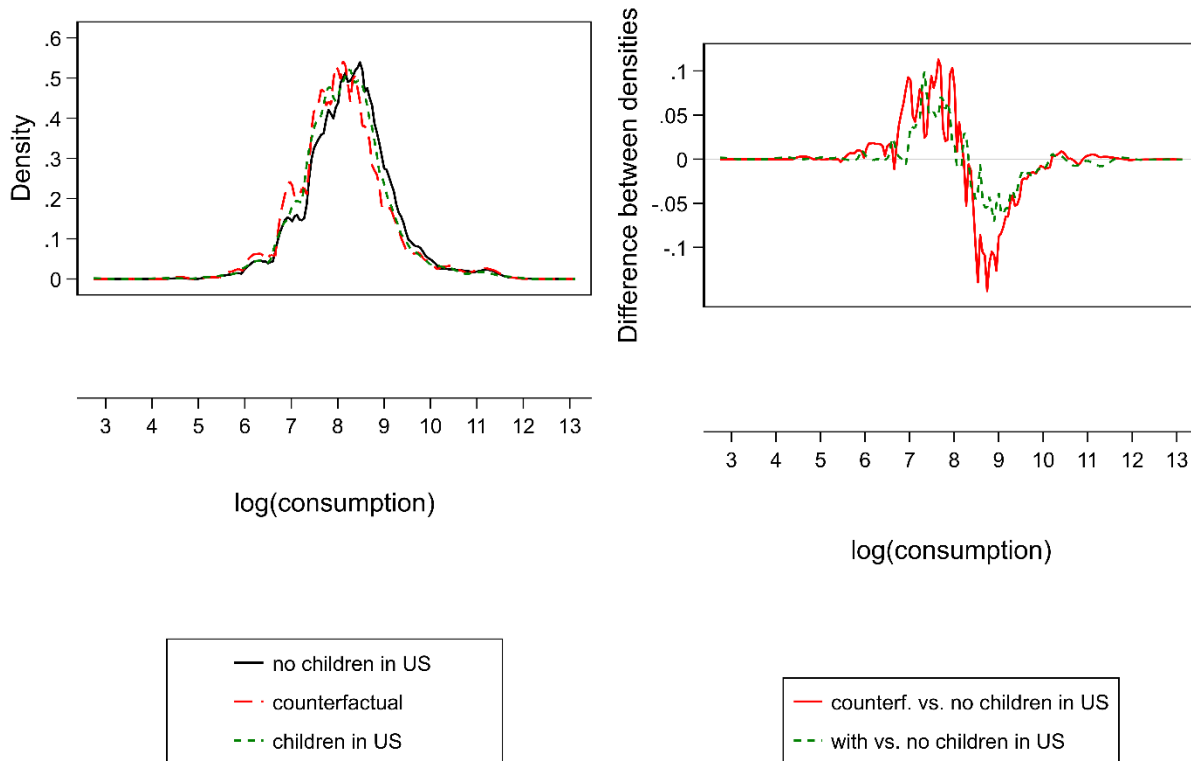
**Figure 3.** *Decomposition of consumption distribution (residuals), by having children in U.S.*



Source: Author's elaboration using MHAS 2018

Figure 4 (left panel) shows that the consumption distribution of households without children in the U.S. (black line) generally lies to the right of that of households with children in the U.S. (green line). That tells us that, although having children in the U.S. may imply remittances are sent to the elderly parents in Mexico, higher consumption levels are observed in households without children in the U.S. along the whole distribution and not only at the mean and median (Table 3). The counterfactual representing how much respondents with children in the U.S. would have consumed if they had not migrated (Fig. 4, left panel, red line), is also found to the left of the observed distribution of households without children in the U.S. Hence, negative selection is at hand; the elderly would have consumed less if their children had not migrated. However, the strong benefits from migration as suggested primarily by individual characteristics is not fully achieved due to unobserved determinants.

**Figure 4.** Consumption distributions, by having children in U.S.



Source: Author's elaboration using MHAS 2018

### 4.3 Migration experiences and accumulated assets

While the previous section examined the distribution of consumption expenditures in relation to migratory experiences, the savings and investment motives suggest that differences may be more pronounced in accumulated wealth. Therefore, we now look at the decomposition of asset distributions.

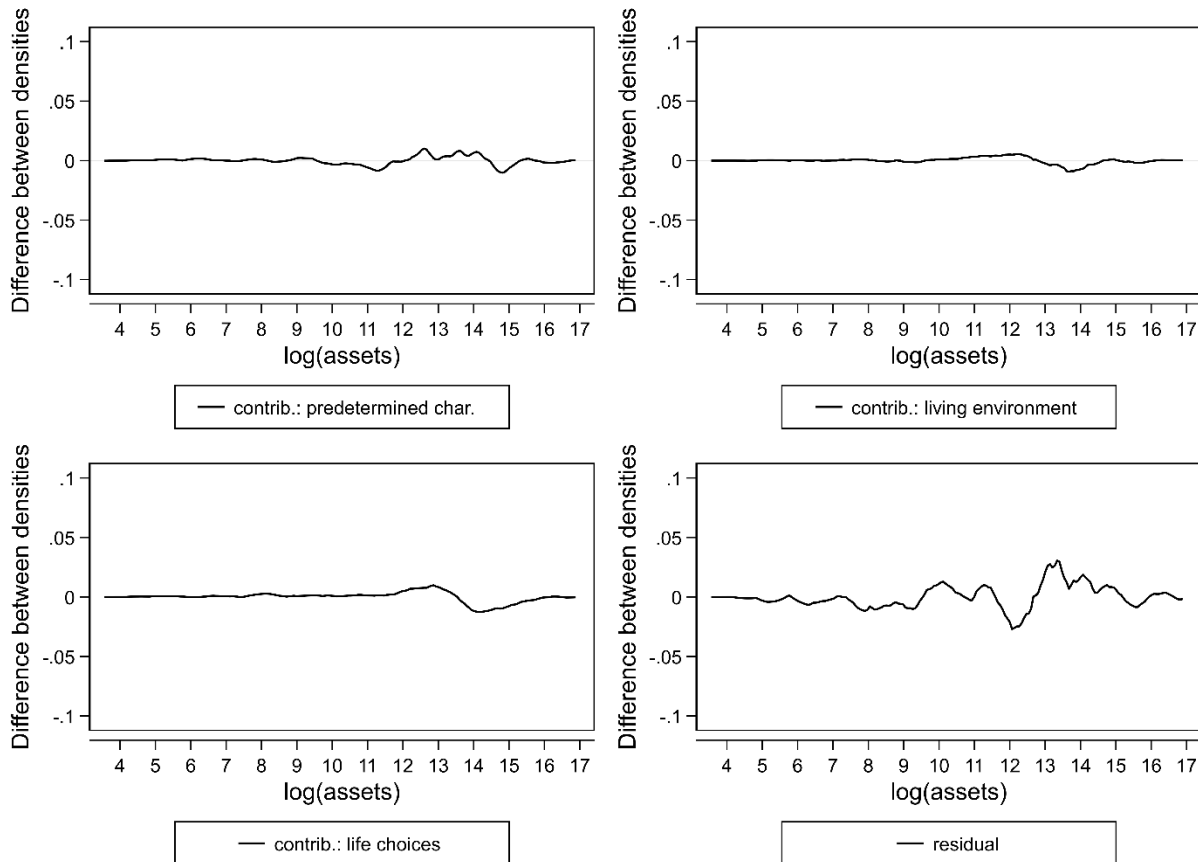
#### *Own migration*

Figure 5 presents the decomposition of the asset distribution by own migration history. In contrast to the results for consumption, the contributions of the observable components are relatively small across most of the distribution. Early-life characteristics (top-left panel) show some variability, but the contributions of the living environment and life-course choices remain limited. This suggests that the observable characteristics included in the model explain only a small share of the differences in asset accumulation between migrants and non-migrants.

As in the case of consumption, the residual component dominates the decomposition (bottom-right panel), indicating that unobserved characteristics play an important role in shaping asset accumulation at older age, although the fluctuations are notably smaller than found for the

consumption distribution (Fig. 1). Nevertheless, the counterfactuals based on environmental and life-course characteristics suggest that migrant respondents would have accumulated slightly fewer assets had they not migrated. This indicates negative selection, which is consistent with the patterns observed for consumption (Fig. 1 and 2), where migration however appears to have partly compensated for disadvantages in observable characteristics.

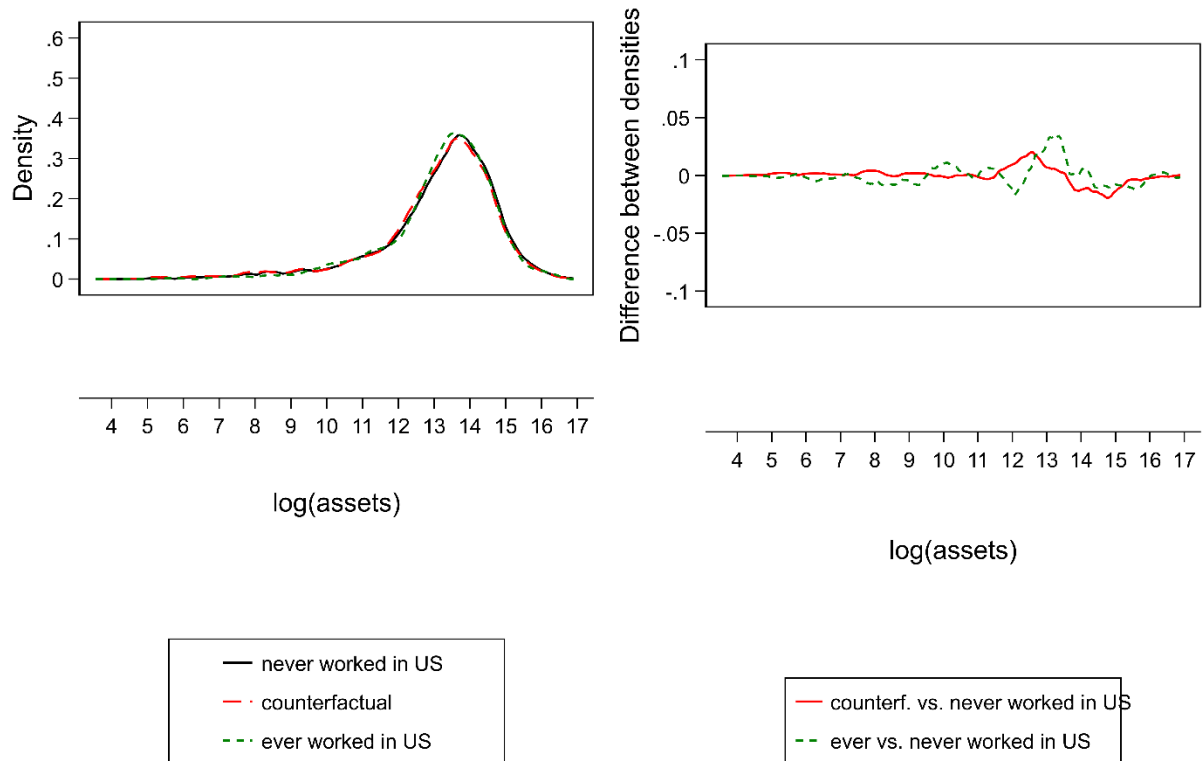
**Figure 5.** *Decomposition of asset distribution (residuals), by own migration history*



Source: Author's elaboration using MHAS 2018

Taking into account all observable characteristics, the counterfactual asset distribution among migrants (Fig. 6, left panel, red line) reflecting the assets they would have obtained had they not migrated, is to the left of the asset distribution found among non-migrants (black line). Hence, migrants would have done worse had they not migrated. Figure 6 also shows that the disadvantage that the migrants would have had if they had not migrated, is not generally compensated by the migration decision, because also the distribution observed with migration (Fig. 6, left panel, green line) is mostly to the left of the distribution among non-migrants. Taken together, Figures 5 and 6 suggest that although migration may have contributed to a slightly higher asset accumulation for migrants relative to their counterfactual situation, these advantages remain modest when compared with the distribution observed among non-migrants.

**Figure 6.** Asset distributions, by own migration history



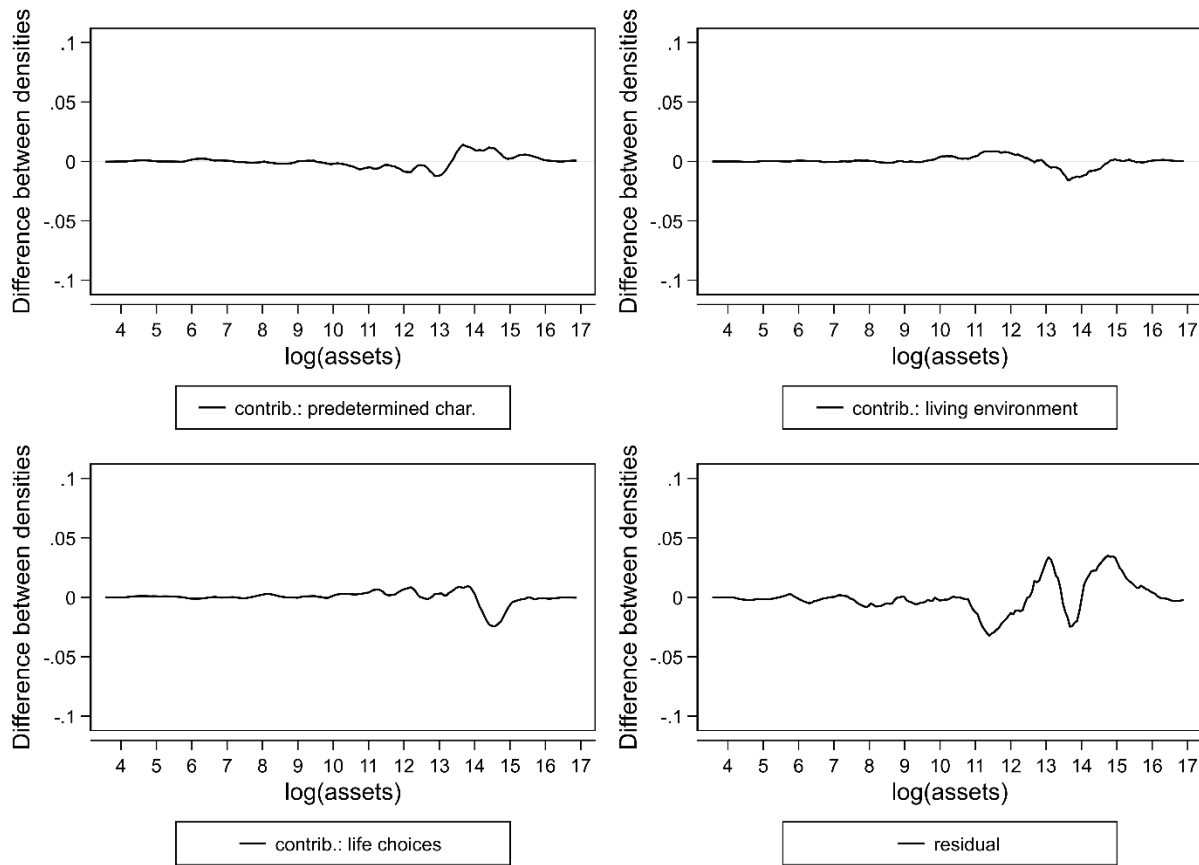
Source: Author's elaboration using MHAS 2018

### Children's migration

The successive decomposition of the asset distribution by whether the respondent currently has children living in the U.S. is shown in Figure 7. Interestingly, the respondent's childhood characteristics (top-left panel) and the living environment and individual choices made over the life course (top-right and bottom-left) show opposite contributions, with the latter giving rise to higher counterfactual assets and the former to smaller asset levels. Higher counterfactual assets when children would not have gone to the U.S. hint on a positive selection effect; parents who made the 'better' choices over their lifetime seem more likely to have children in the U.S. Individual choices and environmental situation suggest that if the respondent's migrated children had stayed in Mexico, that could have led to greater assets for their parents, although the differences are small and largely compensated by pre-existing factors.

Overall, Figure 8 shows that the counterfactual asset distribution (red line) is similar to the observed distribution among non-migrants, implying that migrants would have accumulated similar or perhaps slightly lower (Fig. 8, right panel, red line) assets if they had not migrated. Figure 8 (left panel) also shows that the actual asset accumulation among migrants (green line) and non-migrants (black line) is not very different from each other, and that the differences do not follow a clear pattern over the distribution (Fig. 8, right panel).

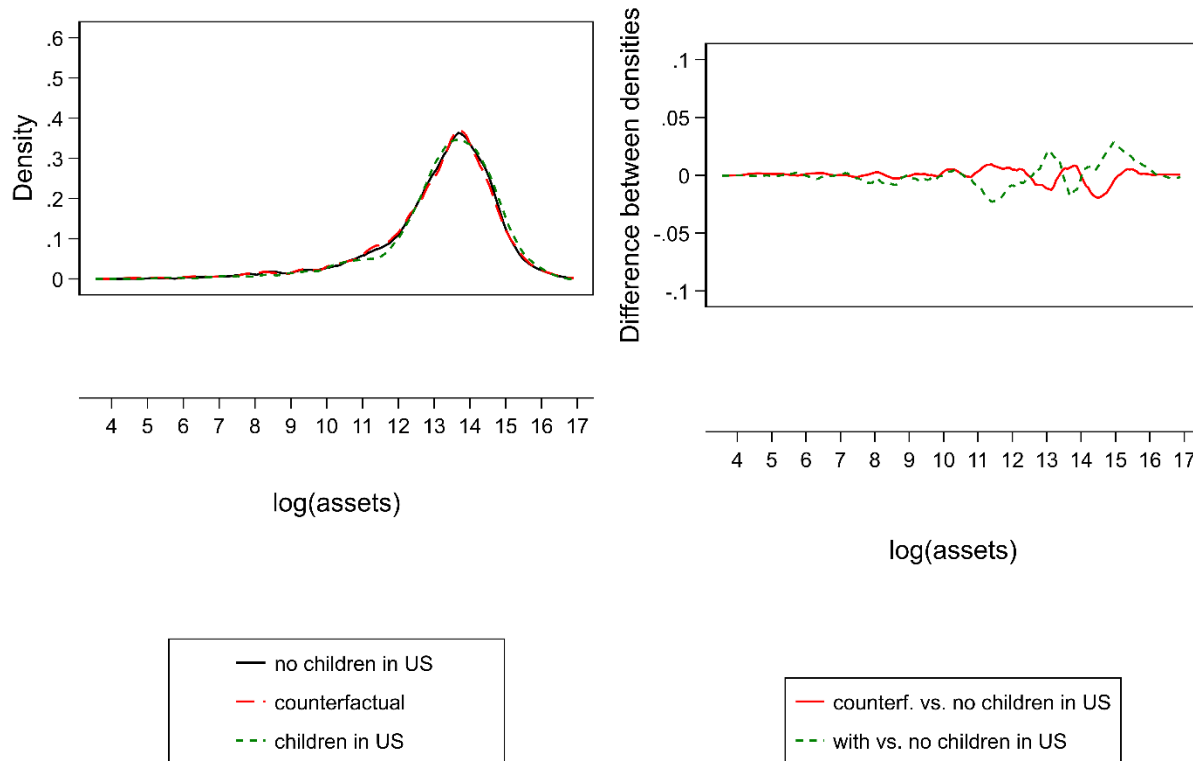
**Figure 7.** *Decomposition of asset distribution (residuals), by having children in U.S.*



Source: Author's elaboration using MHAS 2018

Summarizing the main patterns emerging from the analysis, three broad findings stand out. First, migration experiences appear to have contributed more clearly to consumption outcomes than to accumulated assets. Second, the role of observable characteristics in explaining differences in asset distributions is relatively small, with a substantial share of variation captured by residual factors. Third, negative selection for migration seems to be at hand; those with migration experience would have consumed less than non-migrants had they stayed in Mexico. For assets accumulation, selection is less clear-cut. While the graphical analysis provides detailed evidence on the mechanisms underlying the results, the overall message remains that migration experiences are associated with modest but heterogeneous differences in economic outcomes at older age.

**Figure 8.** Asset distributions, by having children in U.S.



Source: Author's elaboration using MHAS 2018

## 5. Rural vs urban households

Although the previous section suggests that the living environment does not strongly contribute to the decompositions, since migration has traditionally been concentrated in rural areas, it is relevant to examine more explicitly the differences between urban and rural elderly. This is further supported by the strong association between residing in rural or semi-rural communities and both respondents' historical migration and their children's current migration. Moreover, the living environment—whether rural or urban—may also be correlated with both early-life conditions and characteristics established later in life.<sup>6</sup>

### 5.1 Consumption in rural and urban areas

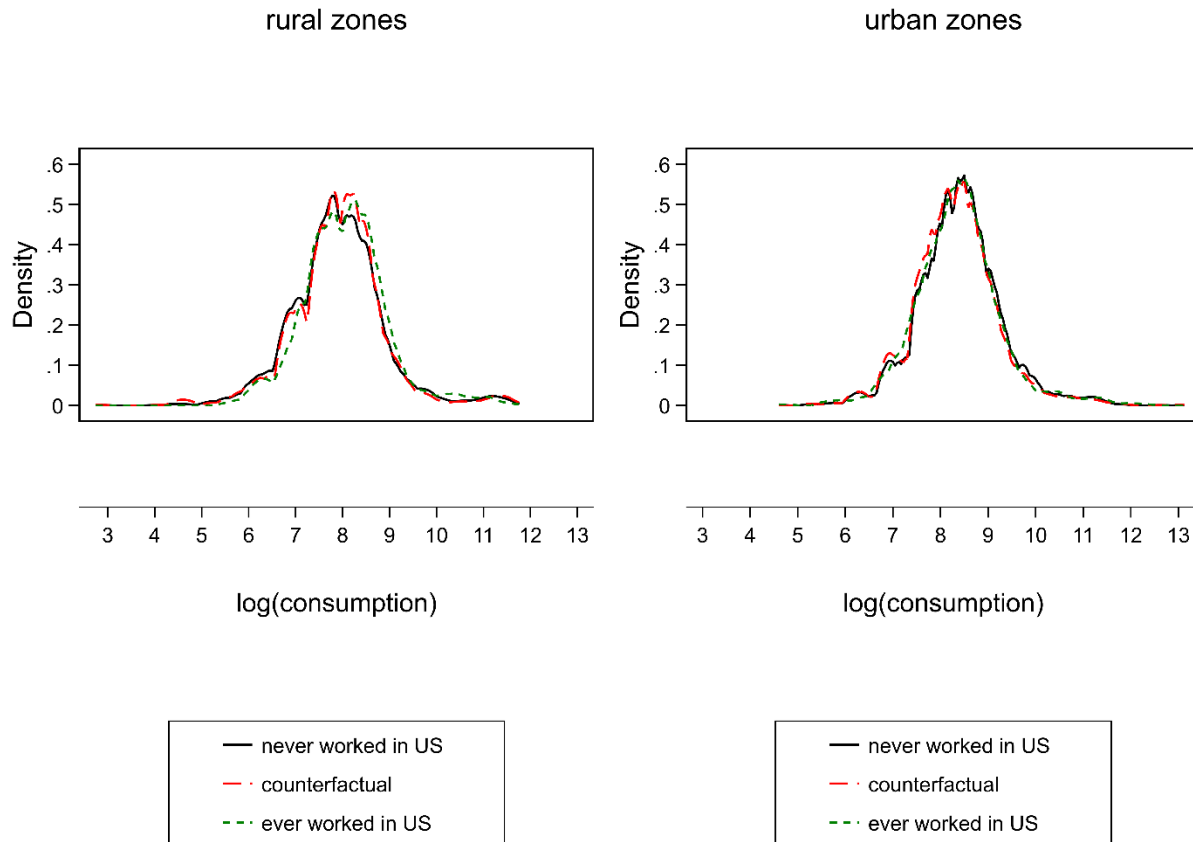
#### *Own migration*

Figure 9 (left panel) shows that in rural areas, the observed consumption distribution of respondents who ever migrated (green line) lies generally to the right of that of non-migrants

<sup>6</sup> The probit models used to construct the reweighting factors are done separately for rural and urban areas, and are available upon request.

(black line), indicating that higher (lower) consumption levels are more (less) common among migrants (see also Appendix Fig. A.1, left panel, green line). This suggests that rural migrants have benefitted from migration. By contrast, this pattern is not evident among urban respondents, where the consumption distributions of migrants (green line, Fig. 9, right panel) and non-migrants (black line) are much more similar.

**Figure 9.** Consumption distributions, by own migration history, in rural and urban zones



Source: Author's elaboration using MHAS 2018

In both rural and urban areas, the differences between the counterfactuals (Fig. 9, red lines) and the actual non-migrants (black lines) are relatively small—and smaller than the differences with the observed migrant distributions (green lines). Nevertheless, in rural areas, the slightly higher densities at higher counterfactual consumption levels—migrant characteristics evaluated as if they were paid according to the returns of non-migrants—compared with the actual non-migrants (Fig. A.1, red line) suggest that migrants would have earned more than non-migrants without migrating. This points to positive selection: those who chose to migrate had characteristics that would have advantaged them in Mexico as well.

In urban areas, the opposite pattern emerges: the densities of lower (higher) consumption levels are higher (lower) in the counterfactual distribution (Fig. 9, right panel, red vs. green line). This implies that, had they never migrated but been subject to the Mexican valuation of their characteristics, respondents with a migration history would have consumed less than non-

migrants. Hence, negative selection appears to prevail in urban areas: the less qualified—who would have earned even less than the actual non-migrants had they remained in Mexico—were the ones who decided to migrate.

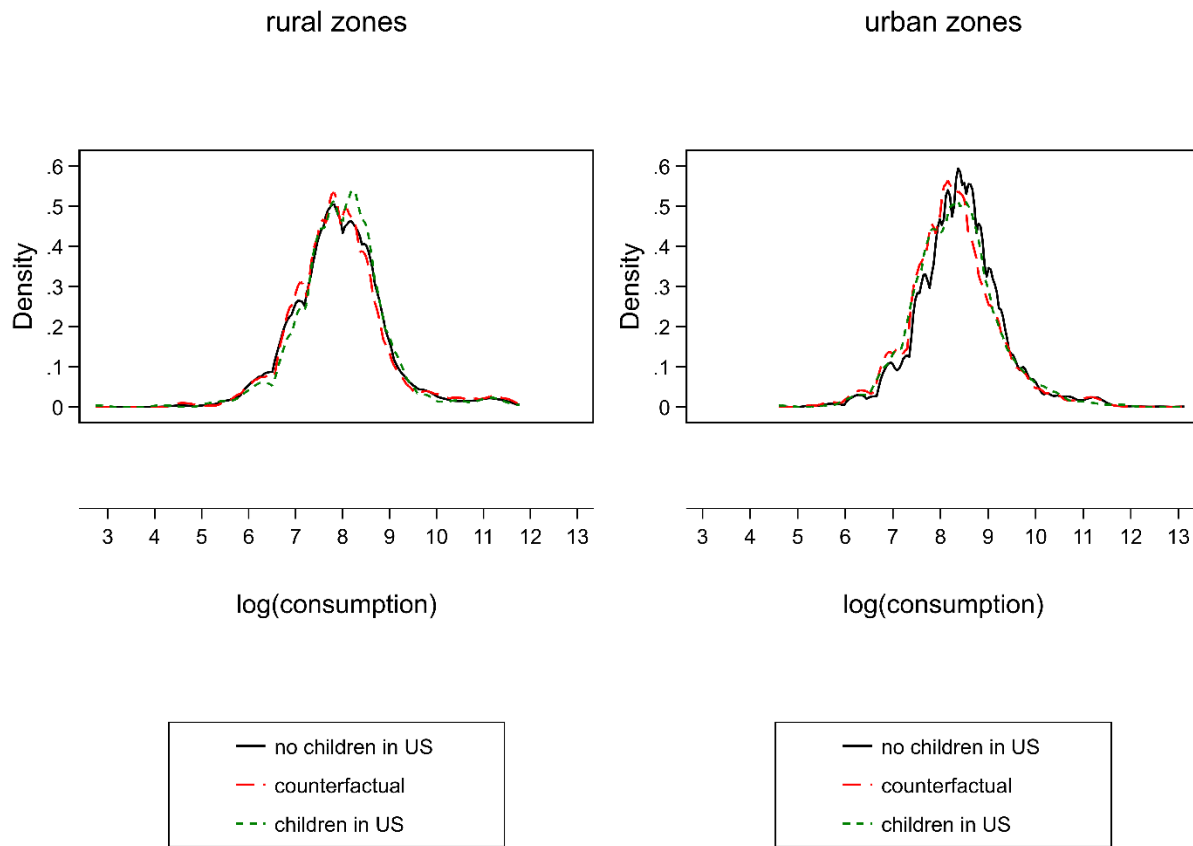
A comparison of the counterfactual distributions (red lines) with the migrants' observed consumption distributions (green lines)—the latter located to the right of the counterfactuals in both panels of Fig. 9—suggests that migrants from both rural and urban areas benefitted from their decision to migrate. In other words, respondents with a migration history consumed more than they would have done if they had not migrated.

### *Children's migration*

Rural elderly with one or more children in the U.S. (Fig. 10, left panel, green line) display higher densities at higher consumption levels than those without children in the U.S. (black line). This pattern mirrors the results in Fig. 9 for the rural elderly's own migration decisions. In contrast, the urban case looks quite different: urban elderly with children in the U.S. (green line) generally exhibit lower consumption levels than those without migrant children (black line). Thus, while in rural areas having children in the U.S. is associated with higher consumption among the elderly in Mexico, in urban areas it does not appear to provide a concurrent benefit.

The counterfactual distributions in rural areas (Fig. 10, left panel, red line) are generally located to the left of the observed distributions for respondents without children in the U.S. (black line), indicating that if the children had remained in Mexico, their elderly parents would have consumed less on average (see also Fig. A.2, left panel, red line). Thus, in contrast with own migration, negative selection appears to prevail: the background characteristics would have been less valuable in Mexico. A similar pattern emerges in urban areas, and in fact it is even stronger, as the counterfactual distribution lies even further to the left of the observed distribution (Fig. 10, right panel, red vs. black line; see also Fig. A.2, right panel, red line).

The implication is that the rural children's migration decision was a choice their parents benefitted from (Fig. 10, left panel). Apparently, the remittances sent by the migrated children contribute to a higher consumption level (green line) while lower consumption would have been more likely if the children had not migrated (red line). For respondents in urban areas it is less straightforward to see if migrating children resulted in a net benefit for their parents' consumption. Although Fig. 10 (right panel) suggests that children in the U.S. had a negative correlation with parental consumption (green line), if they had not migrated, consumption would have been even lower (red line); that is, the counterfactual is generally even further to the left, which implies that at least the migration has offset a part of the negative effect.

**Figure 10.** Consumption distributions, by having children in U.S., in rural and urban zones

Source: Author's elaboration using MHAS 2018

## 5.2 Accumulated wealth in rural and urban areas

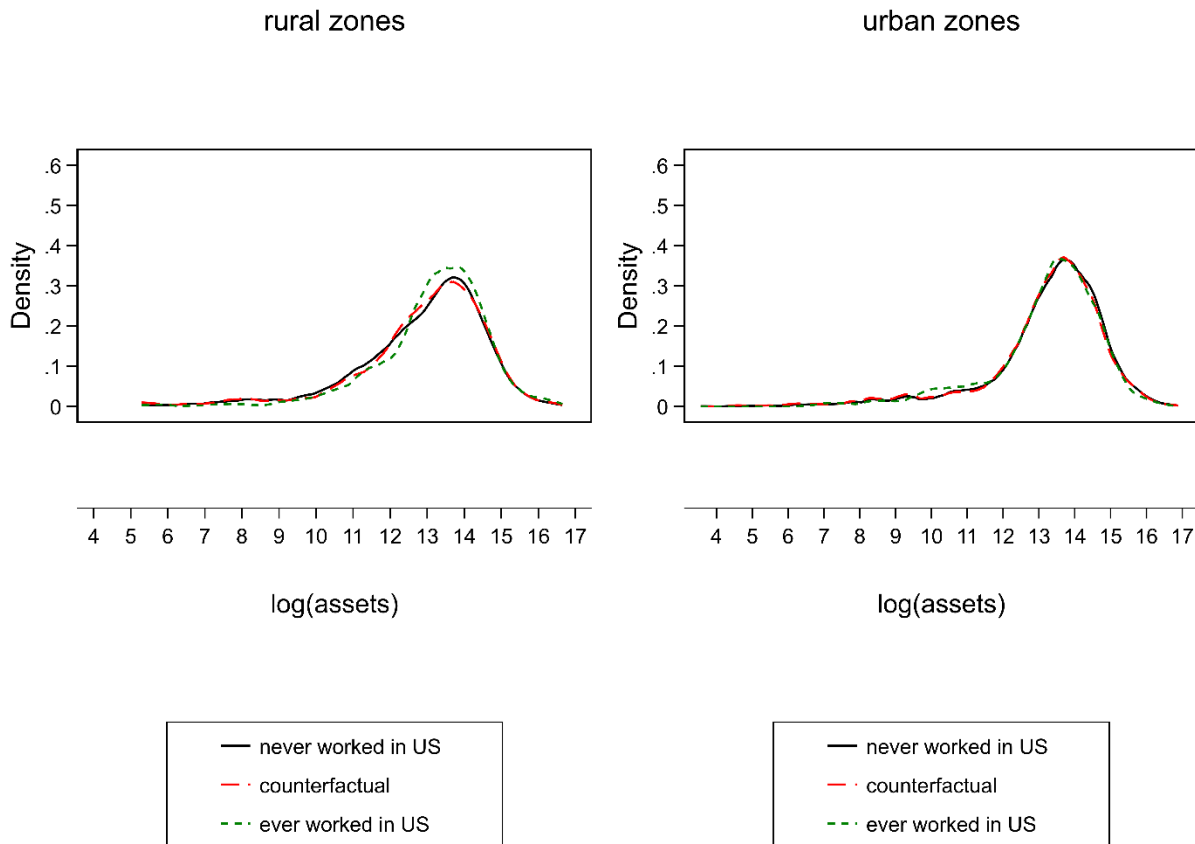
### *Own migration*

Figure 11 presents the asset distributions for respondents with (green lines) and without (black lines) a migration history. In urban areas, as with consumption (Fig. 9, right panel), migration history does not appear to make much of a difference (Fig. 11, right panel) and may even have hindered asset accumulation, as the distribution among migrants (green) lies to the left of that of non-migrants (black). In rural areas (Fig. 11, left panel), however, the difference is more pronounced: migrants (green) show greater concentration in the middle of the distribution compared to non-migrants (black), though at the cost of lower representation at the bottom. Thus, migration earlier in life appears to have contributed to higher asset accumulation in rural areas—although this advantage is less evident at the upper end of the distribution.

The counterfactual asset distributions (Fig. 11, red lines) closely resemble those of respondents who never migrated (black lines) in both rural and urban areas. Thus, the patterns observed in Figure 8 for the full sample are not driven by opposing trends across rural and urban areas but reflect similar processes in both. This also implies that selection effects are largely absent: the average characteristics of migrants would have led to asset accumulations

comparable to those of non-migrants had they not migrated. Figure A.3 asserts that the composition effect (red line) is relatively small, particularly when compared with the consumption distributions (Figs. A.1 and A.2).

**Figure 11.** Asset distributions, by own migration history, in rural and urban zones



Source: Author's elaboration using MHAS 2018

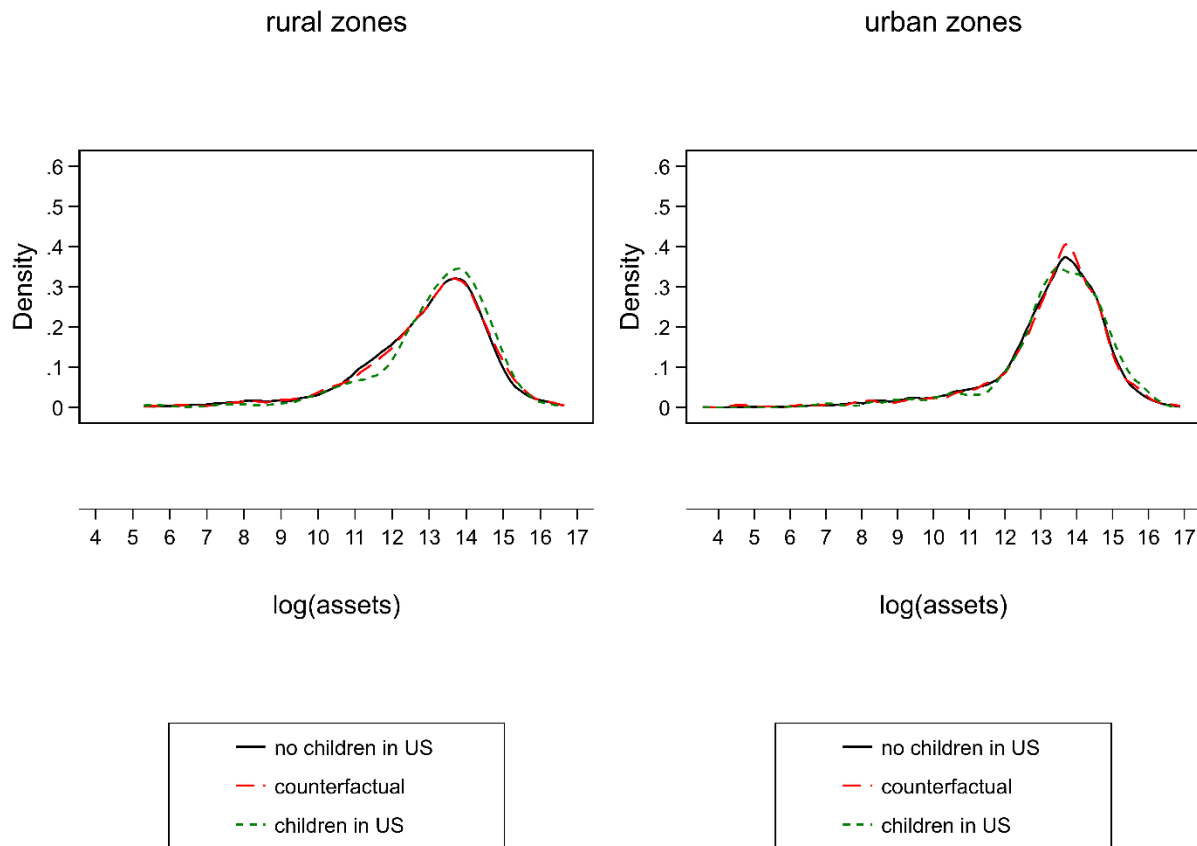
### Children's migration

Figure 12 (left panel) shows that, when distinguishing by whether respondents have children in the U.S., the asset distribution of rural elderly with children abroad (green line) lies generally to the right of that of elderly without children abroad (black line). This suggests that having children in the U.S. is associated with higher asset holdings. A similar, though weaker, pattern appears in urban areas.

In rural areas, little disparity is observed between the counterfactual distribution (Fig. 12, left panel, red line) and the observed distribution of those without children abroad (black line). This suggests that respondents with children in the U.S. would have accumulated similar levels of assets as those without, had their children remained in Mexico. Hence, no clear evidence of positive or negative selection emerges; the composition effect is negligible. The higher assets observed among rural elderly with children in the U.S. (Fig. 12, left panel, green line) therefore likely reflect remittances sent by their children, which contribute to asset accumulation in Mexico.

In urban areas, the background characteristics of migrants would have produced a slightly more concentrated asset distribution had they not had children in the U.S. (Fig. 12, right panel, red line), compared with those without children abroad (black line). Although no clear positive or negative selection emerges, it is noteworthy that, in the counterfactual, respondents with children in the U.S. would have displayed more “average” assets, whereas their actual distribution (green line) shows fewer middle-range assets but greater representation in both tails.

**Figure 12.** Asset distributions, by having children in U.S., in rural and urban zones



Source: Author's elaboration using MHAS 2018

Summarizing, we find clear evidence that the effects of migration are heterogeneous across rural and urban areas, with migration appearing more beneficial for elderly households in rural contexts, both for consumption and asset levels. Interestingly, for rural areas, positive selection effects regarding own historical migration are found, suggesting that more skilled elderly—who could have consumed more than non-migrants also if they had not migrated—decided to move to the U.S. and extended their benefits.

## 6. Conclusions

Migration is a structural phenomenon; historical family conditions, circumstantial factors, and choices made over the course of life have driven migrations decisions as well as the outcomes at

older age. This study used the Mexican Health and Aging Study (MHAS) to examine whether own historical migration experiences or having children in the U.S. shape the consumption and asset distributions among Mexican elderly households observed in 2018. Our findings obtained using semiparametric decomposition techniques indicate that the consequences for consumption and accumulated assets among Mexican elderly aged 50 or above in 2018 of their own earlier-in-life episodes of working in the U.S. as well as of having one or more children in the U.S. address a complex question.

Three main findings emerge from the analysis. Firstly, although we find that migratory experiences do not generally imply higher consumption levels—if anything, having children in the U.S. suggests lower current consumption—the constructed counterfactuals indicate negative selection: without migration, migrant’s consumption would have been lower than among the non-migrants. Hence, we can conclude that consumption benefitted from migratory experiences. Secondly, differences in accumulated assets between migrants and non-migrants are generally small and largely driven by unobserved factors. Negative selection is found for asset accumulation in relation to respondents’ own migration history, but to a lesser extent than for consumption. No clear picture arises for the elderly’s assets in relation to their children’s migration. A heterogeneous picture throughout the distribution including some weak indications of positive selection reflects that intergenerational decisions and outcomes are intertwined in a complex way.

Our third main finding is that the benefits of migration appear to be stronger in rural localities than in urban contexts. While in rural areas for both return-migrants and children abroad we encounter advantages in consumption and assets, in urban contexts the picture is less compelling. Differences in consumption and wealth in urban areas by own or children’s migratory experiences are small, and for consumption even in favor of not having children in the U.S., perhaps reflecting migration decisions intended as investments in the future of younger urban generations at the expense of elderly’s consumption. Regarding consumption at older age, for children’s migration negative selection seems to be at hand in both rural and urban localities; households that would have consumed less than non-migrants seem more prone to have children abroad. Negative selection is also found for urban respondent’s own migration. Importantly, however, regarding consumption among rural respondents we find positive selection. Rural respondents with characteristics that would have made them better-off in Mexico decided to migrate and benefit with higher levels of consumption at older age. For asset accumulation, selection effects are not clearly identifiable. Hence, we find strong indications that rural elderly with valuable capacities have sought and found opportunities in the U.S. when they were younger, and still benefit from that at older age through higher consumption levels. For urban elderly however, results point more towards migration of respondents with less-valued capacities who were motivated to seek work in the U.S., with less-advantageous outcomes for consumption at older age.

Our results at national level are consistent with but extend previous evidence for Mexico of Wong *et al.* (2007) and Wong and González-González (2010), who found positive effects of past migration to the U.S. on wealth accumulation in old age, once selection was corrected. While previous literature has mostly focused on mean effects, the distributional analysis reveals that observable factors explain only a limited share of differences in wealth accumulation among elderly households, with important heterogeneity across the consumption and asset distributions

giving rise to the identification of selective migration. The dominance of the residual component suggests that consumption at older age and asset accumulation are shaped by complex life-course mechanisms that are not fully captured by standard socio-economic indicators. The separate decompositions for rural and urban areas reveal that there are important distinctions between the zones that, to the best of our knowledge, have not been analyzed at this level of detail before. Taken together, this highlights the importance of distributional approaches for understanding long-term economic outcomes and inequalities associated with migration histories.

This research emphasized that earlier and current migration decisions by different generations of the same family are relevant in the search for better economic situation at older age. It points to a setting of intergenerational, structural, migration with intertwined decision-making mechanisms across generations, where household composition, family networks, and (local) socioeconomic conditions play a fundamental role. A potential driving force behind the decisions can be the U.S. migration policies, that have been more welcoming at some periods in history than at other moments, implying variability in opportunities over the generations. A limitation of our research is that no causal relations but merely correlations are revealed. Moreover, we have no detailed information on remittances, only on migration experiences. Hence it has not been possible to analyze whether remittances or migration experience per se are the driving force. On the other hand, the time lapse between historical migration experiences and current economic outcomes may complicate to disentangle the precise mechanisms. Also, general equilibrium effects are not accounted for, while moreover it is implicitly assumed that the distributions of unobserved skills and characteristics are the same among migrants and non-migrants. Future research should address the intrahousehold decision-making processes and in particular incorporate the role of women in migration and other decisions. More generally, an intergenerational framework for decisions regarding initial, circular, and return migration including a gender perspective while taking the policy context into account could be interesting to sketch a more complete picture of the underlying mechanisms.

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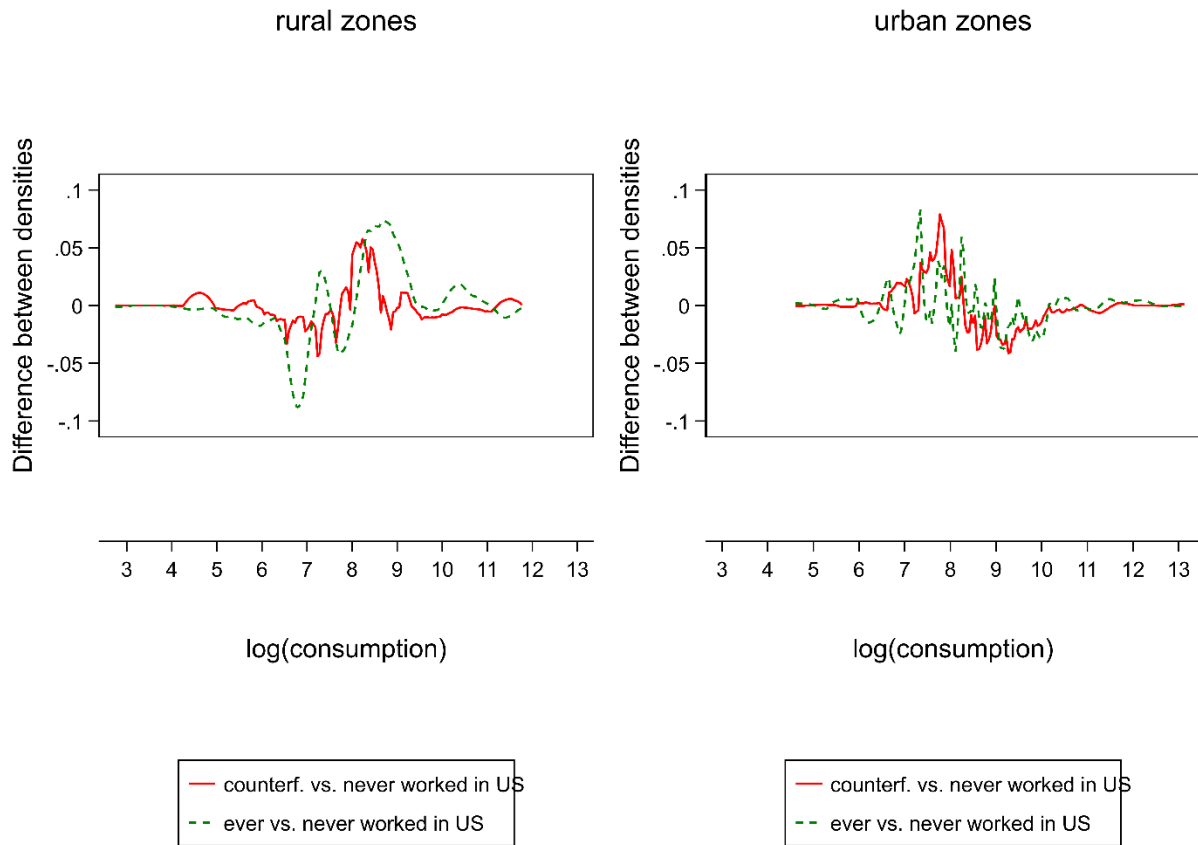
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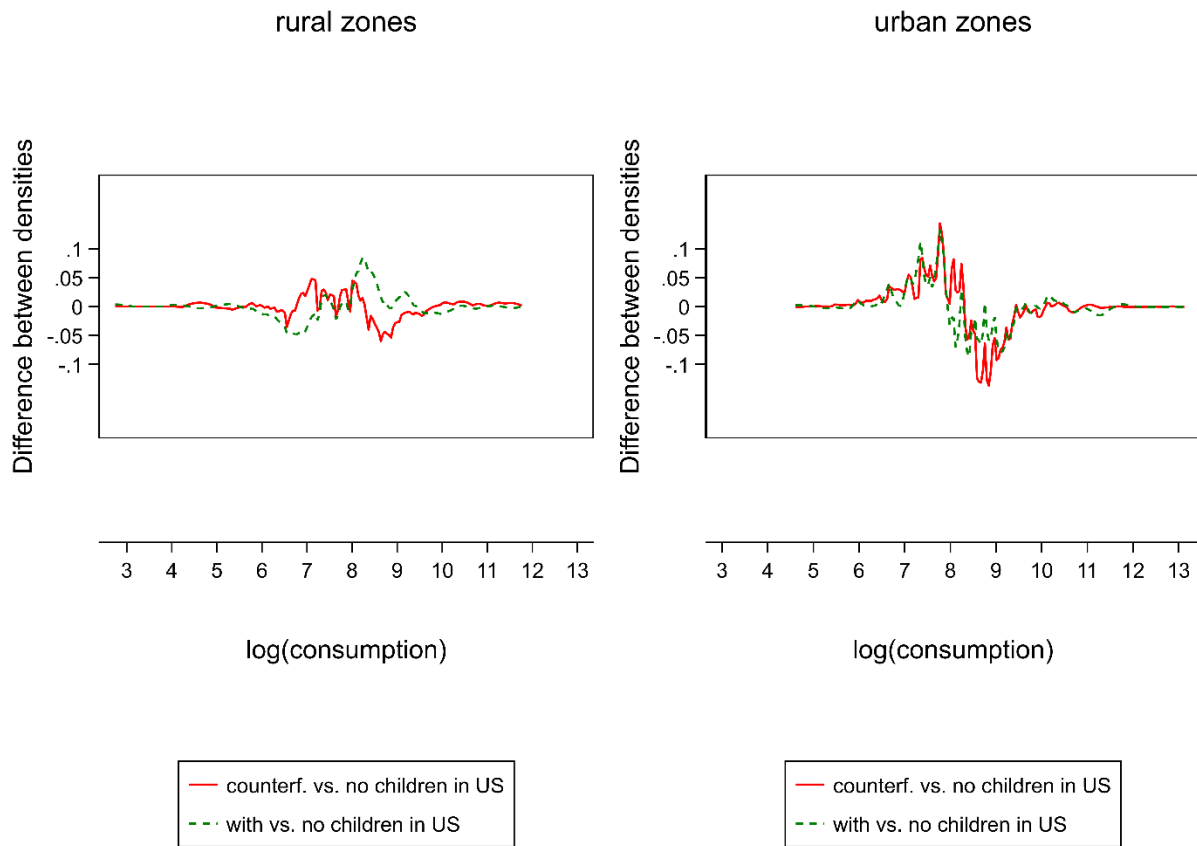
## Appendix

**Figure A.1.** Consumption distributions (residuals), by ever worked/lived in U.S., in rural and urban zones



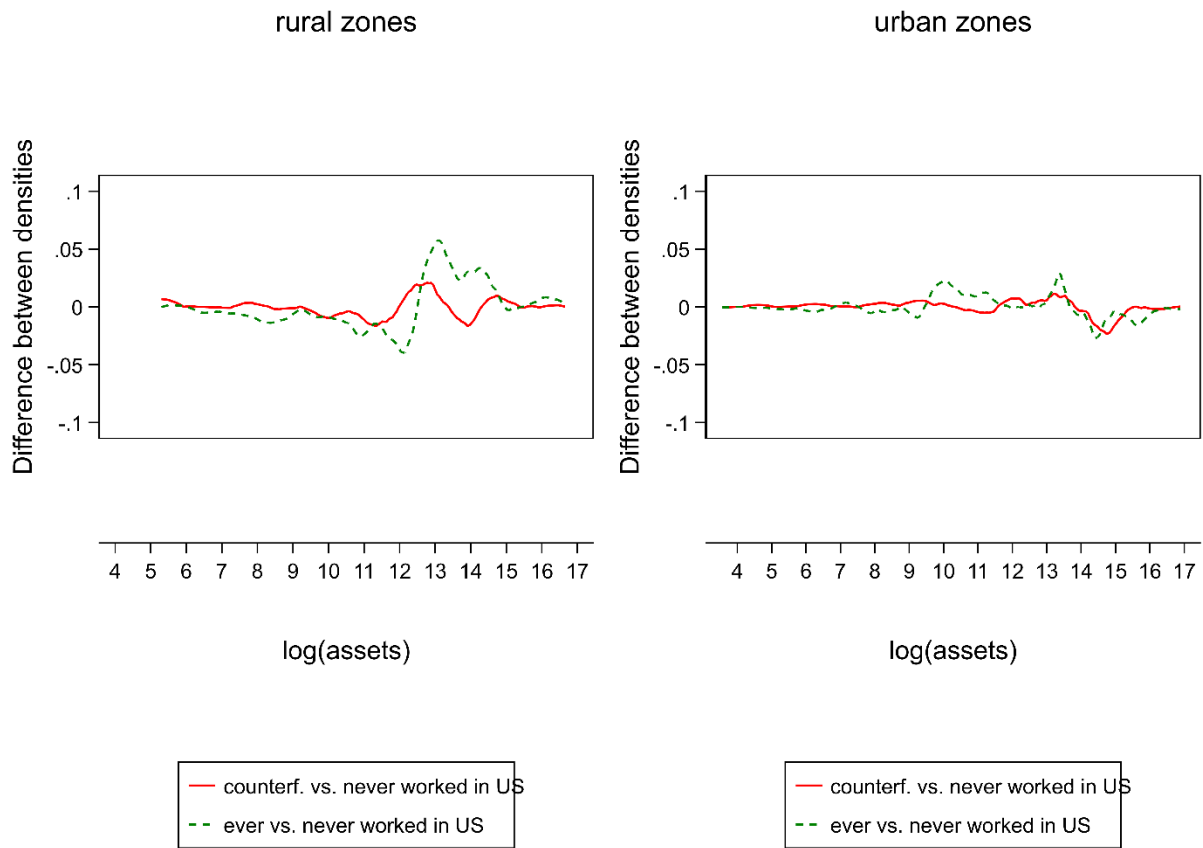
Source: Author's elaboration using MHAS 2018

**Figure A.2.** Consumption distributions (residuals), by children in U.S., in rural and urban zones



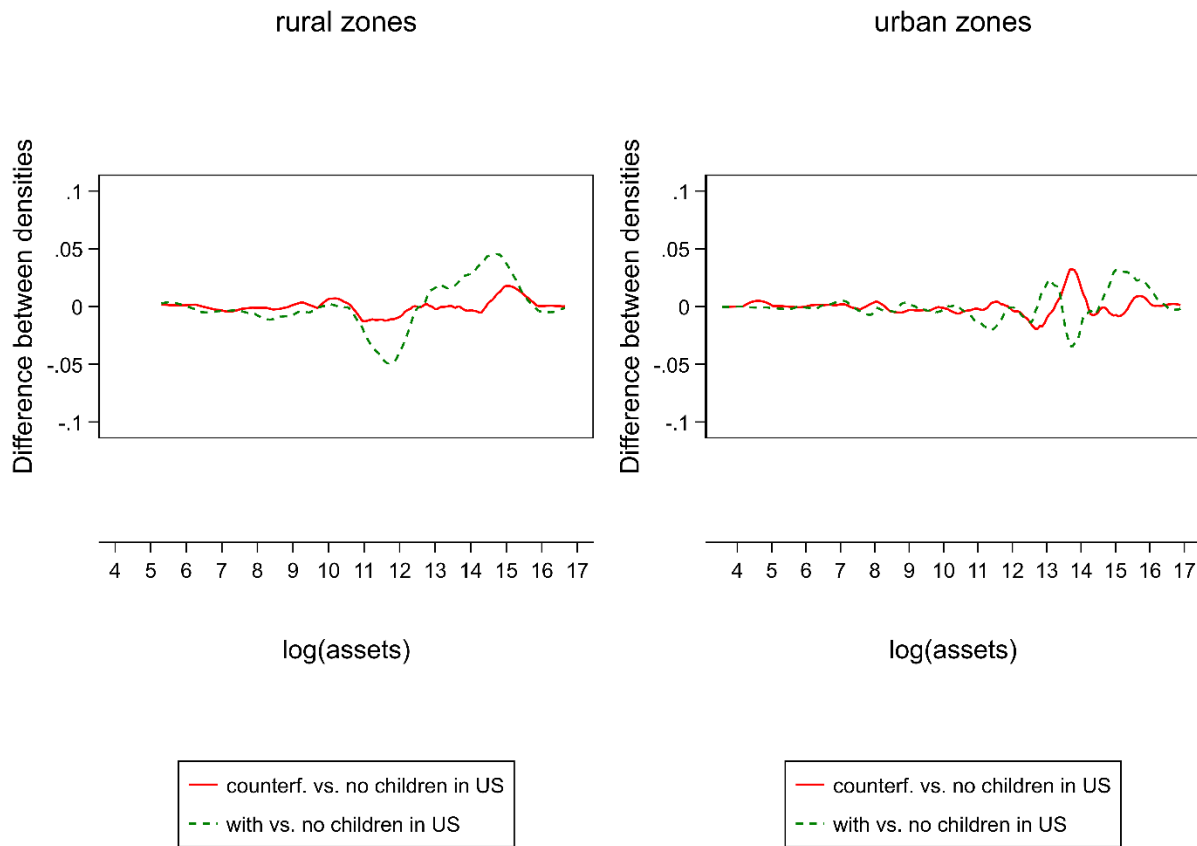
Source: Author's elaboration using MHAS 2018

**Figure A.3.** Asset distributions (residuals), by ever worked/lived in U.S., in rural and urban zones



Source: Author's elaboration using MHAS 2018

**Figure A.4.** Asset distributions (residuals), by having children in U.S., in rural and urban zones



Source: Author's elaboration using MHAS 2018