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COVID-19, Crises and Women's Control of Resources: Evidence from Mexico*

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Abstract: This paper investigates the effect of crises on the intra-household allocation of resources. To study this issue, I use survey data from Mexico and estimate a structural model of household behavior to recover how much resources are allocated to each household member. Then, I construct a proxy for women's bargaining power using the women's control of resources and document how it evolves over periods of economic stability and contraction. The results suggest that during the COVID-19 crisis period, women's control of resources decreased relative to the non-recession period (4-5 percentage points) and the financial crisis (6-8 percentage points). This effect was more pronounced for households with children than those without children. Finally, I look into how this resource reallocation affects household consumption and individual poverty. The results of this paper highlight the heterogeneous behavior of intra-household inequality and women's bargaining power over the business cycle. It also suggests that the hypothesis that the financial crisis was a "man-cession" and the COVID-19 crisis was a "she-cession" holds in terms of intra-household resource allocation.
Keywords: Crisis, Resource shares, Control of resources, COVID-19.
JEL Classification: D10, I14, I30, J10, H12.

Resumen: Este artículo investiga el efecto de las crisis en la asignación de recursos dentro del hogar. Utilizando un modelo estructural del comportamiento del hogar y datos de México, se estima cómo se distribuyen los recursos del hogar entre sus miembros. Posteriormente se crea una variable proxy para medir el poder de negociación de las mujeres, la cual refleja el control que estas ejercen sobre los recursos del hogar, y se analiza cómo cambia durante periodos de estabilidad económica y recesión. Los resultados indican que durante la crisis de COVID-19, el control de recursos por parte de las mujeres disminuyó en comparación con periodos sin recesión (4-5 puntos porcentuales) y con respecto a la crisis financiera (6-8 puntos porcentuales), especialmente en hogares con niños. Finalmente, se examina cómo esta redistribución de recursos afecta los patrones de consumo y la pobreza individual en el hogar. Los resultados resaltan el comportamiento heterogéneo de la desigualdad intrafamiliar y el poder de negociación de las mujeres a lo largo del ciclo económico. Esto también sugiere que la hipótesis de que la crisis financiera fue una "recesión masculina" y que la crisis por COVID-19 fue una "recesión femenina" se sostiene en términos de la asignación de recursos en el interior del hogar.
Palabras Clave: Crisis, Distribución de recursos, Control de recursos, COVID-19.

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1. Introduction

Is the intra-household allocation of resources across men and women affected by crises? If so, does the nature of a crisis matter? Using data from Mexico, this study provides evidence on how resources within a household are apportioned among its members, how this intra-household resource allocation shifts over crisis periods, and the implications in terms of women's control of resources (bargaining power), patterns of consumption, and individual poverty.

The financial crisis of 2008-2009 had detrimental consequences for gender equality, poverty, and economic development (Walby, 2009; Antonopoulos, 2009). Mexico's GDP experienced a sharp decline of 6.6 percent in 2009, which was the largest contraction seen in any Latin American country (Villarreal, 2010). This event severely impacted households, affecting employment, poverty, remittances, and household finances (Hurd and Rohwedder, 2010; Habib et al., 2010; Alcaraz et al., 2012; Lopez-Acevedo et al., 2020). However, a surprising feature of this event was that after the 2008 global economic crisis, female labor force participation increased in Mexico, narrowing the gender gap (Lopez-Acevedo et al., 2020). Something similar happened in the United States, and thus this has led to this recession being labeled as a "man-cession" (Wall et al., 2009).

In contrast, the most recent crisis originated in a health emergency that affected many aspects of human life. This epidemic has triggered the worst worldwide economic collapse since the Great Depression (Alon et al., 2020c).[1] One of the defining characteristics of the economic crisis generated by COVID-19 has been the differential impact it has had on men and women (Alon et al., 2020a,c; Azuara et al., 2021; Albanesi and Kim, 2021; Croda and Grossbard, 2021). The pandemic has exposed and deepened pre-existing disparities between men and women, and its impact has been particularly pronounced in relation to gender inequality and poverty (Blundell et al., 2020; Dang and Nguyen, 2021; Mahler et al., 2022). Several studies have demonstrated that poor segments of society have borne the brunt of the adverse consequences of the COVID-19 pandemic (Bonacini et al., 2021; Papageorge et al., 2021; Aubert et al., 2022). Unlike previous recessions, employment losses during the COVID-19 crisis have been more significant for women than for men, especially for women with young children. This has led to calling this recession a "she-cession" (Alon et al., 2020b; Fabrizio et al., 2021; Bluedorn et al., 2021).

In the case of middle and low-income economies, the evidence suggests that different constraints may intensify how crises affect women (Dingel and Neiman, 2020; Peluffo and Viollaz, 2021; Leyva et al., 2021). Policy measures during crises may impact gender equality by altering employment and funding for social welfare programs (Karamessini and Rubery, 2014; Rubery, 2015).

[1] Latin America and the Caribbean (LAC) governments established measures that imposed social distancing, the closure of non-essential activities, travel limitations, and, in many cases, stay-at-home orders to prevent the spread of COVID-19 (Blackman et al., 2020).

Among the many dimensions of impact, crises can affect how resources are distributed among household members, which can exacerbate inequality. However, evidence of the effect of crises on intra-household allocation of resources is still scarce, especially in Latin American countries. By documenting how crises affect the allocation of resources among family members, this study contributes to understanding the effects of economic recessions on intra-household inequality and individual well-being, which is a fundamental component in formulating policy responses.

The analysis is implemented in several steps. First, I collect data from several rounds of the consumption expenditure survey of Mexico that spans from 2004 to 2020. Second, it is necessary to estimate each household member's resources, which are unobserved in the data. Using a collective household model based on Dunbar et al. (2013), Calvi (2020), and Sokullu and Valente (2022), I structurally estimate the resource shares for men, women, and children.[2] The structure of the model allows for an examination of how the share of household resources allocated to each member evolved over the recession and non-recession periods.

The results reveal that crisis periods generate redistribution of resources within households. In 2020 (COVID-19 crisis period), women's share of resources in households with children decreased relative to both the non-recession period (2004-2006 and 2014-2018) and the period of the financial crisis (2008-2012). By contrast, during the financial crisis, there was an increase in women's share of resources in relation to the non-recession period in households with children. In households without children, women also experienced an increase in their share of resources during the financial crisis period and a decrease during the COVID-19 crisis relative to the non-recession period; however, the differences were less pronounced. These findings suggest that crises could exacerbate household inequality and provide some of the first empirical evidence on the association between crises and intra-household allocation of resources.

Then, I investigate the link between women's control of resources and household consumption decisions over periods of economic stability and contraction. The results suggest that women's control of resources is a significant determinant of household consumption decisions during shocks. Finally, I document the behavior of individual poverty over the women's life cycle and the economic business cycle. It's important to emphasize that this approach to measuring poverty centers on expenditure, and the primary objective is to compare how poverty rates vary over these periods. The findings indicate that the link between individual poverty and age is U-shaped. The difference in poverty rates between men and women significantly expands from the ages of 20 to 45, showing that inequality grows in these decades. This gap begins to converge in the post-reproductive decades and widens again when individuals are old. Lastly, there's evidence of excess female

[2]The identification of resource shares relies on information regarding private assignable goods. A good is considered private if it is non-shareable, and it is considered assignable if it is possible to determine the agent within the household that consumed it. This study uses clothing and footwear as private assignable goods.

poverty during the COVID-19 pandemic compared to non-crisis and financial crisis periods.

Related Literature. Studies examining the evolution of inequality during times of crisis reveal that recessions are often characterized by dramatic increases in earnings inequality (Heathcote et al., 2010; Krueger et al., 2010; Piketty and Saez, 2013; Meyer and Sullivan, 2013; Bitler and Hoynes, 2015). In Mexico, the financial crisis affected employment and income inequality (Villarreal, 2010; Freije et al., 2011; Becker, 2014; Iniguez-Montiel and Kurosaki, 2018), as well as other critical socio-economic outcomes (Vilar-Compte et al., 2015; Alcaraz et al., 2012). Similarly, recent evidence suggests that the COVID-19 pandemic has had a devastating economic impact on households, exacerbating inequality (Adams-Prassl et al., 2020; Bottan et al., 2020; Almeida et al., 2021; Hoehn-Velasco et al., 2022). Previous research has primarily concentrated on evaluating inequality at the household level but has disregarded the potential impact of crises on the distribution of resources within households. This limited attention to the effect of crises on intra-household allocation of resources may lead to an inadequate understanding of the consequences of crises on inequality. This study seeks to fill this gap by presenting empirical evidence on how the financial crisis and COVID-19 pandemic have affected the allocation of resources within households and, consequently, the levels of within-household inequality.

Research analyzing the relationship between crises and women's outcomes revealed that female labor force participation increased in Mexico and other countries after the financial crisis, narrowing gender inequalities (Wall et al., 2009; Ayhan, 2018; Lopez-Acevedo et al., 2020; Leyva and Urrutia, 2022).[3] In contrast, one of the COVID-19 recession's central features is that it disproportionately affected women (Alon et al., 2020a,c; Azuara et al., 2021). Due to school closures and the added demands for care of sick household members, COVID-19 affected women's labor supply (FAO, 2020; Alon et al., 2020c; Heggeness, 2020; Croda and Grossbard, 2021; Yamamura and Tsustsui, 2021), gender gaps in time spent in unpaid activities (Costoya et al., 2021), and the division of labor and childcare (Seiz, 2021).[4] In the case of Mexico, Hoehn-Velasco et al. (2022) suggest that the COVID-19 pandemic severely impacted households in terms of employment and time allocation. Likewise, Peluffo and Viollaz (2021) show that in Mexico, two partner households have high within-household correlations of working from home, contributing to increased inequality during the pandemic.

While these studies and the present study share an interest in evaluating the effect of crises on women's and household outcomes, previous work has yet to focus on the consequences of crises

[3]Moreover, Mexican women did not experience a reduction in their income, and the difference between the labor income of men and women was reduced during the crisis (Becker, 2014).

[4]Other studies suggest that COVID-19 may affect family stress and domestic violence (Silverio-Murillo et al., 2020; Beland et al., 2020; Hsu and Henke, 2021). Also, Fetzer et al. (2021) shows a substantial increase in economic anxiety during the COVID-19 pandemic. Similarly, Czymara et al. (2021) and Huebener et al. (2021) show that during the COVID-19 epidemic in Germany, mothers' mental health and well-being deteriorated.

on the allocation of resources among household members. This study aims to complement the literature by using a structural framework to document how women's share of household resources and poverty are affected by economic recession. Additionally, severe economic shocks can affect women's relative bargaining power. However, the literature on the effects of recessions on women's outcomes has overlooked the impact of crises on female decision-making power. This study references Tommasi (2019) and Calvi (2020), and constructs a proxy variable for women's bargaining power based on individual resource shares. Because resource shares are estimated entirely by observing commodities and household characteristics, they do not suffer from subjective biases (Tommasi, 2019).[5] Therefore, this metric is informative for policy analysis since resource shares provide an explicit measure of bargaining power.

Finally, analyzing the behavioral effects of a crisis under the assumption that households act as a single rational unit in which the costs of the shock are distributed in equal proportion among all family members could underestimate the true impact of a crisis. To address this caveat, this paper benefits from the recent developments in collective intra-household decision models (see for instance, Chiappori, 1992; Browning et al., 1994; Lewbel and Pendakur, 2008; Lise and Seitz, 2011; Browning et al., 2013; Dunbar et al., 2013; Calvi, 2020). Using the framework of Dunbar et al. (2013), Calvi (2020), and Sokullu and Valente (2022), I estimate all the necessary parameters of the collective intra-household model and document how the women's control of resources evolves over the business cycle and the women's life-cycle. The study also enhances this literature by showing the connection between women's bargaining power and household consumption decisions during economic stability and economic downturn periods. Additionally, it explores the behavior of individual poverty over the women's life cycle and economic business cycle.

Outline. In Section 2, I present the most important features of the data used for the analysis. Section 3 presents the model and the identification of the model. Section 4 presents the estimation results and the implications in terms of women's control of resources, patterns of consumption, and individual poverty. Lastly, a conclusion is presented in Section 5.

2. Data

2.1. The Context of Crises in Mexico

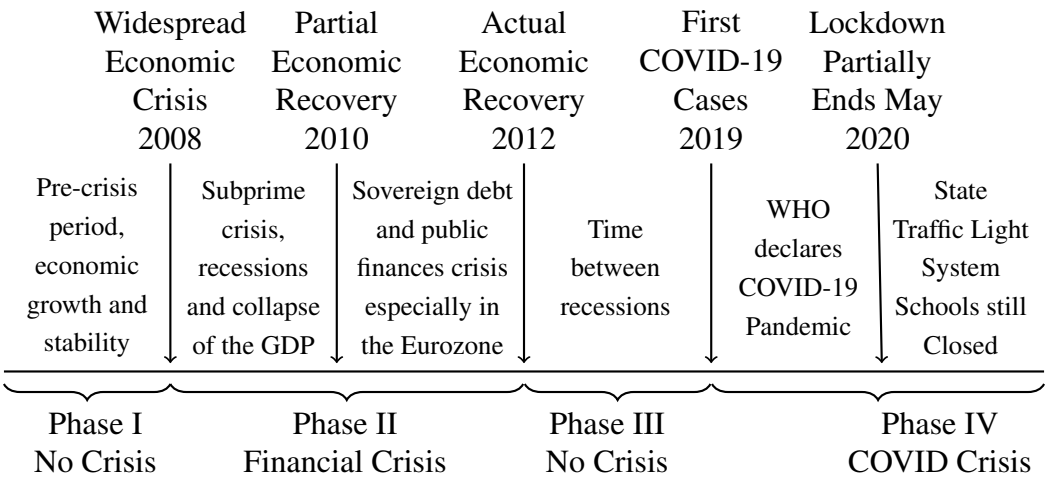
Due to data availability, the present analysis is limited to the years 2004-2020 (see Figure 1). In 2004, the global economy experienced high growth rates, benefiting the Mexican economy with a

[5] To measure bargaining power, other studies have relied on a variety of approaches using indicators of decision control and self-reported decision-making, unearned income, women's share of income, pre-marriage assets, and differences in education (Schultz, 1990; Thomas, 1990; Quisumbing, 1994; Hoddinott and Haddad, 1995; Thomas et al., 2002; Gitter and Barham, 2008; Schady and Rosero, 2008; Reggio, 2011).

4.4% increase in GDP. The world economy continued to show favorable growth in the following years, and Mexico's GDP grew by 3% and 4.8% in 2005 and 2006, respectively (Banco de México, 2005, 2007).

After a stable period, turbulence in international financial markets significantly affected the performance of the global economy in 2008. Additionally, the slowdown in economic activity has affected both emerging and advanced economies. Mexico's GDP growth was approximately one percent that year. The adverse international environment due to the 2008 financial crisis weakened economic activity in Mexico in subsequent years. As a result, the country's GDP fell by 6.5 percent in 2009 (Banco de México, 2009, 2010). In 2010, the reactivation process that began in the second half of 2009 was consolidated. In that year, the real GDP registered an annual increase of 5.5 percent. This expansion led to an important generation of formal employment in the economy (Banco de México, 2011).

Figure 1. Timeline of Crisis Events 2004-2020



Notes: The figure shows the relevant events that affected the Mexican economy between the period 2004 and 2020.

However, the financial crisis of 2008 had far-reaching consequences that persisted until 2011 and were further compounded by the sovereign debt crisis in the Eurozone, the rise in commodity prices, and natural disasters in Asia. The impact on the global economy was profound, with growth rates lower than those in the previous year. The Mexican economy was no exception, as the labor market struggled, with unemployment rates remaining above pre-crisis levels. The effects of the financial crisis also played a significant role in Mexico's inequality due to the weakness of the labor market in generating household income growth (Cord et al., 2017). By 2013, the global economy showed signs of stabilization, and Mexico's economy began to show moderate expansion (Banco

de México, 2012, 2013, 2014).[6]

After a relatively stable period between 2013 and 2019, the COVID-19 pandemic hit the LAC economies hard in 2020, causing a significant impact on their growth.[7] Mexico experienced the onset of the COVID-19 pandemic in March 2020, which led to school closures, limited mobility, and a national stay-at-home order. The country partially lifted the lockdown on May 30, 2020, and implemented a traffic light system (*semáforo*) to regulate business operations during the re-opening. Despite the government's efforts, strict compliance with these restrictions was not fully achieved. Mexico's fiscal response to the COVID-19 shock was modest and has been argued to be insufficient to mitigate the COVID-19 pandemic's effects on the Mexican labor market and economy (Ahmed Hannan et al., 2020). In 2020, the pandemic negatively impacted economic activity, resulting in an 8.2 percent decline in GDP and 3.2 percent decrease in formal employment (Banco de México, 2021; IMSS, 2021). The resulting economic contraction of this event is likely to have had significant distributional implications for various economic groups (Lustig et al., 2020).

2.2. Data Description

This study uses nine waves (2004-2020) from the National Household Income and Expenditures Survey (*Encuesta Nacional de Ingresos y Gastos de los Hogares*), which I denote here as ENIGH for its acronym in Spanish. The ENIGH is a household survey that collects information on the amount, distribution, and structure of household income and expenditures. The ENIGH also contains information on respondents' demographic and socioeconomic characteristics. This data is convenient for identifying and estimating a collective household model because it allows for the generation of private assignable goods to households' men, women, and children. The ENIGH also has sufficient information to characterize the individual, household, and regional factors that influence the allocation of resources within the household.

To perform the analysis, I select a sub-sample of the pooled sample of ENIGHs that satisfies the following restrictions. I exclude households with no women or men above 18 years of age and households with the head or the head's spouse under 18 years of age.[8] For simplicity, I also exclude households with more than five women, more than five men, or more than five children under 18 years of age; polygamous households; households with extrafamilial members, such as servants; and households with any members older than 70 years or missing. To avoid outliers, households

[6] For the analysis, I define the financial crisis as the period between 2008-2012 to consider the persistent effects. In a robustness check, I define financial crises as the year 2008 only.

[7] In 2020, the LAC's GDP fell by 7 percent (compared to 4.7 percent in advanced economies and 2 percent in other emerging economies). Moreover, at the pandemic's peak (June 2020), the LAC region lost around 31 million jobs, representing 14 percent of total employment (Azuara et al., 2021).

[8] In the survey, households were asked how much they spend on clothing and footwear for girls and boys under 18 years old. Therefore, the definition of children is data-driven.

in the top and bottom one percent of the total household expenditure distribution are removed. Lastly, households with missing data for any household characteristics or relevant expenditures were dropped from the sample. The final sample comprises 238,246 households (171,990 with children and 66,256 without children).[9]

Table 1. Descriptive Statistics

	Mean	Median	SD
Adult Members Characteristics:			
Adult Females	1.35	1.00	0.64
Adult Males	1.35	1.00	0.63
Female Higher Education	0.25	0.00	0.43
Male Higher Education	0.24	0.00	0.43
Average Age of Women (ages 18–79)	38.71	37.00	10.91
Average Age of Men (ages 18–79)	39.30	37.50	11.52
Household Characteristics:			
Number of Children	1.48	1.00	1.25
Average Age of Children (ages 0–17)	8.61	8.67	4.45
Share of Girls	0.49	0.50	0.39
Unmarried daughter above age 18	0.19	0.00	0.40
Unmarried son above age 18	0.25	0.00	0.43
Widow	0.04	0.00	0.20
Rural	0.33	0.00	0.47
Benefits	0.39	0.00	0.49
UDL	0.33	0.00	0.47
Year:			
2004	0.07	0.00	0.25
2006	0.06	0.00	0.23
2008	0.08	0.00	0.28
2010	0.08	0.00	0.27
2012	0.02	0.00	0.15
2014	0.06	0.00	0.23
2016	0.20	0.00	0.40
2018	0.20	0.00	0.40
2020	0.24	0.00	0.43
Household Expenditures:			
Men Share of Assignable Goods (%)	0.89	0.00	1.61
Women Share of Assignable Goods (%)	0.95	0.00	1.80
Children Share of Assignable Goods (%)	1.59	0.59	2.31
Total Current Expenditure ($MXN)	38,345.94	29,800.59	36,020.39
Total Expenditure ($MXN)	43,940.67	32,157.31	57,452.11

Notes: The table shows a set of important characteristics of the households used for the analysis. Women, men and children's assignable goods includes expenditure on individual clothes and footwear. Expenditure is quarterly expenditure of the household and is reported in 2011 Mexican pesos. Female higher education and male higher education are indicator variables for higher education (above high school) completed by at least one woman or man in the household. Benefits is an indicator for a household being the beneficiary of government programs, scholarships or donations. UDL is an indicator for living in a state that has adopted the unilateral divorce law. The sample used comprises 238,246 households (171,990 households with children and 66,256 without children).

[9]This sample represents approximately 70% of all the households in the original sample.

2.3. Descriptive Statistics

Table 1 presents selected descriptive statistics for the sample used for the analysis. The average number of adult females and males is around 1.35. The average age of adult females is approximately 38 years old, and the proportion of adult women with higher education is 0.25. In terms of family composition, on average, households have 1.48 children, the mean age of children is around nine years old, and 49% of children are girls. Unmarried daughters above 18 years of age are present in 19% of households, unmarried sons above 18 years of age are present in 25% of households, and 4% of households comprise a widow. In terms of institutional and geographic conditions, 39% of households are beneficiaries of governmental programs, scholarships, and donations, 33% are exposed to unilateral divorce law, and 33% of households live in rural areas.

Similar to many consumption expenditure surveys, the ENIGH survey asks whether the reported expenditure is monthly, quarterly, semi-annually, or annually depending on the consumption item. For the analysis, the values are transformed into monthly expenditures. To calculate assignable good expenditures for each household member, I take advantage of the fact that expenditures on clothing and footwear are available separately for men, women, and children. Therefore, I aggregate household expenses for clothing and footwear for children, adult women, and adult men. To obtain the household's total expenditure, I aggregate all non-durable expenditures. Table 1 indicates that the average quarterly real household's total non-durable expenditure is 38,345.94 Mexican Pesos of 2011 (total current expenditure is around 85% of total expenditure). Expenditures in clothing and footwear represent a small portion of the total household budget (around 3.5%).

3. Structural Analysis of Household Behavior

3.1. Intra-household Allocation of Extended Households

To document the evolution of intra-household inequality throughout the business cycle, it is necessary first to estimate the resource shares of each household member. The available data of the ENIGH provides information on household spending, but not on how much individuals consume or the extent of joint consumption. Therefore, resource sharing is not observable. To identify the share of household resources controlled by each household member and quantify the effect of crises on the reallocation of resources, I use a collective intra-household model similar to Calvi (2020) and Sokullu and Valente (2022).

Consider a household formed by I types of agents indexed by $i = 1, \ldots, I$. Households are heterogeneous in several observable characteristics, such as geographic location, family composition,

sociodemographic factors, and members' socioeconomic variables. The agents within this household could have distinct preferences; however, they have to jointly decide on the purchase of L goods. Let's define $\mathbf{p} = (p_1, \ldots, p_L)$ as the L-vectors of market prices, $\mathbf{x} = (x_1, \ldots, x_L)$ as the L-vectors of quantities of each good l purchased by a household, $\mathbf{c^i} = \left(c_1^i, \ldots c_L^i\right)$ as the L-vectors of quantities of private good equivalents of each good l consumed by member i of the household and y as the household's total expenditure. As in Browning et al. (2013) and Dunbar et al. (2013), I assume economies of scale in consumption through a linear (Barten-type) consumption technology, which takes the form of a matrix denoted by A with $L \times L$ dimension. The advantage of this framework is that it enables the conversion of the household's purchased quantities $\mathbf{x}$ into a bundle of private good equivalents $\mathbf{c}^i$, which is then apportioned among the household members, so $\mathbf{c} = \sum_{i=1}^{I} \mathbf{c}^i = A^{-1}\mathbf{x}$.[10]

Each agent i, derives utility from the consumption of the bundle of L goods, denoted as $U^i\left(\mathbf{c}^i\right)$.[11] Each agent's total utility may also depend on the utility of other household agents, leisure, and being a member of a household. For simplicity, I assume that each agent i's utility is weakly separable over the sub-utility functions for goods. So, for instance, member i who gets utility from other family members' well-being as well as her own would have a utility function given by $\overline{U}^i = \overline{U}^i\left[U^1\left(\mathbf{c}^1\right), \ldots, U^I\left(\mathbf{c}^I\right)\right]$. As $\overline{U}^i$ depends upon other member's private good equivalents $\mathbf{c}^{i' \neq i}$ only through the consumption utilities they produce, direct consumption externalities are ruled out. Therefore, $U^i\left(\mathbf{c}^i\right)$ should be interpreted as a sub-utility function over goods, which may be just one component of total utility.[12] Each household maximizes a social welfare function, $\overline{U}$, defined as:

$$\overline{U}\left(U^1, \ldots, U^I, p/y\right) = \sum_{i=1}^{I} \mu^i\left(p/y\right)\overline{U}^i \tag{1}$$

Note that each household member's Pareto weight $\mu^i\left(p/y\right)$ in Equation 1 is a function of prices, household expenditure, and other individual characteristics. An important assumption of collective models is that, even though agents within the household may have heterogeneity in preferences,

[10] This consumption technology provides a general structure to model sharing and jointness of consumption. Let's look at a typical example used in the literature. If good l is a private good (i.e., not jointly consumed), the lth row of matrix A will have 1 in the lth column and zeros everywhere else. Now, suppose that we look at a married couple without children. The couple jointly rides their automobile half of the time, implying that both share the cost of gasoline (50% each). When one family member rides alone, that member must assume the payment of gasoline. In this context, gasoline consumption, in terms of private good equivalents, is 1.5 times larger than the gasoline consumed at the household level. Assuming that gasoline consumption is independent of the consumption of other goods, then the lth diagonal element of matrix A will be $\frac{2}{3}$ such that: $x_l = \frac{2}{3}\left(c_l^{\male} + c_l^{\female}\right)$ for l being gasoline. In this case, $\frac{2}{3}$ reflects the degree of publicness of good l within the household.

[11] The utility function is assumed to be monotonically increasing, twice continuously differentiable, and strictly quasiconcave.

[12] The children's utility could be interpreted in two ways. $U^k\left(\mathbf{c}^k\right)$ might represent the child's utility function over the bundle of goods $\mathbf{c}^k$, or it could be the utility function their parents believe the child possesses.

they make consumption decisions efficiently. Therefore, efficient allocations can be described as resulting from the following maximization problem:

$$\begin{aligned} \max_{\mathbf{c}^1,\ldots,\mathbf{c}^I,\mathbf{x}} \quad & \overline{U}\left(U^1,\ldots,U^I,p/y\right) \\ \text{subject to :} \quad & \\ & \mathbf{x} = A\sum_{i=1}^{I}\mathbf{c}^i \\ & y = \mathbf{x}'\mathbf{p} \end{aligned} \tag{2}$$

Solving the maximization problem in Equation 2, we can obtain the quantity of private good equivalents, $\mathbf{c}^i$, for each member $i \in \{1,\ldots,I\}$. Then, pricing these bundles at within household shadow prices $A'\mathbf{p}$, it is possible to obtain the resource shares η^i, which represent the fraction of the household's total resources that are assigned to each agent within the household.

The Pareto efficient allocation allows us to use duality theory and decentralization welfare theorems to characterize the collective model expressed in Equation 2. Specifically, the solution to the maximization problem in Equation 2 can be decomposed into a two-stage process (Chiappori, 1992). In the first stage, household members decide on the optimal allocation of resources. This defines the resource shares for each member. The second stage deals with the individual maximization of their own utility function. Conditional upon knowing η^i, each household member performs an individual utility maximization subject to a Lindahl-type shadow budget constraint that defines the optimal bundle $\mathbf{c}^i$.[13] Then, we have a set of indirect utility functions $V^i\left(A'\mathbf{p},\eta^i y\right)$ for $i \in \{1,\ldots,I\}$ evaluated at these shadow (Lindahl) prices. By substituting the indirect utility functions $V^i\left(A'\mathbf{p},\eta^i y\right)$ for $i \in \{1,\ldots,I\}$ in Equation 2, the household program simplifies to the choice of optimal resource shares subject to the constraint that total resource shares must sum to one. Note that each household member maximizes their own utility subject to a shadow budget constraint specific to that member. In this framework, scale economies in consumption resulting from sharing are reflected in the difference between shadow and market prices. Then, the household's demand functions for each good l arising from the maximization in Equation 2 are given by:

$$c_l = A_l\left(\sum_{i=1}^{I} h_l^i(A'\mathbf{p},\eta^i y)\right) \tag{3}$$

where h_l^i are individual demand functions, and $\eta^1,\ldots,\eta^I$ are the resource shares of the respective agent member $i \in \{1,\ldots,I\}$.

[13] Within the household, each member faces a total budget constraint characterized by the member's resource share of the total household budget and a vector of Lindahl type shadow prices for goods. The difference between market and shadow prices lies in the economies of scale to consumption. In particular, shadow prices will be lower than market prices for goods that are shared or consumed jointly.

3.2. Identification and Estimation Strategy

To identify the resource share, it is necessary to have a private assignable good for each household agent (see, Dunbar et al., 2013; Calvi, 2020). A private assignable good has the characteristic that it is consumed exclusively by one member of the household and therefore does not exhibit economies of scale in consumption.[14] Two restrictions are imposed by Dunbar et al. (2013) for identification. The first is that η^i does not depend on household expenditure y, at least at low expenditure levels.[15] The second involves some restrictions on the shapes of individual Engel curves.[16] Under these conditions, it is possible to simplify the household demand functions given in Equation 3, since the private assignable good's shadow price is the same as its market price.

For a private assignable good of agent i, it is possible to re-express the household demand in Equation 3 as the product of η^i and the demand function for individual resource of household member i given by the Engel curve function w^i. Then, the household demand functions for private assignable goods are given by:

$$W^i(y,\mathbf{p}) = \eta^i(y,\mathbf{p})\, w^i\left(A'\mathbf{p}, \eta^i y\right) \quad (i = ♀, ♂, k) \tag{4}$$

In Equation 4, W^i represents the share of total household expenditures devoted to each agent i private assignable good, η^i is the resource share assigned to agent i and w^i represents the unobserved share of agent i's resources that the individual would spend on his private good when maximizing his own utility function given the shadow price $A'\mathbf{p}$.[17]

Equation 4 describes a system of three equations, where W^i and y are observable for each agent i, and the objective is the identification of resource shares η^i for each i. The main complication in identifying these resource shares comes from the inability to observe η^i and w^i on the right-hand side of Equation 4. Therefore, following Calvi (2020), it is necessary to impose some preference restrictions. I impose similarities of preferences across household agents of the same type (i.e., common to all men, all women, and all children), called SAP ("Similar Across People"). By restricting the shapes of the functions w^i to have similar curvatures across household members of a specific type, it is possible to identify the resources shares without relying on any additional

[14] To clarify this concept, a private good does not feature economies of scale in consumption (e.g., food). An assignable good is also private if consumed exclusively by a household member of type i (e.g., clothing and footwear items).

[15] It is not possible to straightforwardly test this assumption. Using the model estimates, I show in Online Appendix A.1 that this assumption is likely to hold. Additionally, there exists empirical evidence in the literature that supports this identification assumption (see, for instance, Menon et al., 2012).

[16] In this context, an Engel curve defines the relationship between a budget share and total spending, holding prices constant.

[17] Since household members may have heterogeneous preferences for their private assignable goods, W^i cannot simply be used as a metric of η^i.

restriction on the shape of the preference function w^i. As a robustness check, I follow Sokullu and Valente (2022) and impose similarity of preferences over time, called SOT ("Similarity Over Time"). The underlying assumption is that preferences for private assignable goods are similar between individuals of the same type (women, men, children) observed in different time periods. In addition, SOT implies that a different cross-section of individuals of a given type (women, men, children) has similar preferences for the private assignable good but different resource shares.

In this framework, women are treated as an aggregate person; therefore, the resource share of women is divided equally among the women in the household (the same applies for men and children). Women's total resource share in households with $N^{\female}$ women is thus given by $H^{\female} = N^{\female}\eta^{\female}$, where $H^{\female}$ denotes the proportion of total household expenditure consumed by women. As a result, $H^{\female}$ is a proxy measure for women's total bargaining power. Let's assume that individual preferences are described by utility functions that belong to the PIGLOG class. Then, in Equation 4, each household member's private assignable good Engel curve is linear in the logarithm of expenditure. So, the demand functions for private assignable goods in households with $N^{\male}$ men, $N^{\female}$ women, and N^K children can be expressed as:

$$\begin{aligned} W^{\male} &= \alpha^{\male} H^{\male} + \beta^{\male} H^{\male} \ln\left(\frac{H^{\male} y}{N^{\male}}\right) \\ W^{\female} &= \alpha^{\female} H^{\female} + \beta^{\female} H^{\female} \ln\left(\frac{H^{\female} y}{N^{\female}}\right) \\ W^k &= \alpha^k H^k + \beta^k H^k \ln\left(\frac{H^k y}{N^K}\right) \end{aligned} \tag{5}$$

where $W^{\male}$, $W^{\female}$ and W^k are the budget shares spent on women's, men's, and children's private assignable goods, and α^i and β^i represent linear combinations of underlying preference parameters. The SAP restriction implies that $\beta^{\male} = \beta^{\female} = \beta^k = \beta$, which means that resource shares can be identified by comparing household demands for private assignable goods across individuals within households. To relax this assumption in the estimation, the resource shares and the preference parameters are allowed to vary with observable household characteristics (including household size). I also allow for variation across time periods by including indicator variables for each year $t = 2004, 2006, \ldots, 2020$. Specifically, preference parameters and resource shares are specified as $\Lambda^i = \delta_0^{\Lambda_i} + \delta_1^{\Lambda_i} X_1 + \ldots + \delta_n^{\Lambda_i} X_n + \sum_{t=2004}^{2020} \delta_t^{\Lambda_i} X_t$ for each $i = \female, \male, k$ and $\Lambda = \alpha, \beta, H$. Furthermore, this flexible specification can be considered as controlling for price variation across geography and time to the degree that households with different characteristics may be exposed to different relative prices.

Additionally, I include exposure to unilateral divorce law[18] as a factor impacting resource allo-

[18] In 2008, Mexico City was the first state to approve unilateral and no-fault divorce in Mexico. Since then, at

cation but not preferences, even though distribution factors are not necessary for identification. One reason to include unilateral divorce law as a distribution factor is that it adds more variance, which may help with identification. Another reason is that it allows for the analysis of gender legislation on women's outcomes, especially regarding access to household resources.[19] In the case of households without children, the system contains only two Engel curves, one for women's private assignable goods and one for men's private assignable goods. To account for unobservable heterogeneity, I include additive error terms in the system of equations. It is assumed that errors are correlated across equations and clustered at the primary sampling unit level.[20] The model parameters are estimated via Nonlinear Seemingly Unrelated Regression (NLSUR).[21]

A possible concern could arise from thinking that in different economic periods the expenditure on the privately assignable good for a particular type of individual within the household drastically change and, therefore, could bias the results. First, we do not see an empirical pattern in the data that shows this issue. Second, it's crucial to emphasize that budget shares on assignable goods, denoted as W^i, and resource shares, represented by H^i, are distinct and separate objects. Notably, it is essential to understand that the proportion of the budget allotted to clothing for a particular type of individuals does not necessarily align with the proportion of resources they have control over (see, Appendix A.2).

4. Results

4.1. Estimation of Resource Shares

Using the system described in Equation 5, I estimate the factors that affect the resource shares of women $(H^{\text{♀}})$, men $\left(H^{\text{♂}}\right)$, and children $\left(H^k\right)$. I focus on the women's resource shares, and the results are presented in Table 2. The first and second columns report the results obtained by estimating separate models for households with and without children under 18. The third column presents the estimation results when all households are considered.

According to the results, the household composition is a significant factor to consider when examining resource distribution. The resource shares of women tend to increase as the number of women in the household increases but decreases as the number of men in the household rises.

varying points between 2008 and 2018, several Mexican states introduced unilateral no-fault divorce laws.

[19] Legal reforms have been utilized as distribution factors affecting bargaining power in many studies in the literature (see, Chiappori et al., 2002; Voena, 2015; Calvi, 2020; Corradini and Buccione, 2023).

[20] The primary sampling unit is a statistical division that is defined as the workload of field operations in statistical research by governmental institutions.

[21] Iterated NLSUR is equivalent to maximum likelihood with multivariate normal errors.

Table 2. Estimates of the Main Determinants of Women's Resource Shares

	With Children under Age 18 (1)	Without Children under Age 18 (2)	All Households (3)
Number of Adult Women	0.054***	0.059***	0.045***
	(0.009)	(0.013)	(0.007)
Number of Adult Men	-0.054***	-0.101***	-0.084***
	(0.009)	(0.008)	(0.006)
Number of Children	-0.041***	-	-0.004*
	(0.004)	-	(0.002)
Fraction of Female Children	-0.006	-	0.004
	(0.008)	-	(0.006)
$\mathbb{I}$(Widow)	-0.023	-0.029	-0.027**
	(0.019)	(0.019)	(0.013)
$\mathbb{I}$(Unmarried daughter above age 18)	-0.003	0.031	0.023**
	(0.014)	(0.020)	(0.011)
$\mathbb{I}$(Unmarried son above age 18)	-0.034**	-0.016	-0.037***
	(0.015)	(0.016)	(0.010)
$\mathbb{I}$(Daughter-in-law)	-0.002	-0.081**	-0.008
	(0.017)	(0.032)	(0.013)
$\mathbb{I}$(Son-in-law)	-0.004	-0.020	0.007
	(0.025)	(0.030)	(0.018)
Average age difference (ages 18–69)	0.101	0.133*	0.204***
	(0.063)	(0.071)	(0.045)
Average female age (ages 18–69)	0.845	-0.894	-0.080
	(1.043)	(1.079)	(0.665)
Average age difference^2 (ages 15–69)	-0.289	-0.240	-0.333**
	(0.211)	(0.187)	(0.130)
Average female age^2 (ages 18–69)	-1.771	2.883	0.906
	(2.654)	(2.488)	(1.624)
Average age difference^3 (ages 18–69)	-1.311	0.060	-1.409**
	(0.901)	(0.750)	(0.604)
Average female age^3 (ages 18–69)	1.196	-2.465	-1.144
	(2.194)	(1.839)	(1.268)
Average children age (ages 0–17)	0.173*	-	-0.014
	(0.090)	-	(0.051)
$\mathbb{I}$(UDL)	0.007***	0.008**	0.007***
	(0.002)	(0.004)	(0.002)
$\mathbb{I}$(Female salary earner)	0.016**	0.018**	0.055***
	(0.007)	(0.009)	(0.005)
$\mathbb{I}$(Men salary earner)	-0.008	-0.022**	-0.030***
	(0.007)	(0.009)	(0.005)
$\mathbb{I}$(Female higher education)	0.007	0.025**	0.016**
	(0.008)	(0.010)	(0.006)
$\mathbb{I}$(Male higher education)	-0.030***	-0.019*	-0.033***
	(0.009)	(0.010)	(0.006)
$\mathbb{I}$(Governmental programs)	0.013**	0.030***	0.029***
	(0.006)	(0.009)	(0.005)
$\mathbb{I}$(Dwelling ownership)	0.002	0.005	0.008
	(0.007)	(0.008)	(0.005)
Constant	0.330**	0.580***	0.478***
	(0.134)	(0.150)	(0.087)
Controls	✓	✓	✓
R^2	0.256-0.491	0.339-0.361	0.318-0.291
N	171,990	66,256	238,246

Notes: The table shows nonlinear seemingly unrelated regression estimates of women's resource shares. Additional controls include time and regional dummies. Women's age and age differences are divided by 100 to ease computation. R^2 range across the different equations of the NLSUR model. Standard errors clustered at the primary sampling unit level. *significant to 10%; **significant to 5%; ***significant to 1%.

Specifically, the presence of an additional woman leads to a 5.4 percentage points increase in women's resource shares in households with children, a 5.9 percentage points increase in households without children, and a 4.5 percentage points increase in the overall sample, holding all other factors constant. On the other hand, the number of children has the opposite effect and reduces women's resource shares, while the proportion of female children does not significantly impact H^{φ}. However, holding all other variables constant, an increase of one year in the average age of children in households with children leads to a 0.17 percentage point rise in women's resource shares. These results suggest that children's age may play a more significant role in determining women's access to household resources than the gender composition of children.

The presence of a widow decreases women's resource shares, although this relation is not statistically significant. The study findings reveal a correlation between the presence of adult sons and a decline in the resource allocation to women in households with children. In contrast, the presence of adult daughters is linked to an increase in women's resource allocation in households without children and in the overall sample. Furthermore, the presence of a daughter-in-law in households without children is associated with a decrease in women's resource allocation. The evidence points to the fact that the coefficients for age differences do not exhibit individual statistical significance; however, they are jointly significant. Therefore, as the average age difference between adult men and women increases, there is a corresponding decrease in the proportion of the household's total expenditure allocated to women. In addition, despite the lack of statistical significance of the coefficients, there is a negative relationship between women's age and the percentage of the household's total expenditure directed toward them. These results suggest that the composition of extended households can potentially exert an influential impact on the quantity of household resources allocated to women.

The results also indicate that exposure to the Unilateral Divorce Law (UDL) plays a significant role in determining the distribution of resources among women. Depending on the model specification, women's share of resources increases by 0.7 to 0.8 percentage points in households affected by this legal reform. This is particularly important because household resources are crucial for meeting basic needs such as food, healthcare, and education. By increasing women's share of household resources, the UDL may enable women to better provide for themselves and their families, potentially reducing gender disparities. Likewise, the level of education attained by women and the presence of a female salary earner are both positively associated with an increase in the overall expenditure allocated to women within the household. This underscores the importance of investing in female education and employment opportunities to enhance women's economic well-being. In addition, households that receive government programs, scholarships, or donations are more likely to allocate more resources to women, suggesting that government welfare programs can play a crucial role in promoting gender equality and enhancing the economic well-being of women.

Lastly, I test the null hypothesis that the models in columns 1 and 2 have equal coefficients. The results of this test showed that the likelihood ratio test statistics exceeded the χ^2 critical value. As a consequence, the null hypothesis was rejected. Therefore, I will use separate models for the remainder of the paper, including one model with children and one without children.

4.2. Intra-household Allocation

Until this point, the empirical analysis has mainly focused on the marginal effects of different factors on women's resource shares. In the next step, I employ the estimates presented in Table 2 and the corresponding estimates for men and children to predict the resource shares for women $\left(\hat{H}^{\text{♀}}\right)$, men $\left(\hat{H}^{\text{♂}}\right)$, and children $\left(\hat{H}^{k}\right)$, in households with and without children. Resource shares are modeled as linear functions of household characteristics.[22] Specifically, total resource shares are computed as: $\hat{H}^{i} = \hat{\delta}_0^{H_i} + \hat{\delta}_1^{H_i} X_1 + \ldots + \hat{\delta}_n^{H_i} X_n + \sum_{t=2004}^{2020} \hat{\delta}_t^{H_i} X_t$, for each $i = \text{♀}, \text{♂}, k$. Table 3 presents the mean and standard deviation of the estimated resource shares for each type of household members, distinguishing between households with and without children.[23]

Table 3. Estimated Resource Shares by Event

	Event			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
	A. With Children under Age 18 Only			
Women $\left(H^{\text{♂}}\right)$	0.437	0.450	0.417	0.395
	(0.070)	(0.068)	(0.065)	(0.067)
Men $\left(H^{\text{♀}}\right)$	0.331	0.330	0.367	0.405
	(0.074)	(0.074)	(0.071)	(0.074)
Children $\left(H^{k}\right)$	0.233	0.220	0.216	0.201
	(0.081)	(0.080)	(0.074)	(0.073)
	B. Without Children under Age 18 Only			
Women $\left(H^{\text{♂}}\right)$	0.552	0.544	0.510	0.480
	(0.111)	(0.110)	(0.103)	(0.105)
Men $\left(H^{\text{♀}}\right)$	0.448	0.456	0.490	0.520
	(0.111)	(0.110)	(0.103)	(0.105)

Notes: The table reports the mean and standard deviation of the estimated resource shares for family members of each type (female, male, and children) over time. Resource shares are modeled as linear functions of household characteristics using the estimated parameters of the model.

In households with children (Panel A), women receive more resources than men, except during the COVID-19 crisis. A similar pattern is observed in households without children (Panel B) over the

[22] These measures are not necessarily bounded between 0 and 1; nevertheless, using my model estimates, the predicted resource shares are bounded between the 0–1 range, validating the model's reliability.

[23] Resource shares consider the empirical distributions of the covariates since they are estimated as linear combinations of these variables.

same analysis period. The fact that in pre-pandemic periods, the share of household resources is larger for women than for men is consistent with previous studies in the literature (see, Calvi et al., 2023; Hoehn-Velasco and Penglase, 2021; Sokullu and Valente, 2022). Conversely, the results suggest that the COVID-19 crisis has significantly impacted gender equality within households. Specifically, in the COVID-19 crisis (2020), women's resource shares in households with and without children decreased in relation to the non-recession period (2004-2006 and 2014-2018) and the financial crisis period (2008-2012). These findings highlight the importance of considering the nature of a crisis when assessing its impact on gender equality. The COVID-19 crisis has had a distinct and negative impact on women's household resource shares. The observed reallocation of resources has significant implications for gender equality, particularly in terms of intra-household inequality and its direct effects on women's empowerment.

4.3. Women's Control of Resources

Using the predicted resource shares, I compute the amount of resources controlled by women relative to men ($R = \frac{\hat{H}^{\varphi}}{\hat{H}^{\varphi}+\hat{H}^{\sigma}}$). This measure is a good indicator of women's bargaining power within households (Tommasi, 2019; Calvi, 2020). This is because the ability to control resources gives women a degree of autonomy and decision-making power that can influence their bargaining position. When women control resources, they are in a better position to negotiate for their preferences and needs, as they have the means to enforce their bargaining position. Moreover, compared with self-reported indicators of bargaining power, which rely on women's subjective assessment of their power within their households, resource control provides a more objective measure. The summary statistics of this metric for each household type are presented in Table 4.

The results indicate that women in households with children had less control over household resources during the COVID-19 crisis (49.4%) compared to the non-recession period (57% and 53.3%) and the financial crisis (57.9%). Furthermore, it was found that women's control over resources decreased in households without children during the COVID-19 crisis compared to the non-recession period and the financial crisis. However, the magnitude of the differences is slightly smaller for households with children. At the bottom of each Panel of Table 4, a comparison of women's resource control over different periods is calculated. Results suggest a statistically significant difference in women's control of resources between the COVID -19 period and (i) all the previous periods, (ii) the periods without crisis, and (iii) the financial crisis period. These differences are somewhat larger for households with children than those without children. These findings suggest that the COVID-19 crisis has disproportionately impacted women's bargaining power within households, regardless of whether or not they have children.

Table 4. Women's Control of Resources

	A. With Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.570	0.579	0.533	0.494
	(0.077)	(0.075)	(0.071)	(0.073)
(COVID-19) – (All)		-0.056***		
		(0.000)		
(COVID-19) – (No Crisis)		-0.047***		
		(0.000)		
(COVID-19) – (Fin. Crisis)		-0.084***		
		(0.001)		
	B. Without Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.552	0.544	0.510	0.480
	(0.111)	(0.110)	(0.103)	(0.105)
(COVID-19) – (All)		-0.044***		
		(0.001)		
(COVID-19) – (No Crisis)		-0.038***		
		(0.001)		
(COVID-19) – (Fin. Crisis)		-0.064***		
		(0.001)		

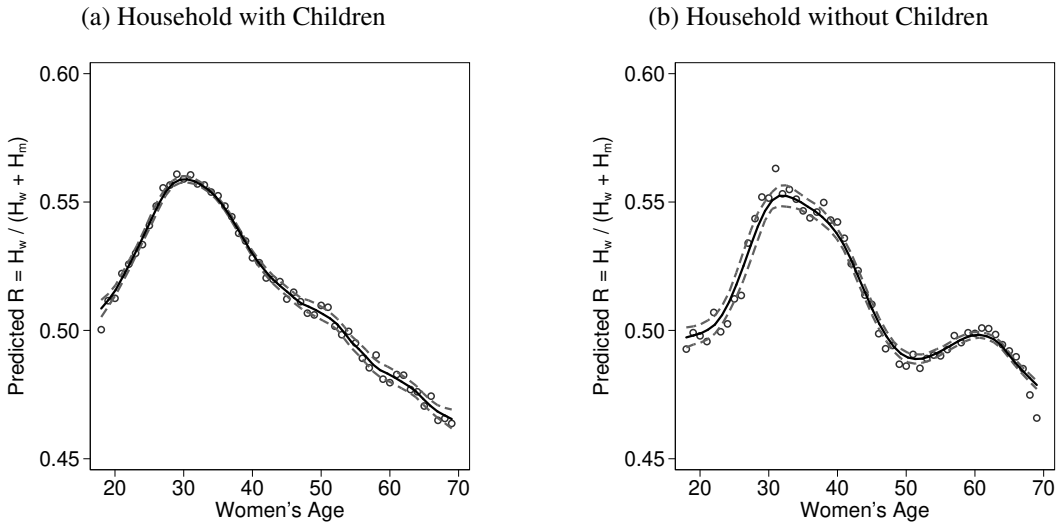
Notes: The table reports the mean and standard deviation of the estimated women's relative control of resources (women's bargaining power) over time. The bottom of each Panel presents three comparisons: (i) COVID-19 period and all the previous periods (Pre Fin. Crisis, Crisis, and Pre COVID-19), (ii) COVID-19 period and No Crisis periods (Pre Fin. Crisis and Pre COVID-19), and (iii) COVID-19 period and Fin. Crisis period.

Using cross-sectional variation in women's age, I next investigate how women's resource control evolves across the lifecycle. For each age profile $a \in (18,\ldots,70)$, I calculate $\left(\hat{R}_a\right)$ as the mean predicted women's resource control among all households with women's average age equal to a. Figure 2 presents the average predicted women's resource share against women's average age for the entire sample of households with children (Panel (a)) and without children (Panel (b)). The solid line is the mean at each age profile, while the dashed lines display the 95% confidence intervals for the smoothed values.

A resource share equal to 0.5 indicates that there is no gender asymmetry in the intra-household allocation of resources. Figure 2 depicts a noteworthy disparity in the allocation of resources between adult men and women in both types of households, suggesting an asymmetrical distribution of resources. Women's control over resources follows an inverse U-shaped pattern throughout their lifecycle. Notably, during the core reproductive years of women, resource allocation within households favors women over men. However, as women reach post-reproductive ages, their control over resources consistently decreases in households with children. This is consistent with recent

findings in the literature (see, Tommasi, 2019; Calvi, 2020). On the other hand, in households without children, women experience a moderate increase in control over resources between the ages of 50 and 60, followed by a declining pattern as they continue to age. The hump around the ages of retirement (around 65 years old) in Panel b of Figure 2 suggests that women in households without children have a different bargaining power behavior when they are old compared to women in households with children.

Figure 2. Women's Control of Resource over Age Profiles



Notes: The figure shows the average predicted women's control of resources among different age profiles between 2004 and 2020, together with 95% confidence intervals. Panel (a) shows the mean predicted bargaining power measured as the resources controlled by women relative to men for households with children under age 18. Panel (b) shows the same metric for households without children under age 18.

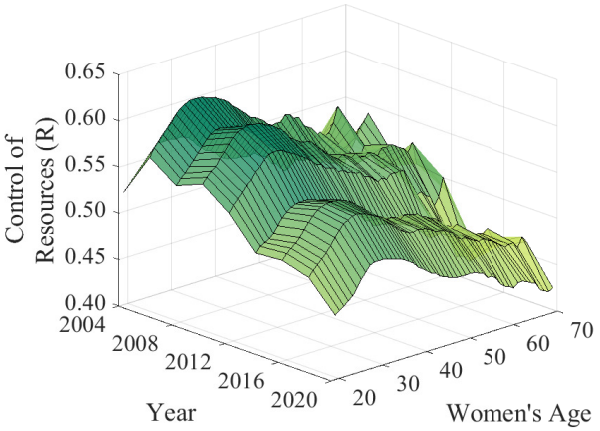
The heterogeneous pattern observed in the bargaining power behavior of women, especially at older ages, in households with and without children (Figure 2) could be attributed to various factors. One potential explanation is that women in households without children may have more opportunities to engage in paid labor and accumulate financial resources, thus increasing their bargaining power (see, Duflo, 2011; Miller, 2011; Adda et al., 2017; Cortés and Pan, 2020; Berniell et al., 2023). As women age, they may also acquire additional skills, resources, and social networks that could affect their bargaining power, particularly in households without children. Moreover, the priorities and preferences of women in households without children may change as they get older. For instance, women without children may emphasize financial security and independence as they age. By contrast, women with children may prioritize their children's well-being and invest more resources in it (see, Folbre, 1994; Guryan et al., 2008; Ferrant et al., 2014; Bruins, 2017; Charmes, 2019). In addition, differences in social norms and expectations related to gender roles and caregiving responsibilities may also shape bargaining power behavior among older women in

these two household contexts (see, Katz and Correia, 2001; Cha and Thébaud, 2009; Bertrand et al., 2015).

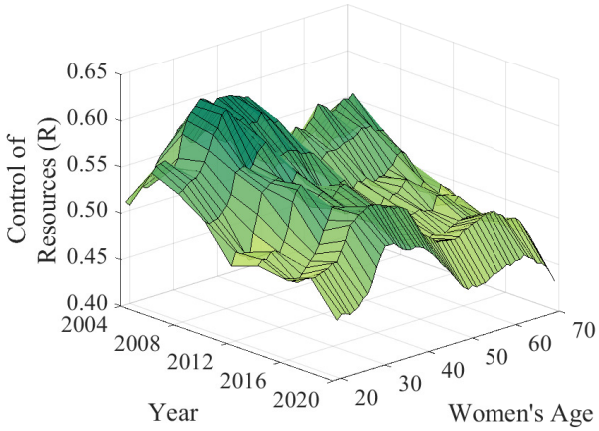
Figure 3 shows the behavior of women's bargaining power over the women's life cycle and the economic business cycle for both types of households. According to the findings across the business cycle, women's control of resources reduced during the COVID-19 crisis compared to both non-recessionary periods and the financial crisis. In addition, the results show that the financial crisis had little impact on women's control of resources. On the other hand, Figure 3 demonstrates that women experience a decreasing pattern in terms of resource control, especially at post-reproductive ages in both types of households; however, the levels differ. Women in households with children have a similar degree of resource control to their counterparts in households without children at reproductive ages. Nevertheless, at post-reproductive ages, this gap begins to slightly diverge, and there is a larger decrease in women's resource control in households with children, whereas women's resource control stays relatively stable in households without children.

Figure 3. Women's Control of Resource over the Business Cycle and Life Cycle

(a) Household with Children



(b) Household without Children



Notes: The figure shows the average predicted women's control of resources over the women's life cycle and the economic business. Panel (a) shows the mean predicted bargaining power measured as the resources controlled by women relative to men for households with children under age 18. Panel (b) shows the mean predicted bargaining power measured as the resources controlled by women relative to men for households without children under age 18.

The findings depicted in Figure 3 demonstrate that the COVID-19 pandemic has disproportionately impacted women, thereby exacerbating gender inequality. In contrast, the peak observed between 2008 and 2012 indicates that the financial crisis significantly impacted men. One plausible explanation for this phenomenon is that, contingent on the nature of the crisis, women could be more or less vulnerable to adverse outcomes. For instance, the financial crisis resulted in a scenario where the gender gaps in unemployment and labor force participation narrowed in Mexico, mainly

due to an increase in female labor force participation (Freije et al., 2011; Lopez-Acevedo et al., 2020). This underscores women's reduced vulnerability to the financial crisis, which could have potentially contributed to their financial stability and enhanced their bargaining power within the household.

In contrast, the COVID-19 pandemic created conditions that disrupted women's participation in the labor force due to factors such as school closures, the increased caregiving responsibilities for ill family members, and the lack of flexibility in employment (FAO, 2020; Alon et al., 2020c; Heggeness, 2020; Croda and Grossbard, 2021; Yamamura and Tsustsui, 2021). [24] In the case of Mexico, the evidence suggests that the COVID-19 pandemic severely impacted women in terms of employment and time allocation (Hoehn-Velasco et al., 2022; Peluffo and Viollaz, 2021). Such an economic impact could harm women's say and decision-making power within the household, resulting in limitations on their ability to control resources. Additionally, older women may face unique challenges as they may have less access to resources and rely more on their partners for support. These implications are concerning, as they can have long-term effects on women's economic and social well-being, exacerbating gender inequalities.

4.4. Robustness Checks

To verify the robustness of the benchmark findings, I perform a series of alternative specifications to test the sensitivity of the findings. Appendix B contains the complete set of results. First, I examine the sensitivity of the results to an alternative definition of the financial crisis period, which yields results consistent with the benchmark specification. Following Sokullu and Valente (2022), I impose a SOT assumption in the estimation, and demonstrate that the main conclusions remain unchanged.

In 2019, the Mexican Government decided to cut funding to the "*Estancias Infantiles*" program and redirect it to other programs, such as direct cash transfers to low-income families and accessible education to all levels. This policy change could have affected working mothers and low-income families who relied on the program, potentially impacting the results observed in 2020. To account for this confounding factor, I added a dummy variable for households with eligible children and controlled for participation in welfare programs. Additionally, I restrict the sample to households with very young children. The results of these alternative specifications are consistent with benchmark findings.

Subsequently, the population weights were used in the estimation. Weights were not used in the benchmark specification because they could exacerbate the effects in larger cities. The results

[24] Many recent studies (e.g., Alon et al., 2020a,c; Azuara et al., 2021) have shown that the COVID-19 recession disproportionately impacted women.

using weights suggest a similar pattern to the main findings, with a small change in the decline of women's control of resources, especially during the COVID-19 pandemic. Finally, I estimated an alternative system that includes a food Engel curve. The results were very similar to the benchmark specifications. In addition, the food Engel curves are negatively sloped for most households in the sample, which confirms Engel's law and the reliability of the results. Overall, these robustness checks provide greater confidence in attributing the decline in women's resource control to the COVID-19 pandemic.

4.5. Patterns of Consumption

When confronted with unexpected shocks, households may employ various strategies to mitigate the adverse effects of these events. One strategy could be adjusting the households' consumption patterns. If a household member possesses greater control over resources and holds a position of higher bargaining power within the household, it could influence these household's consumption patterns. To link women's resource control and the household demand for food and health, I define a simple specification that is concordant with the context of this study and implementable given the available data. To analyze the relationship between women's resource control and patterns of consumption, I estimate Engel curves for food and health. Specifically, I estimate:

$$W_{gi} = \alpha + \delta R_i + \gamma P_j + \beta X_i + \theta \ln y_i + \varepsilon_{gi} \tag{6}$$

where W_{ig} is the budget share for good category g in household i, δ is the main parameter of interest and measures the effect of women's control of household resources, vector P is the interaction between states (entidades) and years, X are control variables, y is total expenditure, and ε is the error term. Following Attanasio and Lechene (2010) and Tommasi (2019), the specification implemented is a linear relationship with respect to expenditure. I also follow Attanasio et al. (2012) and estimate a separate equation for each good category g allowing for heterogeneous trends across geographical regions. To mitigate division bias and the mismeasurement of women's control of resources, I instrument total expenditure and women's control of resources with total household income, the average age gap between men and women, and the benefits received from government assistance programs.[25]

Table 5 indicates that the women's resource control is positively associated with the demand for food. In particular, a 10-point rise in the index of women's control of household resources results in a 0.6 to 1.6 percentage point increase in food expenditure, depending on the specification. These effects are congruent with the recent literature (see, Klein and Barham, 2018; Tommasi, 2019). The

[25] In Appendix A.5, I provide the results of various model specifications, demonstrating the consistency of the findings.

last two columns of Table 5 present the connection between women's control over resources and health expenditure. The result suggests that women's resource control is positively associated with the households' demand for health. Specifically, an increase of 10 points in the women's control of household resources index corresponds to an approximate 0.3 to 0.5 percentage point uptick in health expenditure, contingent on the model specification.

Table 5. Consumption Patterns

	Share of Food (OLS) (1)	Share of Food (IV) (2)	Share of Health (OLS) (3)	Share of Health (IV) (4)
R	0.055***	0.157***	0.025***	0.049***
	(0.008)	(0.014)	(0.003)	(0.005)
$\ln(y)$	-0.073***	-0.102***	0.014***	0.008***
	(0.001)	(0.001)	(0.000)	(0.000)
N	238,246	238,246	238,246	238,246

Notes: The table reports the results of the effects of women's control of resources on household demand. Controls include: men's and women's educational attainment and work status, the number of women and men, the number of children, residential location (urban or rural), the fraction of post reproductive women in the household, and socioeconomic status. The regressions also include the interaction of year and region dummies to control for price variation. Standard errors clustered at the primary sampling unit and bootstrapped with 500 replications. *significant to 10%; **significant to 5%; ***significant to 1%.

Table 6 presents the results linking women's resource control to household demand for food and health in each economic period. During the financial crisis, when women have more control over household resources, there is a higher proportion of spending on food. In contrast, amidst the COVID-19 pandemic, the association decreased compared to the pre-pandemic and financial crisis periods. Table 6 further shows that women's resource control is positively associated with the household demand for health in each economic period, although noteworthy variations exist. In the COVID-19 crisis, when women have more control over resources, there is a notable increase in the proportion of spending allocated to health, surpassing the health expenditure responses to women's resource control observed before the pandemic and during the financial crisis.

According to these results, women's control over resources shaped food demand behavior during the financial crisis. COVID-19 may have attenuated this association but reinforced the connection between women's resource control and health spending. When considering both crises, these findings suggest that an increase in women's control of resources leads to different reactions in terms of food and health spending, revealing that households with higher women's control of resources tend to prioritize more health expenses when there is a health shock (COVID-19).

Furthermore, these findings indicate that households' responses to shocks differ depending on the

degree of control women have over household resources. The significant variation in expenditure responses points to the fact that women's control over resources is an important determinant to consider when analyzing household consumption choices. This hints that crisis events affect consumption through income and price changes and by modifying the household's preferences. Recognizing the pivotal role of women's bargaining power in household responses to shocks can be essential in designing interventions and policies that empower women to withstand and overcome shocks. Nevertheless, it is necessary to acknowledge that certain households may be more exposed to shocks because of their particular characteristics. Therefore, the results presented in this section should be interpreted as compelling evidence that women's degree of bargaining power influences how households react to shocks.

Table 6. Women's Control of Resources and Household Demand by Events

	Pre Fin. Crisis [2004-2006]		Fin. Crisis [2008-2012]		Pre COVID-19 [2014-2018]		COVID-19 [2020]	
	Share of Food	Share of Health	Share of Food	Share of Health	Share of Food	Share of Health	Share of Food	Share of Health
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
R	0.069*	0.054***	0.192***	0.037***	0.173***	0.036***	0.146***	0.068***
	(0.039)	(0.017)	(0.034)	(0.010)	(0.020)	(0.006)	(0.027)	(0.012)
$\ln(y)$	-0.108***	0.005***	-0.107***	0.007***	-0.097***	0.009***	-0.103***	0.015***
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)
N	29,374	29,374	44,246	44,246	108,176	108,176	56,450	56,450

Notes: The table reports the results of the effects of women's control of resources on household demand. Controls include: men's and women's educational attainment and work status, the number of women and men, the number of children, residential location (urban or rural), the fraction of post reproductive women in the household, and socioeconomic status. The regressions also include the interaction of year and region dummies to control for price variation. Standard errors clustered at the primary sampling unit and bootstrapped with 500 replications. *significant to 10%; **significant to 5%; ***significant to 1%.

4.6. Individual Poverty

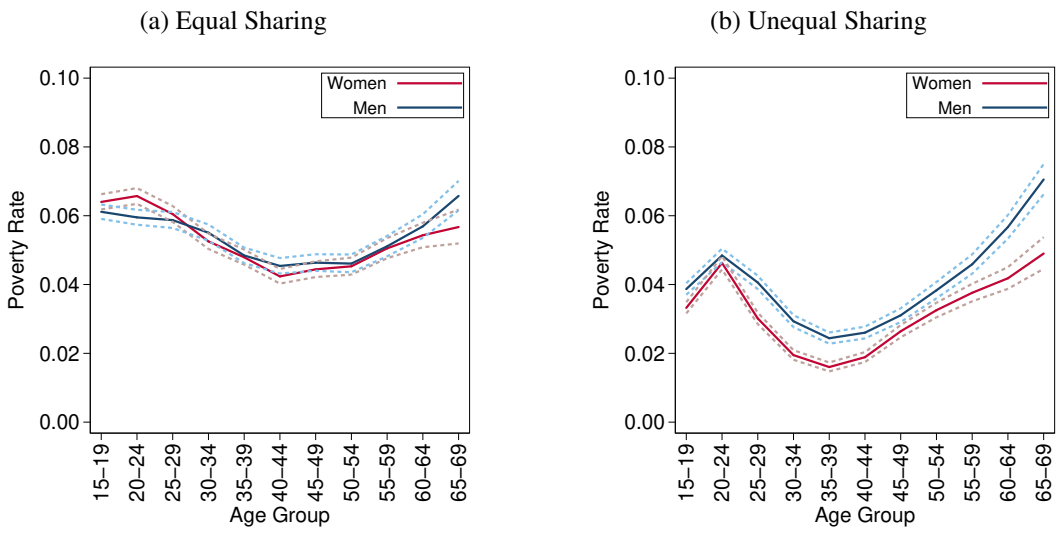
Understanding how households distribute resources under different circumstances is crucial for assessing individuals' well-being. Current poverty and inequality indicators measure consumption and expenditure at the household level. This procedure assumes that resources are evenly shared among household members and does not consider the different factors that could lead to the asymmetric allocation of resources among individuals. However, poverty assessments can vary significantly when considering disparities within the household (see for instance, Dunbar et al., 2013; Calvi, 2020; Brown et al., 2021). As a result, poverty assessments based on household-level measures can mask the poverty experienced by different individuals, particularly women and children. This is relevant in developing countries where a significant portion of the population has low

household expenditure levels. In such contexts, measuring poverty at the individual level is critical for ensuring that poverty assessments accurately capture the living standards of all household members. Additionally, analyzing how economic crises impact each household member's poverty is essential to better evaluate the welfare effects of recessions.

Using the estimated parameters from the intra-household structural model, I evaluate individual (as opposed to household) level of poverty, which is useful for understanding intra-household inequalities. Figure 4 presents gender-specific poverty rates across age groups, together with the corresponding 95% confidence intervals. The World Bank's US$1.90 per day poverty line is used to calculate poverty rates. Gender-age-specific poverty estimates show that taking into consideration intra-household gender asymmetries has a significant impact on poverty calculations. Consistent with the resource shares results, male poverty rates are higher at all ages when unequal distribution is taken into account. According to conventional poverty measures, the poverty rates for men and women appear to be primarily consistent throughout time, with a slightly negative slope until reaching 45 years old. Then, at women's post-reproductive ages, the slope becomes positive.

The model predictions reveal an intriguing pattern: the link between individual poverty and age is U-shaped. Male and female poverty follow a similar trajectory at a younger age. Then, the difference in poverty rates between men and women significantly expands from ages 20 to 45, showing that inequality has grown in these decades. This gap starts to converge at post-reproductive ages. Finally, the gap widens again when individuals are old.

Figure 4. Poverty Rates by Gender and Age

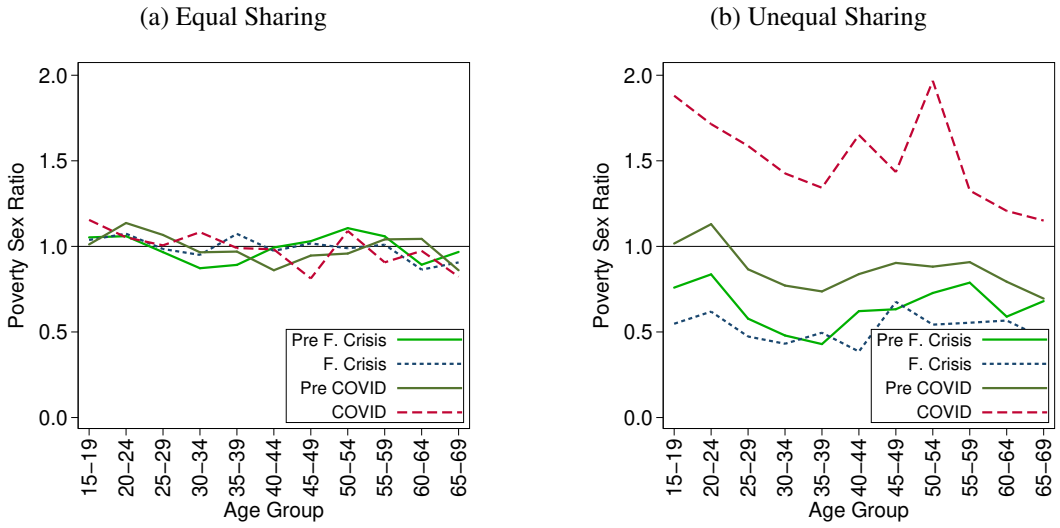


Notes: The plot shows the fraction of females or males in each age group living below the poverty line. The left panel, it is assumed that household expenditure is split equally among household members. In the right panel, per capita expenditures are computed using the model predictions. Per capita expenditures are compared with the US$1.90/day poverty line.

The age distribution of women's relative poverty to males is compared in Figure 5. The poverty sex ratio (the ratio between the poverty rates for men and women) is shown for each age group and each period of economic stability and contraction. A ratio greater than one denotes excess female poverty when female poverty is higher than male poverty. When equal sharing of household resources is assumed, there is no evidence of excessive female poverty in any of the business cycle periods. However, when the model predictions are used and the unequal distribution of resources withion households is considered (Panel B of Figure 5), there is clear evidence of excess female poverty during the COVID-19 pandemic compared to the no-crisis and financial crisis periods.

Young women and women in the first post-reproductive decade were most affected during the pandemic. Additionally, the financial crisis did not severely affect women's poverty rates. Several factors, such as the overrepresentation of women in sectors affected by the economic lockdown, increased caregiving obligations, and lack of employment security and benefits, are likely to contribute to excess female poverty during the COVID-19 pandemic. This evidence validates the hypothesis that during the COVID-19 pandemic, women were more significantly affected than men ("she-cession"), whereas the financial crisis hit men harder ("man-cession").

Figure 5. Poverty Sex Ratio



Notes: The plot shows the fraction of female poverty rate to male poverty rate in each age group. Individuals from all households in the sample are used for calculations.

There are some important points to consider in this analysis. These poverty indicators focus on expenditure and consumption rather than the typical income-based approach. The study does not aim to highlight absolute poverty levels since they depend on adjustment for the relative needs of each household member. Instead, the primary focus is to compare how poverty rates vary over periods of economic stability and contraction and throughout individuals' lifecycles. Lastly, it's

important to note that these poverty estimates are derived from selected samples and should not be interpreted as national poverty statistics.

5. Conclusion

This study has provided valuable insights into the dynamics of intra-household inequality during periods of economic crisis. Using a structural household model and rich household expenditure data from Mexico, I have documented changes in intra-household resource allocation over periods of economic stability and contraction. The findings demonstrate that crisis episodes, such as the global financial crisis and COVID-19 pandemic, can lead to a redistribution of resources within households.

This reallocation of resources can impact women's bargaining power, household consumption patterns, and individual poverty. Using a proxy for women's bargaining power through their control of resources, I show that women experienced a change in resource control during crises. Specifically, during the COVID-19 crisis, women's control of resources decreased in households with children compared to the non-recession and financial crisis periods. In households without children, these differences were less pronounced, but still evident. This change in resource control has important implications for household consumption decisions. I found that when women control more household resources, the proportion of food and health expenditure is higher than in situations where women control fewer household resources. Furthermore, this relationship is heterogeneous over the recessionary and non-recessionary periods. Finally, this study underscores the importance of individual poverty as a measure of welfare losses for different household members, particularly concerning the role of crises in exacerbating excess female poverty.

The findings of this study have demonstrated that crises have gender-specific impacts. Failing to recognize this fact could have detrimental effects on inequality. The structural analysis and empirical application discussed in this article provide a valuable framework for examining how economic crises affect the allocation of resources within households. This methodology allows for a thorough assessment of the impact of economic downturns on intra-household inequality using readily available survey data. Further research in this area can build on the insights gained from this framework and expand its application to understand better how economic crises affect household resource allocation and inform policies to mitigate such impacts while promoting gender equality and social welfare.

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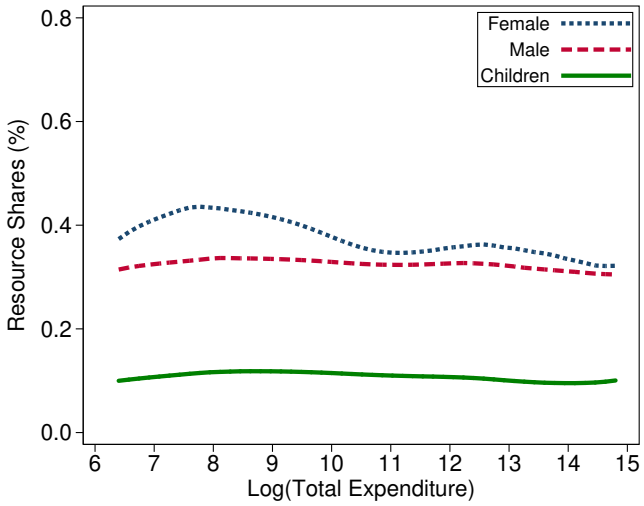
A. Appendix Figures

A.1. Resource Shares' Independence

A critical assumption of the Dunbar et al. (2013) and Calvi (2020) models is the resource shares' independence with respect to total household expenditure. To show that this assumption holds, I plot in Figure A.1.1 the relationship between resource shares and total household expenditure. The figure indicates that this assumption is likely to hold.

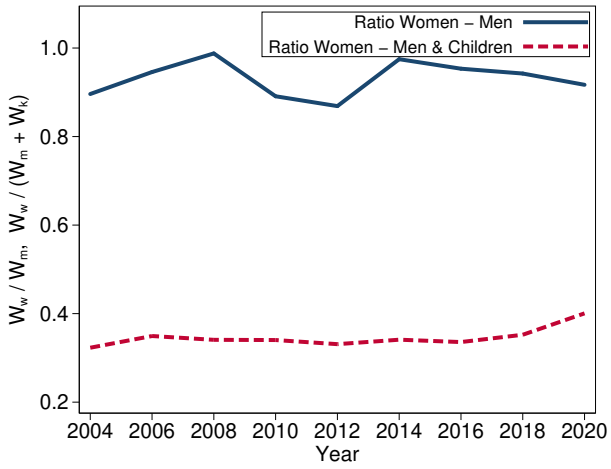
Figure A.1.1. Resource Shares' Independence



Notes: The plot shows each individual's resource shares on the log of total household expenditure.

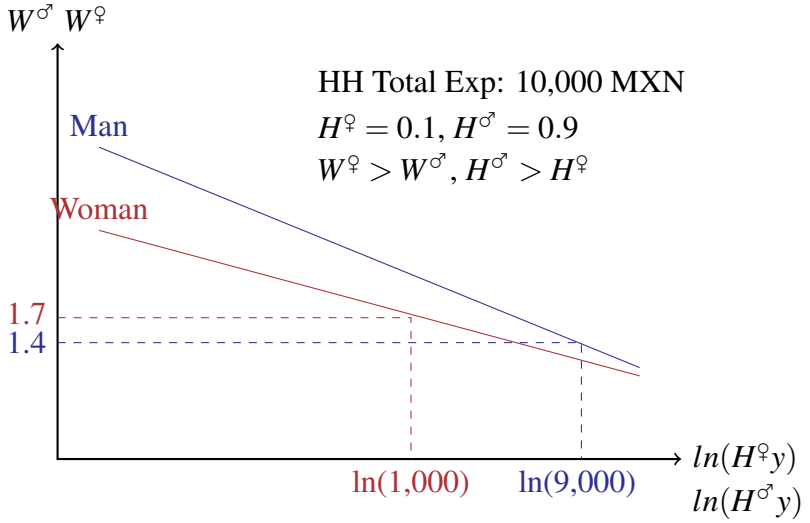
A.2. Budget Shares vs. Resources Shares

Figure A.2.1. Women's Clothing Expenditure Relative to Men and Children



Notes: The plot illustrates the proportion of women's clothing compared to men's clothing and women's clothing compared to the combined total of men's and children's clothing.

Figure A.2.2. Engel curves for assignable clothing: an illustrative example



Notes: The plot shows an illustrative example of Engel curves for clothing (assignable good). Here I examine a straightforward scenario of a nuclear family without children (F=M=1 and C=0). The total household spending amounts to 10,000 pesos. Observable budget shares for female and male clothing are equal to 1.7 and 1.4, respectively. Let the Engel curves for assignable clothing be as in this figure. The relationship between assignable clothing budget shares ($W^{♂}$ and $W^{♀}$, on the vertical axis) and the logarithm of the total expenditure designated for each individual ($H^i y$ on the horizontal axis) is linear under the functional form assumptions discussed in the model. By inverting these Engel curves, two points on the horizontal axis can be pinpointed: ln(500) (approximately 6.21) and ln(4,500) (approximately 8.41). These points, coupled with the prerequisite that the resource shares must sum up to 1, enable the computation of individual resource shares at any expenditure level (y). At a total household expenditure of 10,000 pesos, $H^{♀}$ amounts to 0.1, while $H^{♂}$ equals 0.9.

A.3. Slopes

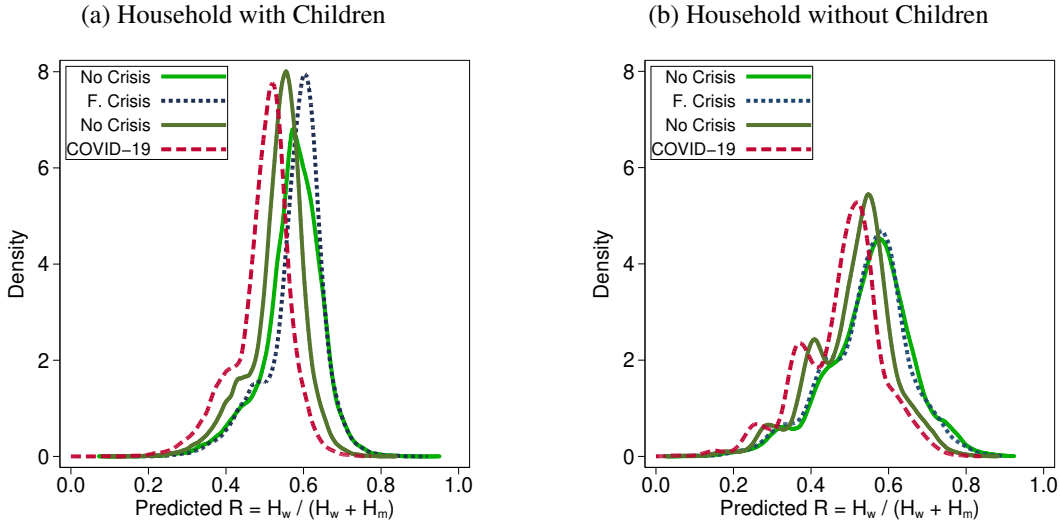
Table A.3.1. Predicted Engel Curve Slopes: Descriptive Statistics

	N	Mean	SD	Min	Max
	(1)	(2)	(3)	(4)	(5)
A. Household with Children					
Women Assignable Clothing	171,990	0.220	0.096	-0.169	0.718
Men Assignable Clothing	171,990	0.191	0.090	-0.180	0.697
Children Assignable Clothing	171,990	0.109	0.109	-0.144	0.428
B. Household without Children					
Women Assignable Clothing	66,256	0.337	0.146	-0.324	1.070
Men Assignable Clothing	66,256	0.324	0.144	-0.302	1.185

Notes: The slopes satisfies the same sign restriction in households with and without children. Also, the slopes of men's and women's clothing shares are highly correlated.

A.4. Women's Control of Resources

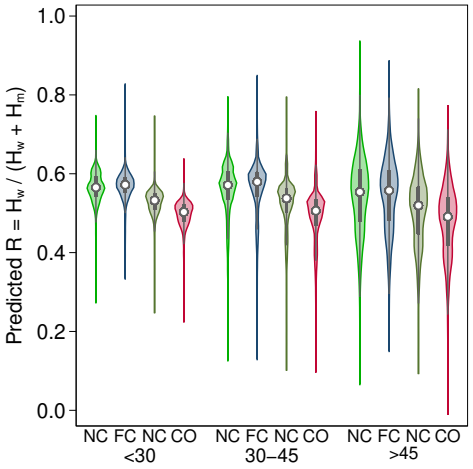
Figure A.4.1. Distribution of Women's Control of Resources by Economic Periods



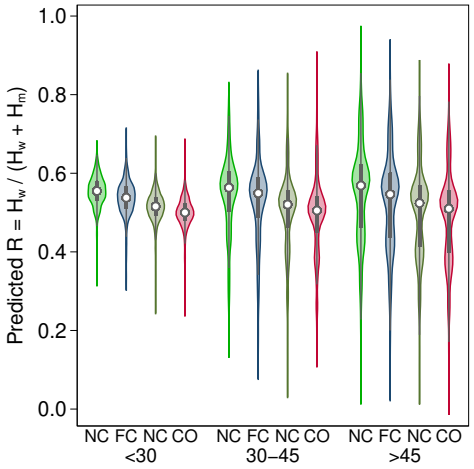
Notes: The figure shows the distribution of women's relative control of resources differentiating between economic events. Panel (a) shows the distribution for households with children under age 18 and Panel (b) shows the distribution for households without children under age 18.

Figure A.4.2. Women's Control of Resources over Reproductive and Economic Periods

(a) Household with Children



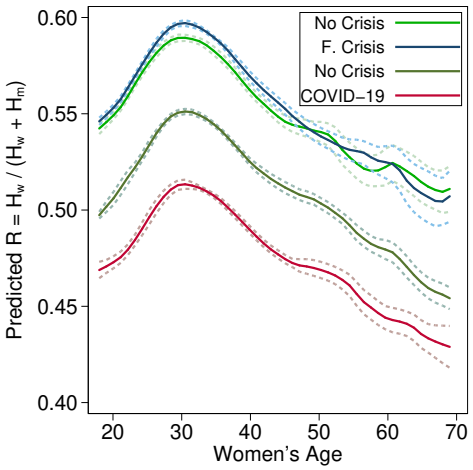
(b) Household without Children



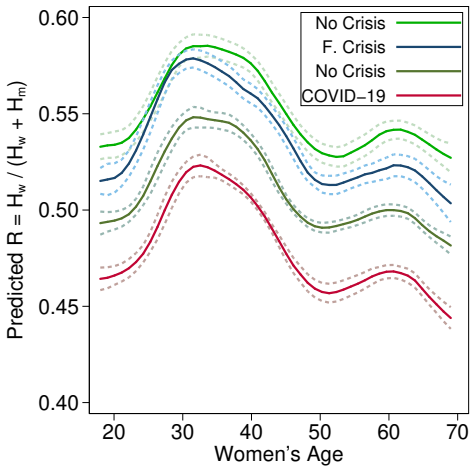
Notes: The figure shows violin plots presenting the distribution of women's control of resources over reproductive and economic periods. Panel (a) shows the distribution for households with children under age 18 and Panel (b) shows the distribution for households without children under age 18.

Figure A.4.3. Women's Control of Resource over Age Profiles by Economic Periods

(a) Household with Children



(b) Household without Children

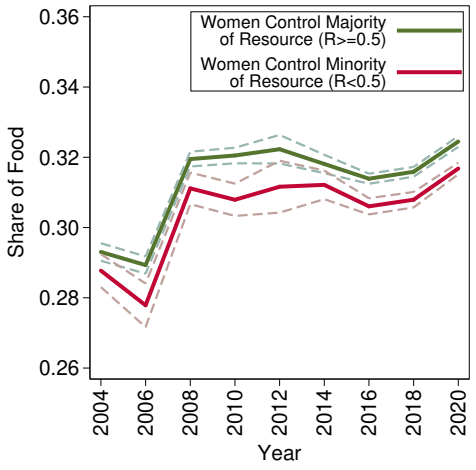


Notes: The figure shows the average predicted women's control of resources among different age profiles and economic periods. Panel (a) shows the mean predicted bargaining power measured as the resources controlled by the mother relative to the father for households with children under age 18. Panel (b) shows the mean predicted bargaining power measured as the resources controlled by the mother relative to the father for households without children under age 18.

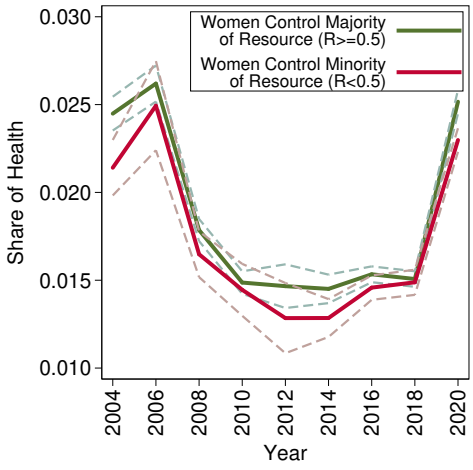
A.5. Control of Resources and Consumption

Figure A.5.1. Women's Control of Resource and Consumption

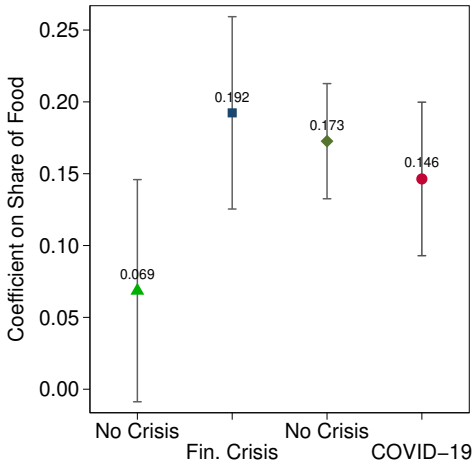
(a) Demand for Food



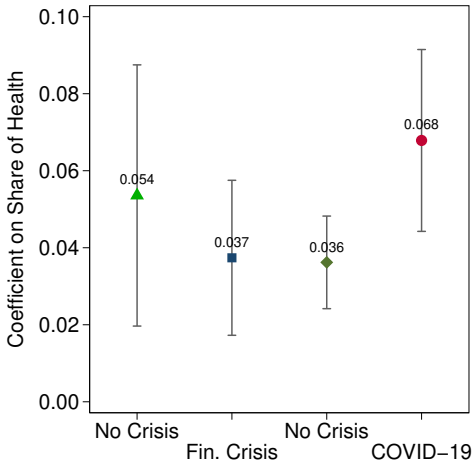
(b) Demand for Health



(c) Effect of R on Demand for Food



(d) Effect of R on Demand for Health



Notes: Panels (a) and (b) display the evolution of the shares of food and health trends, accompanied by the 95% confidence bands represented by dotted lines. Panels (c) and (d) present the estimated effects of the women's control of resources on the household demand for food and health over periods of economic expansion and contraction, along with bootstrap-derived 95% confidence intervals.

Table A.5.1. Consumption Patterns

	Share of Food (OLS)	Share of Food (IV) instrumented: $\ln(y)$	Share of Food (IV) instrumented: $\ln(y)$, R	Share of Food In (IV) instrumented: $\ln(y)$, R	Share of Food Out (IV) instrumented: $\ln(y)$, R	Share of Health (OLS)	Share of Health (IV) instrumented: $\ln(y)$	Share of Health (IV) instrumented: $\ln(y)$, R
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
R	0.055***	0.063***	0.157***	0.169***	-0.018***	0.025***	0.026***	0.049***
	(0.008)	(0.008)	(0.014)	(0.013)	(0.007)	(0.003)	(0.003)	(0.005)
$\ln(y)$	-0.073***	-0.102***	-0.102***	-0.124***	0.022***	0.014***	0.008***	0.008***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
N	238,246	238,246	238,246	238,246	238,246	238,246	238,246	238,246

Notes: The table reports the results of the effects of women's control of resources on household demand. Controls include: men's and women's educational attainment and work status, the number of women and men, the number of children, residential location (urban or rural), the fraction of post reproductive women in the household, and socioeconomic status. The regressions also include the interaction of year and region dummies to control for price variation. Standard errors clustered at the primary sampling unit and bootstrapped with 500 replications. *significant to 10%; **significant to 5%; ***significant to 1%.

Table A.5.2. Robustness of Instrumental Variable Approach

	Share of Food (IV) instrumented: $\ln(y)$	Share of Food (IV) instrumented: $\ln(y)$, R	LTZ Bounds for Food	Share of Health (IV) instrumented: $\ln(y)$	Share of Health (IV) instrumented: $\ln(y)$, R	LTZ Bounds for Health
	(1)	(2)	(3)	(7)	(8)	(8)
R	0.063***	0.157***	[0.117 , 0.197]	0.026***	0.049***	[0.034 , 0.065]
	(0.008)	(0.014)		(0.003)	(0.005)	
$\ln(y)$	-0.102***	-0.102***	[-0.105 , -0.099]	0.008***	0.008***	[0.007 , 0.009]
	(0.001)	(0.001)		(0.000)	(0.000)	
N	238,246	238,246	238,246	238,246	238,246	238,246
Kleibergen-Paap (F statistic)	21234.32	15104.11	-	21234.32	15104.11	-
Hansen Test (J Statistic)	-	0.142	-	-	3.161	-
Hansen Test (p-value)	-	0.931	-	-	0.206	-

Notes: The table reports the results of the effects of women's control of resources on household demand. Controls include: men's and women's educational attainment and work status, the number of women and men, the number of children, residential location (urban or rural), the fraction of post reproductive women in the household, and socioeconomic status. The regressions also include the interaction of year and region dummies to control for price variation. Standard errors clustered at the primary sampling unit and bootstrapped with 500 replications. The local to zero (LTZ) approach applied here assumes that γ, the sign on the instrument when included in the structural equation, is distributed $\gamma \sim N(0, \delta^2)$ (see, Conley et al., 2012). The weak identification and underidentification test statistics reject their null hypotheses at the 99% level, suggesting that the instruments are adequate to identify the equations. *significant to 10%; **significant to 5%; ***significant to 1%.

Table A.5.3. Women's Control of Resources and Household Demand by Events

	Pre Fin. Crisis [2004-2006]		Fin. Crisis [2008-2012]		Pre COVID-19 [2014-2018]		COVID-19 [2020]	
	Share of Food	Share of Health	Share of Food	Share of Health	Share of Food	Share of Health	Share of Food	Share of Health
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: OLS							
R	0.004	-0.001	0.090***	0.003	0.062***	0.017***	0.025	0.054***
	(0.022)	(0.011)	(0.016)	(0.006)	(0.012)	(0.004)	(0.016)	(0.008)
$\ln(y)$	-0.079***	0.013***	-0.082***	0.011***	-0.069***	0.012***	-0.064***	0.023***
	(0.002)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)
	Panel B: IV-I instrumented $\ln(y)$							
R	0.027	0.004	0.099***	0.004	0.071***	0.019***	0.041**	0.057***
	(0.021)	(0.010)	(0.016)	(0.006)	(0.012)	(0.004)	(0.016)	(0.008)
$\ln(y)$	-0.107***	0.005***	-0.107***	0.007***	-0.097***	0.009***	-0.103***	0.015***
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)
	Panel C: IV-II instrumented $\ln(y)$, R							
R	0.069*	0.054***	0.192***	0.037***	0.173***	0.036***	0.146***	0.068***
	(0.039)	(0.017)	(0.034)	(0.010)	(0.020)	(0.006)	(0.027)	(0.012)
$\ln(y)$	-0.108***	0.005***	-0.107***	0.007***	-0.097***	0.009***	-0.103***	0.015***
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)

Notes: The table reports the results of the effects of women's control of resources on household demand. Controls include: men's and women's educational attainment and work status, the number of women and men, the number of children, residential location (urban or rural), the fraction of post reproductive women in the household, and socioeconomic status. The regressions also include the interaction of year and region dummies to control for price variation. Standard errors clustered at the primary sampling unit and bootstrapped with 500 replications. *significant to 10%; **significant to 5%; ***significant to 1%.

B. Appendix Additional Results

B.1. Robustness I: the Definition of Financial Crisis

Table B.1.1. Estimated Resource Shares by Event (Other Definition)

	Event			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008] (2)	Pre COVID-19 [2010-2018] (3)	COVID-19 [2020] (4)
	A. With Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.437	0.447	0.424	0.395
	(0.070)	(0.069)	(0.067)	(0.067)
Men $\left(H^{♀}\right)$	0.331	0.334	0.359	0.405
	(0.074)	(0.074)	(0.073)	(0.074)
Children $\left(H^{k}\right)$	0.233	0.218	0.217	0.201
	(0.081)	(0.081)	(0.075)	(0.073)
	B. Without Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.552	0.560	0.514	0.480
	(0.111)	(0.110)	(0.105)	(0.105)
Men $\left(H^{♀}\right)$	0.448	0.440	0.486	0.520
	(0.111)	(0.110)	(0.105)	(0.105)

Notes: The table reports the mean and standard deviation of the estimated resource shares for family members of each type (women, men, and children) over time. Resource shares are modeled as linear functions of household characteristics using the estimated parameters of the model.

Table B.1.2. Women's Control of Resources (Other Definition)

	A. With Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008] (2)	Pre COVID-19 [2010-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.570	0.574	0.542	0.494
	(0.077)	(0.075)	(0.075)	(0.073)
(COVID-19) – (All)		-0.056***		
		(0.000)		
(COVID-19) – (No Crisis)		-0.053***		
		(0.000)		
(COVID-19) – (Fin. Crisis)		-0.079***		
		(0.001)		
	B. Without Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008] (2)	Pre COVID-19 [2010-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.552	0.560	0.514	0.480
	(0.111)	(0.110)	(0.105)	(0.105)
(COVID-19) – (All)		-0.044***		
		(0.001)		
(COVID-19) – (No Crisis)		-0.040***		
		(0.001)		
(COVID-19) – (Fin. Crisis)		-0.080***		
		(0.002)		

Notes: The table reports the mean and standard deviation of the estimated women's relative control of resources (women's bargaining power) over time. The bottom of each Panel presents three comparisons: (i) COVID-19 period and all the previous periods (Pre Fin. Crisis, Crisis, and Pre COVID-19), (ii) COVID-19 period and No Crisis periods (Pre Fin. Crisis and Pre COVID-19), and (iii) COVID-19 period and Fin. Crisis period.

B.2. Robustness II: Estimation Under SOT

Table B.2.1. Determinants of Women's Resource Shares (SOT)

	With Children under Age 18 (1)	Without Children under Age 18 (2)
Number of Adult Women	0.055***	0.060***
	(0.009)	(0.013)
Number of Adult Men	-0.057***	-0.102***
	(0.009)	(0.009)
Number of Children	-0.039***	-
	(0.004)	-
Fraction of Female Children	-0.006	-
	(0.008)	-
$\mathbb{I}$(Widow)	-0.025	-0.036*
	(0.019)	(0.020)
$\mathbb{I}$(Unmarried daughter above age 18)	-0.001	0.029
	(0.015)	(0.020)
$\mathbb{I}$(Unmarried son above age 18)	-0.033**	-0.011
	(0.015)	(0.017)
$\mathbb{I}$(Daughter-in-law)	-0.001	-0.080**
	(0.017)	(0.033)
$\mathbb{I}$(Son-in-law)	-0.001	-0.019
	(0.025)	(0.030)
Average age difference (ages 18–69)	0.098	0.148**
	(0.065)	(0.072)
Average female age (ages 18–69)	0.734	-0.915
	(1.076)	(1.094)
Average age difference^2 (ages 15–69)	-0.256	-0.242
	(0.218)	(0.190)
Average female age^2 (ages 18–69)	-1.462	2.920
	(2.743)	(2.526)
Average age difference^3 (ages 18–69)	-1.395	-0.222
	(0.940)	(0.760)
Average female age^3 (ages 18–69)	0.926	-2.501
	(2.272)	(1.869)
Average children age (ages 0–17)	0.151*	-
	(0.092)	-
$\mathbb{I}$(UDL)	0.007***	0.008**
	(0.002)	(0.004)
$\mathbb{I}$(Female salary earner)	0.021***	0.021**
	(0.007)	(0.009)
$\mathbb{I}$(Men salary earner)	-0.013*	-0.028***
	(0.007)	(0.009)
$\mathbb{I}$(Female higher education)	0.009	0.023**
	(0.009)	(0.011)
$\mathbb{I}$(Male higher education)	-0.026***	-0.020**
	(0.009)	(0.010)
$\mathbb{I}$(Governmental programs)	0.013**	0.031***
	(0.007)	(0.009)
$\mathbb{I}$(Dwelling ownership)	0.003	0.006
	(0.007)	(0.009)
Constant	0.346**	0.594***
	(0.138)	(0.152)
Controls	✓	✓
R^2	0.256-0.488	0.339-0.361
N	171,990	66,256

Notes: Additional controls include time and regional dummies. Women's age and age differences are divided by 100 to ease computation. R^2 range across the different equations of the NLSUR model. Standard errors clustered at the primary sampling unit level. *significant to 10%; **significant to 5%; ***significant to 1%.

Table B.2.2. Estimated Resource Shares by Event (SOT)

	Event			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
	A. With Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.438	0.453	0.420	0.398
	(0.070)	(0.069)	(0.066)	(0.068)
Men $\left(H^{♀}\right)$	0.344	0.341	0.376	0.411
	(0.074)	(0.074)	(0.071)	(0.073)
Children $\left(H^{k}\right)$	0.218	0.207	0.204	0.191
	(0.078)	(0.076)	(0.071)	(0.070)
	B. Without Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.551	0.543	0.510	0.483
	(0.111)	(0.111)	(0.104)	(0.106)
Men $\left(H^{♀}\right)$	0.449	0.457	0.490	0.517
	(0.111)	(0.111)	(0.104)	(0.106)

Notes: The table reports the mean and standard deviation of the estimated resource shares for family members of each type (women, men, and children) over time. Resource shares are modeled as linear functions of household characteristics using the estimated parameters of the model.

Table B.2.3. Women's Control of Resources (SOT)

	A. With Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.561	0.572	0.528	0.493
	(0.077)	(0.075)	(0.072)	(0.074)
(COVID-19) – (All)		-0.052***		
		(0.000)		
(COVID-19) – (No Crisis)		-0.043***		
		(0.000)		
(COVID-19) – (Fin. Crisis)		-0.079***		
		(0.001)		
	B. Without Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.551	0.543	0.510	0.483
	(0.111)	(0.111)	(0.104)	(0.106)
(COVID-19) – (All)		-0.040***		
		(0.001)		
(COVID-19) – (No Crisis)		-0.034***		
		(0.001)		
(COVID-19) – (Fin. Crisis)		-0.060***		
		(0.001)		

Notes: The table reports the mean and standard deviation of the estimated women's relative control of resources (women's bargaining power) over time. The bottom of each Panel presents three comparisons: (i) COVID-19 period and all the previous periods (Pre Fin. Crisis, Crisis, and Pre COVID-19), (ii) COVID-19 period and No Crisis periods (Pre Fin. Crisis and Pre COVID-19), and (iii) COVID-19 period and Fin. Crisis period.

B.3. Robustness III: Estimation Using HHs with Young Eligible Children

Table B.3.1. Determinants of Women's Resource Shares (HHs with Eligible Children)

	With Children under Age 18 (1)	With Children under Age 18 Restricted (2)
Number of Adult Women	0.057***	0.044***
	(0.009)	(0.013)
Number of Adult Men	-0.051***	-0.056***
	(0.009)	(0.013)
Number of Children	-0.044***	-0.029***
	(0.004)	(0.007)
Fraction of Female Children	-0.007	0.004
	(0.007)	(0.014)
$\mathbb{I}$(Widow)	-0.023	-0.027
	(0.018)	(0.027)
$\mathbb{I}$(Unmarried daughter above age 18)	0.002	0.011
	(0.013)	(0.022)
$\mathbb{I}$(Unmarried son above age 18)	-0.032**	-0.033
	(0.014)	(0.023)
$\mathbb{I}$(Daughter-in-law)	-0.003	0.020
	(0.016)	(0.021)
$\mathbb{I}$(Son-in-law)	0.003	-0.005
	(0.023)	(0.038)
Average age difference (ages 18–69)	0.109*	0.015
	(0.059)	(0.107)
Average female age (ages 18–69)	0.632	-0.724
	(0.983)	(1.949)
Average age difference^2 (ages 15–69)	-0.279	0.527
	(0.201)	(0.401)
Average female age^2 (ages 18–69)	-1.248	2.867
	(2.508)	(5.097)
Average age difference^3 (ages 18–69)	-1.349	-1.991
	(0.852)	(1.818)
Average female age^3 (ages 18–69)	0.814	-3.385
	(2.081)	(4.278)
Average children age (ages 0–17)	0.155	-0.596**
	(0.097)	(0.248)
$\mathbb{I}$(UDL)	0.006***	0.007**
	(0.002)	(0.003)
$\mathbb{I}$(Female salary earner)	0.012*	0.004
	(0.007)	(0.012)
$\mathbb{I}$(Men salary earner)	-0.012*	-0.018
	(0.007)	(0.013)
$\mathbb{I}$(Female higher education)	0.011	0.001
	(0.008)	(0.015)
$\mathbb{I}$(Male higher education)	-0.029***	-0.027*
	(0.008)	(0.016)
$\mathbb{I}$(Governmental programs)	0.012**	0.030***
	(0.006)	(0.011)
$\mathbb{I}$(Dwelling ownership)	0.003	0.007
	(0.006)	(0.012)
Constant	0.348***	0.528**
	(0.127)	(0.238)
Controls	✓	✓
R^2	0.259-0.497	0.245-0.496
N	171,990	64,928

Notes: Additional controls include time and regional dummies. Women's age and age differences are divided by 100 to ease computation. R^2 range across the different equations of the NLSUR model. Standard errors clustered at the primary sampling unit level. *significant to 10%; **significant to 5%; ***significant to 1%.

Table B.3.2. Estimated Resource Shares by Event (HHs with Eligible Children)

	Event			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
	A. With Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.433	0.442	0.405	0.385
	(0.073)	(0.070)	(0.067)	(0.069)
Men $\left(H^{♀}\right)$	0.326	0.331	0.371	0.405
	(0.074)	(0.073)	(0.070)	(0.072)
Children $\left(H^{k}\right)$	0.241	0.227	0.224	0.209
	(0.085)	(0.083)	(0.078)	(0.076)
	B. With Children under Age 18 Only (restricted)			
Women $\left(H^{♂}\right)$	0.460	0.445	0.395	0.369
	(0.062)	(0.066)	(0.061)	(0.063)
Men $\left(H^{♀}\right)$	0.285	0.306	0.349	0.349
	(0.057)	(0.063)	(0.059)	(0.061)
Children $\left(H^{k}\right)$	0.254	0.249	0.256	0.282
	(0.075)	(0.075)	(0.072)	(0.072)

Notes: The table reports the mean and standard deviation of the estimated resource shares for family members of each type (women, men, and children) over time. Resource shares are modeled as linear functions of household characteristics using the estimated parameters of the model.

Table B.3.3. Women's Control of Resources (HHs with Eligible Children)

	A. With Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.572	0.573	0.523	0.488
	(0.078)	(0.074)	(0.071)	(0.073)
(COVID-19) – (All)		-0.056***		
		(0.000)		
(COVID-19) – (No Crisis)		-0.046***		
		(0.000)		
(COVID-19) – (Fin. Crisis)		-0.085***		
		(0.001)		
	B. With Children under Age 18 Only (restricted)			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.618	0.594	0.531	0.514
	(0.062)	(0.070)	(0.065)	(0.070)
(COVID-19) – (All)		-0.048***		
		(0.001)		
(COVID-19) – (No Crisis)		-0.038***		
		(0.001)		
(COVID-19) – (Fin. Crisis)		-0.079***		
		(0.001)		

Notes: The table reports the mean and standard deviation of the estimated women's relative control of resources (women's bargaining power) over time. The bottom of each Panel presents three comparisons: (i) COVID-19 period and all the previous periods (Pre Fin. Crisis, Crisis, and Pre COVID-19), (ii) COVID-19 period and No Crisis periods (Pre Fin. Crisis and Pre COVID-19), and (iii) COVID-19 period and Fin. Crisis period.

B.4. Robustness IV: Estimation Using Sample Weights

Table B.4.1. Determinants of Women's Resource Shares (Using Weights)

	With Children under Age 18 (1)	Without Children under Age 18 (2)
Number of Adult Women	0.057***	0.053**
	(0.016)	(0.026)
Number of Adult Men	-0.071***	-0.083***
	(0.014)	(0.014)
Number of Children	-0.025***	-
	(0.007)	-
Fraction of Female Children	-0.007	-
	(0.016)	-
$\mathbb{I}$(Widow)	-0.019	-0.019
	(0.036)	(0.029)
$\mathbb{I}$(Unmarried daughter above age 18)	-0.004	0.025
	(0.027)	(0.033)
$\mathbb{I}$(Unmarried son above age 18)	0.006	-0.038
	(0.027)	(0.026)
$\mathbb{I}$(Daughter-in-law)	0.011	-0.131**
	(0.030)	(0.054)
$\mathbb{I}$(Son-in-law)	-0.018	-0.042
	(0.041)	(0.046)
Average age difference (ages 18–69)	0.061	0.229*
	(0.121)	(0.123)
Average female age (ages 18–69)	-2.556	-2.135
	(1.989)	(1.822)
Average age difference^2 (ages 15–69)	-0.234	-0.091
	(0.383)	(0.295)
Average female age^2 (ages 18–69)	6.165	4.897
	(5.108)	(4.152)
Average age difference^3 (ages 18–69)	-1.182	-0.488
	(1.475)	(1.329)
Average female age^3 (ages 18–69)	-4.701	-3.248
	(4.254)	(3.042)
Average children age (ages 0–17)	0.119	-
	(0.186)	-
$\mathbb{I}$(UDL)	0.015***	0.005
	(0.004)	(0.007)
$\mathbb{I}$(Female salary earner)	0.042***	0.032**
	(0.015)	(0.016)
$\mathbb{I}$(Men salary earner)	-0.014	-0.005
	(0.015)	(0.016)
$\mathbb{I}$(Female higher education)	0.003	0.013
	(0.018)	(0.016)
$\mathbb{I}$(Male higher education)	-0.016	-0.026
	(0.017)	(0.016)
$\mathbb{I}$(Governmental programs)	0.009	0.026
	(0.014)	(0.016)
$\mathbb{I}$(Dwelling ownership)	0.012	0.011
	(0.014)	(0.015)
Constant	0.780***	0.724***
	(0.253)	(0.248)
Controls	✓	✓
R^2	0.262-0.478	0.364-0.383
N	133,733,992	49,981,027

Notes: Additional controls include time and regional dummies. Women's age and age differences are divided by 100 to ease computation. R^2 range across the different equations of the NLSUR model. Standard errors clustered at the primary sampling unit level. *significant to 10%; **significant to 5%; ***significant to 1%.

Table B.4.2. Estimated Resource Shares by Event (Using Weights)

	Event			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
	A. With Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.433	0.468	0.437	0.428
	(0.062)	(0.064)	(0.061)	(0.063)
Men $\left(H^{♀}\right)$	0.399	0.377	0.408	0.430
	(0.063)	(0.065)	(0.062)	(0.065)
Children $\left(H^{k}\right)$	0.167	0.156	0.155	0.142
	(0.056)	(0.055)	(0.052)	(0.051)
	B. Without Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.564	0.541	0.51	0.465
	(0.115)	(0.111)	(0.106)	(0.108)
Men $\left(H^{♀}\right)$	0.436	0.459	0.49	0.535
	(0.115)	(0.111)	(0.106)	(0.108)

Notes: The table reports the mean and standard deviation of the estimated resource shares for family members of each type (women, men, and children) over time. Resource shares are modeled as linear functions of household characteristics using the estimated parameters of the model.

Table B.4.3. Women's Control of Resources (Using Weights)

	A. With Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R=\frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.521	0.554	0.517	0.498
	(0.066)	(0.068)	(0.065)	(0.067)
(COVID-19) – (All)		-0.029***		
		(0.000)		
(COVID-19) – (No Crisis)		-0.019***		
		(0.000)		
(COVID-19) – (Fin. Crisis)		-0.056***		
		(0.001)		
	B. Without Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R=\frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.564	0.541	0.510	0.465
	(0.115)	(0.111)	(0.106)	(0.108)
(COVID-19) – (All)		-0.060***		
		(0.001)		
(COVID-19) – (No Crisis)		-0.055***		
		(0.001)		
(COVID-19) – (Fin. Crisis)		-0.076***		
		(0.001)		

Notes: The table reports the mean and standard deviation of the estimated women's relative control of resources (women's bargaining power) over time. The bottom of each Panel presents three comparisons: (i) COVID-19 period and all the previous periods (Pre Fin. Crisis, Crisis, and Pre COVID-19), (ii) COVID-19 period and No Crisis periods (Pre Fin. Crisis and Pre COVID-19), and (iii) COVID-19 period and Fin. Crisis period.

B.5. Robustness V: Estimation including a Food Engel Curve

Table B.5.1. Determinants of Women's Resource Shares (including a Food Engel Curve)

	With Children under Age 18 (1)	Without Children under Age 18 (2)
Number of Adult Women	0.054***	0.059***
	(0.009)	(0.013)
Number of Adult Men	-0.054***	-0.101***
	(0.009)	(0.008)
Number of Children	-0.041***	-
	(0.004)	-
Fraction of Female Children	-0.006	-
	(0.008)	-
$\mathbb{I}$(Widow)	-0.023	-0.029
	(0.019)	(0.019)
$\mathbb{I}$(Unmarried daughter above age 18)	-0.003	0.031
	(0.014)	(0.020)
$\mathbb{I}$(Unmarried son above age 18)	-0.034**	-0.016
	(0.015)	(0.016)
$\mathbb{I}$(Daughter-in-law)	-0.002	-0.081**
	(0.017)	(0.032)
$\mathbb{I}$(Son-in-law)	-0.004	-0.020
	(0.024)	(0.030)
Average age difference (ages 18–69)	0.101	0.133*
	(0.062)	(0.071)
Average female age (ages 18–69)	0.845	-0.894
	(1.041)	(1.079)
Average age difference^2 (ages 15–69)	-0.289	-0.240
	(0.211)	(0.187)
Average female age^2 (ages 18–69)	-1.773	2.884
	(2.648)	(2.489)
Average age difference^3 (ages 18–69)	-1.310	0.060
	(0.893)	(0.750)
Average female age^3 (ages 18–69)	1.197	-2.465
	(2.189)	(1.839)
Average children age (ages 0–17)	0.173*	-
	(0.090)	-
$\mathbb{I}$(UDL)	0.007***	0.008**
	(0.002)	(0.004)
$\mathbb{I}$(Female salary earner)	0.016**	0.018**
	(0.007)	(0.009)
$\mathbb{I}$(Men salary earner)	-0.008	-0.022**
	(0.007)	(0.009)
$\mathbb{I}$(Female higher education)	0.007	0.025**
	(0.008)	(0.010)
$\mathbb{I}$(Male higher education)	-0.030***	-0.019*
	(0.009)	(0.010)
$\mathbb{I}$(Governmental programs)	0.013**	0.030***
	(0.006)	(0.009)
$\mathbb{I}$(Dwelling ownership)	0.002	0.005
	(0.007)	(0.008)
Constant	0.330**	0.580***
	(0.134)	(0.150)
Controls	✓	✓
R^2	0.256-0.769	0.339-0.850
N	171,990	66,256

Notes: Additional controls include time and regional dummies. Women's age and age differences are divided by 100 to ease computation. R^2 range across the different equations of the NLSUR model. Standard errors clustered at the primary sampling unit level. *significant to 10%; **significant to 5%; ***significant to 1%.

Table B.5.2. Estimated Resource Shares by Event (including a Food Engel Curve)

	Event			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
	A. With Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.437	0.450	0.417	0.395
	(0.070)	(0.068)	(0.065)	(0.067)
Men $\left(H^{♀}\right)$	0.331	0.330	0.367	0.405
	(0.074)	(0.074)	(0.071)	(0.074)
Children $\left(H^{k}\right)$	0.233	0.220	0.216	0.201
	(0.081)	(0.080)	(0.074)	(0.073)
	B. Without Children under Age 18 Only			
Women $\left(H^{♂}\right)$	0.552	0.560	0.514	0.480
	(0.111)	(0.110)	(0.105)	(0.105)
Men $\left(H^{♀}\right)$	0.448	0.440	0.486	0.520
	(0.111)	(0.110)	(0.105)	(0.105)

Notes: The table reports the mean and standard deviation of the estimated resource shares for family members of each type (women, men, and children) over time. Resource shares are modeled as linear functions of household characteristics using the estimated parameters of the model.

Table B.5.3. Women's Control of Resources (including a Food Engel Curve)

	A. With Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.570	0.579	0.533	0.494
	(0.077)	(0.075)	(0.071)	(0.073)
(COVID-19) – (All)		-0.056***		
		(0.000)		
(COVID-19) – (No Crisis)		-0.047***		
		(0.000)		
(COVID-19) – (Fin. Crisis)		-0.084***		
		(0.001)		
	B. Without Children under Age 18 Only			
	Pre Fin. Crisis [2004-2006] (1)	Fin. Crisis [2008-2012] (2)	Pre COVID-19 [2014-2018] (3)	COVID-19 [2020] (4)
$R = \frac{\hat{H}^{♀}}{\hat{H}^{♀}+\hat{H}^{♂}}$	0.552	0.560	0.514	0.480
	(0.111)	(0.110)	(0.105)	(0.105)
(COVID-19) – (All)		-0.044***		
		(0.001)		
(COVID-19) – (No Crisis)		-0.040***		
		(0.001)		
(COVID-19) – (Fin. Crisis)		-0.080***		
		(0.002)		

Notes: The table reports the mean and standard deviation of the estimated women's relative control of resources (women's bargaining power) over time. The bottom of each Panel presents three comparisons: (i) COVID-19 period and all the previous periods (Pre Fin. Crisis, Crisis, and Pre COVID-19), (ii) COVID-19 period and No Crisis periods (Pre Fin. Crisis and Pre COVID-19), and (iii) COVID-19 period and Fin. Crisis period.