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THE EFFECTS OF SOCIAL PENSIONS ON MONETARY AND TIME TRANSFERS AMONG THE POOR

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The effects of social pensions on monetary and time transfers among the poor*

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Abstract

We study the effects of Peru's social pension program, *Pension 65*, on family transfers of money and time. The program provides pensions to individuals aged 65 and over who are officially classified as extremely poor and who do not receive other pensions. We use survey data matched to the program's administrative registers and exploit the discontinuity around the welfare index that determines eligibility to estimate the intention-to-treat effects of the program on family transfers. We find that *Pension 65* reduces monetary family transfers by 70% (the effect is 97% for men). There is a substantial increase in childcare hours among men, from 1 to 7 hours per week. This result is consistent with an increase in the number of young children in the household and with a reduction in time spent on leisure activities among men.

Key words: Social pensions, family transfers, time use, poverty, ageing

JEL-classification: H55, I38, J14, J26

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Los efectos de las pensiones sociales en las transferencias monetarias y de tiempo entre los pobres

Resumen

Estudiamos los efectos del programa de pensiones sociales del Perú, *Pension 65*, sobre las transferencias familiares de dinero y tiempo. El programa otorga pensiones a personas de 65 años o más que están oficialmente clasificadas como en pobreza extrema y que no reciben otras pensiones. Utilizamos datos de encuesta emparejados con registros administrativos del programa y explotamos la discontinuidad en torno al índice de bienestar que determina la elegibilidad para estimar los efectos de intención de tratar del programa sobre las transferencias familiares. Encontramos que *Pension 65* reduce las transferencias monetarias familiares en 70% (el efecto es de 97% para los hombres). También observamos un aumento sustancial en las horas de cuidado infantil entre los hombres, de 1 a 7 horas por semana. Este resultado es consistente con un aumento en el número de niños pequeños en el hogar y con una reducción del tiempo dedicado a actividades de ocio entre los hombres.

Key words: Pensiones sociales, transferencias familiares, uso del tiempo, pobreza, envejecimiento

JEL-classification: H55, I38, J14, J26

1 Introduction

During the last two decades, many social pension programs have been established in low- and middle-income countries as a way to fight old-age poverty and to complement standard social security systems that are not prepared to cope with large informal labour markets. These programs provide transfers, generally small relative to national income averages, to targeted poor older individuals, yet they can be relatively important for their budgets. This policy can help protect vulnerable older adults and, at the same time, have unintended effects on recipients and/or other household members. One of the programs most studied in the early literature is South Africa's *Old Age Pension Program*, established during the 1990s. The studies by Case and Deaton (1998), Duflo (2000, 2003), and Edmonds (2006) are particularly important because they identify some of the first impacts of pension transfers on recipients and their families (improvements in health and education outcomes of co-residing children, as well as reductions in child labour). Since the emergence of these studies, a substantial body of research has developed on the effects of other social pension programs on additional outcomes.[1]

It is well established in the literature that public transfers may displace private transfers received from relatives living outside the recipient's household (Feldstein 1974, Abrams and Schitz 1978). This "crowding-out" effect has been studied for various types of public transfers and countries (Becker 1974; Cox 1987; Cox and Jakubson 1995; Cox et al. 1998; Bernheim et al. 1985). This literature treats time transfers as "services" such as visits, calls, help, or companionship, given and received between grandparents, parents, and children, usually living in different households. However, time transfers also occur within the household and can take the form of activities such as childcare, housekeeping, or home management, among others.

Although several papers have studied the displacement effect of social pensions on family cash transfers, the effects of these pensions on time transfers in and out of the household have not yet been sufficiently studied. Even less has been done on the effect of social pensions on all these transfers simultaneously. In this paper, we implement a Regression Discontinuity Design (RDD) to study the effects of Peru's social pension program, *Pension 65*, on family cash

[1]For example, de Carvalho-Filho (2008, 2012) note a large decrease in recipients' labour supply in Brazil. For Mexico, studies have found increases in school enrolment of co-residing children (Gutierrez et al. 2017), a reduction in labour supply among the poorest recipients and male co-residing teenagers (Juarez and Pfutze 2015), improvements in mental health and subjective well-being (Galiani et al. 2016), positive impacts on health and healthcare utilisation (Aguila et al. 2015), and increases in family size and the number of co-residing children (Aguila et al. 2020). General effects of social pensions on poverty, income inequality, and social security coverage have been studied, for example, in Barrientos et al. (2003), Barrientos (2012), Pal and Palacios (2011), Willmore (2007), and Holzmann et al. (2009).

transfers and time transfers within the household and with other households. We exploit rich survey data matched to administrative information on the welfare index used to verify eligibility for the program to identify its causal effects.

Nikolov and Bonci (2020) provide an interesting review of how social pensions displace private transfers, which could diminish the capacity of pensions to protect against poverty risk. However, it is also possible that new family members join the recipient's household, attracted by this new source of income, and bring their own income sources –thereby improving the household income pool– which can improve insurance against economic risks. In this case, the household's economic situation could improve, even under declining private transfers. As the final effect should also account for increases in household size, this is ultimately an empirical question that we also address in this paper.

The magnitude of the crowding-out effect of social pensions can vary significantly. For example, in Mexico, Amuedo-Dorantes and Juarez (2015) estimate that pension transfers from the *70 and More* program can displace 37% of private transfers received by households. Juarez (2009) finds a substantial effect of 86% for a generous transfer from the *Nutrition Transfer for Senior Adults* program implemented in the poorest neighbourhoods of Mexico City. Amuedo-Dorantes et al. (2019) estimate the effect of federal and state social pension programs on savings, finding that household savings rates decrease in households with young members. For South Africa's *Old Age Pension Program*, Jensen (2003) finds a crowding-out effect of 25%-30% in transfers sent by migrant children to elderly recipient parents. In Taiwan, Fan (2010) finds that the Farmers' Pension Program reduces private transfers by 30%-39%. In China, Huang and Zhang (2021) find no effects of the New Rural Pension Scheme (NRPS) on displacing private transfers, but they find that the program increases food income and expenditures and reduces labour supply by 3%, especially in the agricultural sector. In contrast, Hernani-Limarino and Mena (2015), Behrman et al. (2011), Chen and Tan (2018), and Nikolov and Adelman (2019) find little evidence of crowding-out of private transfers in Bolivia, Chile, Singapore, and China, respectively.

Not many studies have investigated the effects of social pension programs on time transfers. One of the few is Li et al. (2018), which finds that China's New Rural Pension Program (NRPP) increased time spent caring for grandchildren. In the case of the South African social pension program, Ambler (2016) finds an increase in women's bargaining power, suggesting that some effects of social pensions on time use could be mediated by changes in bargaining power. In an

analysis of the effects of social pensions in Spain on internal migration, Amuedo-Dorantes and Borra (2021) do not find that childcare provided by grandparents mediates such an effect.

We estimate the intention-to-treat (ITT) effect of *Pension 65* and find that the program causes a reduction of 29.8 Soles in family transfers from a baseline of 42.6 Soles at the cutoff; that is, the crowding-out effect is estimated at -70% at the eligibility threshold. However, this effect is significant only among men, not among women. Regarding time allocation, we find no statistically significant effects on working hours, but we do find a substantial increase in hours dedicated to childcare. This effect is concentrated among men, who show a significant increase from 1 to 6 hours per week in time spent on childcare at the cutoff. Eligible men also reduce hours spent on leisure activities, as well as the likelihood of spending time volunteering and participating in social activities. Conversely, women increase their likelihood of participating in social activities and home management.

We also detect program effects on household size and composition. The household size of eligible individuals increases by 0.93 members from a baseline of 2.84 at the cutoff, which implies 33% more members residing in eligible households at the eligibility threshold. Furthermore, the proportion of children aged 0-5 years in the household increases considerably at the cutoff. To a lesser extent, the proportions of young adults (18-29 years) and middle-aged adults (30-59 years) in the household also increase.

On the one hand, the program increases non-labour income via the pension transfer, which in turn reduces labour income of older adults; on the other hand, the program reduces family transfers and increases household size. In such a case, the program's effectiveness may be compromised, as the pension amount is not fully added to the general household budget. This could limit the effectiveness of pension transfers in improving the economic conditions of eligible people, but it depends on the extent of potential new income sources brought in by new household members. Looking only at the statistically significant results of our non-parametric regressions, we find no evidence that the program loses effectiveness due to changes in household size and income composition. Our measure of household disposable income per capita –which includes private and public transfers, and labour and non-labour income from all household members– does not increase or decrease due to the program.

The rest of the paper is organised as follows. Section 2 provides an overview of the *Pension 65* program. Section 3 presents the data and empirical strategy. Section 4 presents the results. Section 5 presents robustness checks. Lastly, Section 6 concludes.

2 The Pension 65 program

The program *Pension 65* provides bi-monthly transfers of 250 Soles (about USD 31 per month) to individuals older than 65 who have no other pension and live in a household classified as extremely poor by the national targeting system (known as SISFOH, due to its Spanish name). This policy was enacted in October 2011, at the beginning of Ollanta Humala's presidency. The program had a coverage of 570,000 recipients (as of 2021), which represents 19% of the population aged 65 and over, and it is not very costly in comparison to other NCP programs in Latin America. For example, in 2017 the cost of *Pension 65* represented 0.13% of GDP, whereas the Latin American average was 0.39% (Arenas de Mesa 2019). In terms of generosity, the program is among those offering the lowest replacement rates in Latin America. On average, non-contributory pensions represent 17.8% of the average salary in the region, but for *Pension 65* this figure is 6.9% (Altamirano et al. 2018).

Nonetheless, the transfer may represent an important amount for the population in our sample. For instance, in 2015 (the year when our data were collected), the transfer was equivalent to 87% and 71% of the extreme poverty lines in rural and urban areas, respectively. The transfer amount has never increased since the introduction of the program in 2011, which implies a loss in purchasing power of about 52%.[2] The Ministry of Development and Social Inclusion (MIDIS) administers the program, and the Ministry of Economy and Finance (MEF) allocates fiscal resources from general revenues to finance it. The roll-out of *Pension 65* started in October 2011 by assessing the enrolment of individuals residing in the poorest districts of six prioritised departments (Apurimac, Ayacucho, Huancavelica, Puno, Ica, and Huanuco).

To be eligible, individuals must live in a household classified as extremely poor by the national targeting system, SISFOH. The goal of this system is to provide guidance on which populations –according to their levels of structural poverty– can be targeted by specific social programs. SISFOH is fed with socioeconomic information on households and their members, collected on-site by government officers. A series of specific censuses has been implemented to collect and update this socioeconomic information. For this study, the large roll-out census of 2012 was used to design the sample framework. The information collected for SISFOH includes access to (and quality of) public services (water, electricity, sewage), type of fuel used in the household, type and quality of materials used in dwelling construction, overcrowding, highest educational attainment of household members and the household head, access to health

[2]The variation in Peru's Consumer Price Index between October 2011 and August 2023 is 52%.

insurance, etc. This information is used to compute a composite welfare index according to the official methodology, which involves different weights and variables (see Valderrama and Pichihua 2011). The index is then compared to region-specific cutoffs and used to identify groups of households classified as extremely poor, non-extremely poor, and non-poor. This classification is valid for 3 and 4 years in urban and rural areas, respectively. It is worth noting that individuals know the group to which their household belongs, but they do not know the value of their welfare index or how to compute it. Moreover, the values of the regional cutoffs are not publicly known.

3 Data and empirical strategy

3.1 Data

We use data from the *Encuesta de Salud y Bienestar del Adulto Mayor* (ESBAM), which was collected by the National Institute of Statistics of Peru (INEI) to study the causal effects of *Pension 65*. The baseline survey was carried out between October and November 2012, and the follow-up survey was collected between July and September 2015. The survey was conducted in 12 (out of 24) departments that had completed the SISFOH data collection roll-out, so the sample framework considered only these departments. The sample framework was intentionally designed to implement a regression discontinuity design (RDD) using the follow-up survey. This framework is composed of households where at least one member is aged between 65 and 80 and has a SISFOH score within 0.3 standard deviations above or below the threshold for extreme poverty. That is, by construction, the sample includes individuals very close to the eligibility criterion of the welfare index used by the program: extremely poor and non-extremely poor households, leaving aside non-poor households.

The sampling procedure used to select households for ESBAM is probabilistic, independent in each department, and stratified by rural and urban areas. The primary sampling units (PSU) are defined as census units in urban areas (blocks) and villages (*centro poblado*) in rural areas. In a first step, PSUs are selected within each department and area according to a selection probability proportional to the total number of households. Then, in a second step, households are selected through systematic random sampling.[3]

Figure A.1 in the Appendix provides a better idea of how close the individuals in our sample

[3]For more methodological details, see MIDIS (2013).

are to the cutoff. Compared with the national distribution of the SISFOH score, the ESBAM sample is located in the neighbourhood of the eligibility threshold. Households located on the right side of the threshold are non-extremely poor and thus just ineligible for the program, while households located on the left side of the threshold are extremely poor and just eligible for the program. Our strategy exploits the discontinuity in the probability of program eligibility generated by the SISFOH score. Differences between eligible and ineligible individuals observed at the eligibility cutoff are considered potential program effects, that is, intention-to-treat (ITT) effects. Subsection 3 discusses the identification strategy in more detail.

We use the ESBAM follow-up survey of 2015 to run our RDD. The final sample is composed of 3,494 individuals, of whom 2,278 are eligible and 1,216 are ineligible. There were 3,885 individuals in the 2012 baseline with complete information on their SISFOH score and consistent information on their program status.[4] From the baseline sample, 373 individuals were not found in the follow-up survey, and 18 could not be linked to the modules on family financial transfers. Of the 373 individuals who attrited, 208 died before the follow-up survey, and 165 were not found in their households. We do not detect any statistically significant relationship between attrition and either the SISFOH score or eligibility status.[5]

The ESBAM survey includes several demographic variables capturing individual and household characteristics, health, well-being, income, transfers, and consumption. SISFOH score information comes from administrative registers. The information was collected through face-to-face interviews. We focus on economic variables such as private transfers, income, and consumption, as well as variables capturing time transfers, such as time allocated to work, companionship, childcare, and other activities. We also exploit a time-use module covering 10 distinct activities. Detailed definitions of the variables used in the analysis are reported in Tables A.1 to A.4 in the Appendix, while Tables A.5 to A.8 present descriptive statistics for these variables.

3.2 Empirical strategy

As we described earlier, eligibility for the program is defined by three criteria: being at least 65 years old, not receiving any other pension, and living in a household officially classified

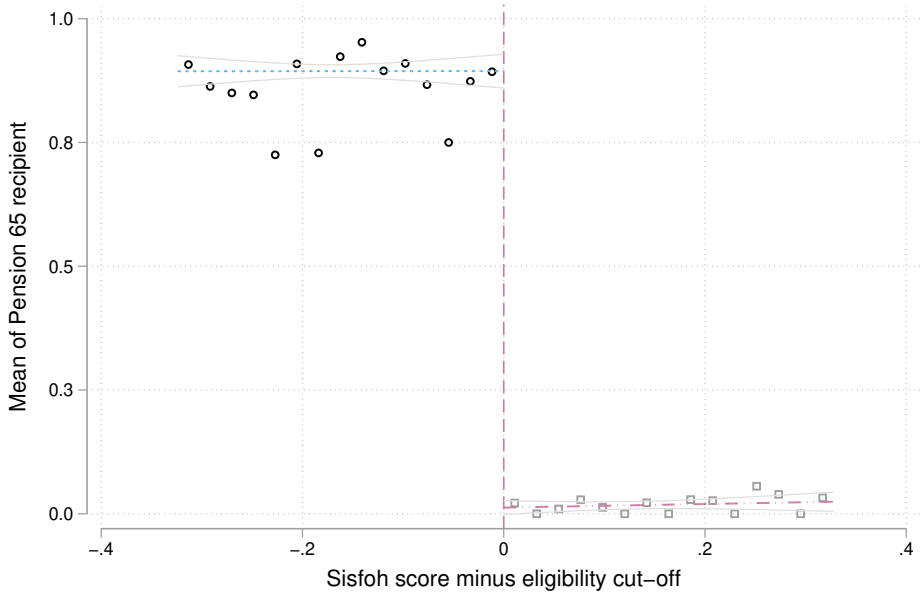
[4]For example, recipients of the program in the baseline survey were dropped, as well as individuals receiving pensions from contributory pension systems. See Valderrama and Olivera (2023) and MEF (2016) for more details on the baseline sample.

[5]Correlations between attrition and the SISFOH score and eligibility status in the baseline sample produce p-values of 0.327 and 0.337, respectively.

as extremely poor by the SISFOH system. This classification is determined by comparing the SISFOH score of the individual's household with regional cutoffs: households with a score below the cutoff are classified as extremely poor and are eligible for the program, whereas households with a score above the cutoff are classified as non-extremely poor and are ineligible for the program. Variation in the index around the threshold provides a natural experiment that quasi-randomly assigns program eligibility, allowing us to observe individuals who are just eligible or narrowly ineligible. This setting allows us to identify the expected effects of the program.

Figure 1 plots the SISFOH score centred at zero (i.e., the index minus its eligibility threshold), so that negative values indicate that the individual lives in an extremely poor household and is eligible for the program. Positive values of the SISFOH score indicate that the individual lives in a non-extremely poor household and is not eligible for the program. The bandwidth of our sample ranges from -0.32 to 0.32 in the centred SISFOH score. We observe in the figure that eligibility, by crossing the threshold, significantly increases the probability of receiving a pension transfer (by 85.7 percentage points).

Figure 1: Probability of being recipient of *Pension 65*



Notes: The dots denote averages for 15 bins each side of the cutoff. The dotted lines indicate predicted linear regressions at each side of the cutoff. The confidence intervals correspond to 95% confidence levels.

The potential effect of *Pension 65* is identified by the difference between the average value of the outcome below the cutoff (eligible) and the average value of the outcome above the cutoff

(ineligible). In practice, ITT estimates are typically obtained using parametric fitting functions in the region around the threshold. Assuming linearity, the following econometric specification can be used to estimate the expected effects of the programme:

$$y_i = \beta_0 + \beta_1 z_i + \beta_2 E_i + \beta_3 z_i E_i + X_i^{'} + \varepsilon_i \tag{1}$$

where β_1 is the slope of the line to the right of the threshold, $\beta_1 + \beta_3$ is the slope of the line to the left of the threshold, and β_2 is the difference at the cutoff (Imbens and Lemieux, 2008). The variable y_i indicates a particular outcome variable, z_i is the SISFOH score centred at the regional eligibility cutoff, and E_i is an indicator variable for eligibility for the programme ($E_i = 1$ if $z_i < 0$ and $E_i = 0$ if $z_i \geq 0$). β_2 is the linear estimated effect of being eligible on the outcome of interest, and ε_i denotes the error term clustered at the primary sampling unit level.[6]

This strategy allows us to estimate intention-to-treat (ITT) effects; that is, we analyse the overall potential effects of the programme on the population based on eligibility status, and not only on individuals who effectively receive treatment. We argue that the discontinuity at the cutoff observed in Figure 1 is substantially large and therefore allows us to focus on estimating ITT effects.

For all regression models, we implement the data-driven procedure of Calonico et al. (2015) to obtain optimal bandwidths, in order to attenuate estimation bias arising from an incorrect bandwidth choice and from including data farther away from the cutoff. In addition, the regressions use a triangular kernel weighting function in the distance from the cutoff (Calonico et al., 2014), which implies that observations closer to the eligibility threshold receive larger weights, while observations farther from the threshold receive smaller weights.

3.3 RD validity

The potential manipulation of the running variable (the SISFOH score in our analysis) by individuals seeking to become eligible for the programme is an issue that can challenge identification in RD designs. If this occurs, the running variable will not be random around the eligibility threshold, making identification of effects in the RDD invalid (Lee and Lemieux, 2010). However, we consider this unlikely for the following reasons. First, individuals are unlikely to know

[6]Following the recommendation by Abadie et al. (2020) to deal with design uncertainty, we cluster standard errors at the PSU level.

the precise algorithm used to compute the SISFOH score. While the methodology is publicly available, it is complex to fully understand and replicate. Second, the 15 different regional eligibility cutoffs (a combination of region, geographical area, and rural/urban location) are not publicly known; therefore, individuals cannot be certain about the results of manipulating, if they do, their scores. Third, most variables used in the index construction are recorded and verified by government officials and are therefore difficult to manipulate (e.g., roof and floor materials of the dwelling). Fourth, although other social programmes in Peru also use the SISFOH score, and households could in principle learn how to affect their score advantageously, no other major social programme uses the extreme-poverty SISFOH eligibility criterion. Other programmes use the poverty SISFOH eligibility criterion, distinguishing between poor households (including extremely poor and non-extremely poor) and non-poor households. As our sample is composed of households that are either extremely poor or non-extremely poor, we can rule out the possibility that households in our sample learned from other programmes how to manipulate their score to be classified as extremely poor. Therefore, manipulation is unlikely.

In any case, to address concerns about manipulation, we implement several tests that reassure us about the validity of our RDD. We perform the Cattaneo et al. (2018) test to assess continuity of the running variable around the eligibility cutoff. Figure A.2 in the Appendix does not reveal a discontinuity around the eligibility cutoff; we cannot reject the null hypothesis of continuity in the density of the running variable at the cutoff ($p\text{-}value = 0.55$). Using the test of Bugni and Canay (2021), we likewise cannot reject this hypothesis ($p\text{-}value = 0.76$).

Another manipulation test assesses whether predetermined individual characteristics change discontinuously at the threshold. The idea is to examine whether eligible individuals are similar to ineligible individuals in terms of observable characteristics near the cutoff (Cattaneo et al. 2020). The argument is that we should not find systematic differences between individuals with similar values of the running variable if there is no manipulation in the running variable. Table A.9 in the Appendix reports no significant effects of the programme on the covariates gender, age, years of education, and being the head of household. Therefore, we do not find discontinuities in these covariates.

In Section 5, we perform additional robustness checks to assess the stability and sensitivity of our estimated effects. Taken together, these tests support the interpretation that we are identifying a causal effect of the programme.

4 Results

4.1 Main results

Table 1 reports the overall ITT effects of the programme on the amount of monetary transfers received by individuals from other households, as well as on the probability of receiving such transfers. Being eligible for the programme causes a reduction of 29.8 Soles (*p-value*=0.06) in family transfers from a baseline of 42.6 Soles at the cutoff; that is, the crowding-out effect is estimated at -70% at the eligibility threshold (29.8/42.6). When disaggregated by domestic or foreign origin, family transfers are statistically significant only for those from abroad. We also estimate the effect on the probability of receiving transfers (see the bottom panel of Table 1). We find that the share of eligible individuals receiving family transfers from other households is reduced by 29 p.p. from a baseline at the eligibility cutoff of 42 p.p., implying a reduction of 69% in the probability of receiving transfers from other households. There are also statistically significant reductions in the probability of receiving domestic and foreign transfers. Overall, we find a crowding-out effect of the programme on monetary transfers of about 70%, which is consistent with the negative effects estimated in other studies.

Table 1: Effects of Pension 65 on monetary transfers

Variable	Effect	Std Err	P-value	Control	N
Transfer amount (Soles)					
Transfers received from other households in the country	-18.34	12.41	0.14	33.63	1,823
Transfers received from other households abroad	-12.32**	5.94	0.04	7.87	1,280
Total transfers received from other households	-29.79*	15.55	0.06	42.57	1,441
Transfer indicator (1/0)					
Transfers received from other households in the country	-0.21**	0.08	0.01	0.37	1,750
Transfers received from other households abroad	-0.05**	0.03	0.05	0.04	1,315
Total transfers received from other households	-0.29***	0.09	0.00	0.42	1,280

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual. The monetary variables are expressed in monthly Soles of 2015.

The ESBAM survey includes a time-use module in which individuals report the number of hours per week spent on nine different activities. These relate mainly to tasks performed at home, such as cooking, making clothes, childcare, housekeeping, and household management, as well as the use of free time for leisure activities, social activities, volunteering, and gardening.

The survey also asks for the total number of hours worked per week, which allows us to add this activity to our set of time-allocation outcomes. Details of all these activities are described in the Appendix.

Table 2 reports the effects on time transfers. We find no effects of the programme on working hours or on the probability of working, evaluated at the eligibility cutoff. This result is in line with Bando et al. (2020), who also employ an RDD and find no impact of *Pension 65* on working hours. This finding may contrast with evidence from other studies evaluating the impact of social pension programmes, which generally report a reduction in both the extensive and intensive margins of labour supply. However, differences may arise from different methodological approaches.[7]

Table 2: Effects of Pension 65 on time transfers

Variable	Effect	Std Err	P-value	Control	N
Time transfers in weekly hours					
Working	0.37	5.04	0.94	20.24	1,313
Cooking activities	-0.23	1.39	0.87	6.13	1,862
Housekeeping	0.34	0.58	0.56	2.01	1,349
Care and making of clothes	-0.13	0.40	0.75	0.77	1,472
Childcare	4.15**	1.72	0.02	1.80	1,365
Home management and organisation	0.30	0.24	0.21	0.04	1,363
Time with family and/or social activities	-1.68	4.06	0.68	8.03	3,430
Using of free time for leisure activities	-4.34**	2.12	0.04	9.75	3,156
Caring for gardens and animals	3.11**	1.28	0.02	1.59	1,236
Volunteering	-1.40**	0.57	0.01	0.62	454
Time transfer indicator (1/0)					
Working	0.05	0.12	0.69	0.62	765
Cooking activities	0.02	0.08	0.83	0.68	1,433
Housekeeping	0.01	0.07	0.86	0.78	3,484
Care and making of clothes	0.02	0.10	0.87	0.43	1,321
Childcare	0.18**	0.07	0.01	0.16	1,741
Home management and organisation	0.15**	0.07	0.04	0.14	3,437
Time with family and/or social activities	-0.04	0.10	0.67	0.67	3,111
Using of free time for leisure activities	-0.15	0.12	0.21	0.87	634
Caring for gardens and animals	0.08	0.11	0.45	0.42	1,337
Volunteering	-0.14*	0.08	0.08	0.14	646

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual.

[7]For instance, if we run a simple linear regression as in equation 1 over the full bandwidth (that is, without kernel weights or optimal bandwidths), we obtain an average treatment effect of -6.2 working hours (*p-value*=0.011) for eligible individuals and a constant of 21.5 hours for ineligible individuals, implying a drop of 29% in hours worked. However, as mentioned earlier, this result may be biased due to observations farther from the cutoff.

One result that stands out is the increase in time spent on childcare. We find an increase of 4.15 hours per week relative to a baseline of 1.8 hours, i.e., time devoted to childcare more than doubles. The likelihood of spending time on childcare also increases. The effect of the pension is an 18 p.p. increase in the probability of spending time on childcare, compared to a baseline of 16 p.p. We also detect an increase in the probability of spending time on home management and organisation, but not in the number of hours allocated to this activity. The effect of the pension is a 15 p.p. increase in the probability of spending time on home management and organisation, from a baseline at the cutoff of 14 p.p. According to the corresponding survey question, this activity includes tasks such as bookkeeping, budget allocation, collecting social assistance, and picking up children from nursery. The pension also increases the number of hours spent caring for household gardens and animals (a non-economic activity), with an effect of 3.1 additional hours from a baseline at the cutoff of 1.6 hours.

The programme also reduces the hours spent on some activities. According to the ESBAM survey, the activity labelled "Use of free time for leisure activities" includes watching television, reading for distraction, walking, resting without doing anything, doing sport or exercise, talking to friends, drawing, painting, dancing, or other artistic activities.

A statistically significant reduction of 4.3 hours is observed from a baseline of 9.8 hours at the cutoff, i.e., a 45% reduction in time spent on leisure activities. This reduction is observed in hours, but not in the probability of spending time on leisure activities. In addition, there is a reduction in both the number of hours and the likelihood of spending time on volunteering. The programme reduces volunteering time by 1.4 hours per week relative to a baseline at the cutoff of 0.6 hours, while the corresponding probability is reduced by 14 p.p. relative to a baseline at the cutoff of 14 p.p.

We are also interested in assessing whether there are changes in time transfers received and given by, and to, persons residing outside the household. Our data do not allow us to identify the precise number of hours spent on these time transfers, but we can at least observe whether the individual engages in these activities. In Table 3, we observe a 27 p.p. reduction in the probability of receiving companionship from people outside the household (baseline is 44 p.p.), an 18 p.p. reduction in the probability of receiving emotional support from people outside the household (baseline is 79 p.p.), and a 40 p.p. reduction in the probability of giving companionship to people outside the household (baseline is 49 p.p.). These results may indicate a decline in interactions between eligible older individuals and people living outside the household.

The survey includes information about the self-perception of elderly individuals about their role in providing different types of help to the household. Thus, we can use this information as a proxy for time transfers of help to other household members. The results reported in the last panel of Table 3 indicate that eligible individuals provide financial help and childcare to other household members. The effect of the program is a 12 p.p. increase in the share of individuals reporting they provide financial help to the household from a baseline at the cutoff of 67 p.p. Moreover, the program leads to a 16 p.p. increase in the share of individuals reporting they provide childcare help to the household from a baseline at the cutoff of 23 p.p. The positive impact on the self-perceived provision of childcare help is in line with the previous result about the hours spent on childcare.

Considering the results on time transfers together, we observe that the programme has, on the one hand, reduced the interactions of eligible individuals with members of other households and reduced their time in leisure activities, but, on the other hand, it has made these people more involved in household activities, with childcare being the most relevant.

Table 3: Effects of Pension 65 on support and help

Variable	Effect	Std Err	P-value	Control	N
Support from/to other households (1/0)					
Receive company	-0.27**	0.14	0.05	0.44	649
Receive emotional support	-0.18**	0.09	0.04	0.79	1,337
Give company	-0.40***	0.13	0.00	0.49	494
Give emotional support	-0.01	0.08	0.90	0.87	3,447
Help provided in the household (1/0)					
Provide finance help to the household	0.12*	0.06	0.06	0.67	3,163
Provide help with household chores	0.08	0.08	0.30	0.79	1,363
Provide help with childcare	0.16**	0.08	0.03	0.23	1,878
Provide advice	0.10	0.07	0.16	0.87	1,392

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual.

4.2 Heterogeneous effects by gender

Table 4 reports programme effects by gender for outcomes that are statistically significant (at least at the 10% level) for at least one gender. The complete set of results is reported in Table A.13 in the Appendix.

We find that the effect of *Pension 65* on private cash transfers is statistically significant only among men, not among women. The effect is a reduction of 50.1 Soles in family transfers received by men from a baseline transfer at the cutoff of 52 Soles, i.e., an almost complete crowding-out effect of 97%. A reduction in private transfers from abroad received by men is also observed. As for the probability of receiving private monetary transfers, the programme reduces it by 25 p.p. for women from a baseline of 42 p.p., which is equivalent to a reduction of 60%. For men, the probability is reduced by 23 p.p. from a baseline of 36 p.p., equivalent to a reduction of 64%. The effect on the probability of receiving transfers from within the country is significant for both women and men, but the effect on the probability of receiving transfers from abroad is significant only for men.

The previously reported increase in hours spent on childcare is statistically significant only among men. The effect is a substantial increase of 6 hours in time spent on childcare by older men, from a baseline at the cutoff of 1 hour. One of the few studies documenting an effect of social pensions on childcare is Li et al. (2018). They find that China's New Rural Pension Program (NRPP) increased time spent caring for grandchildren, although their identification relies on village-level participation in the social pension rather than individual participation. Ambler (2016) analyse the South African social pension programme and find an increase in women's bargaining power, explained by the large change in their incomes relative to the pre-transfer situation. This change was greater for women than for men due to labour withdrawal among men. In our case, we do not have a clear variable to measure bargaining power in household decisions, but we can conjecture that changes in bargaining power may be operating behind the increase in childcare provision by older men.

Eligible men also reduce time spent on family and/or social activities.[8] The effect of the programme is a reduction of 9.7 hours from a baseline at the cutoff of 13.7 hours. Regarding the effect of the programme on the likelihood of spending time on specific activities, there is an increase in childcare among men (in line with the previous result in hours) and an increase in time spent on household management and organisation among both women and men. In contrast, the programme reduces men's participation in leisure activities and volunteering. For example, the programme effect is a 43 p.p. reduction in the probability of spending time on leisure activities from a baseline probability at the cutoff of 94 p.p. Similarly, volunteering is reduced by 16 p.p. from a baseline of 15 p.p. among men.

[8] According to the corresponding survey question, this activity includes spending time with other family members (talking, listening to music, watching TV, etc.) and/or attending recreational, family, or social activities.

Table 4: Effects of Pension 65 on individual transfers by gender

Variable	Women					Men				
	Effect	Std Err	P-val	Control	N	Effect	Std Err	P-val	Control	N
Monetary transfers (Soles)										
Received from other hhs abroad	-5.72	4.06	0.16	3.73	656	-17.46*	9.93	0.08	10.46	717
Total received from other hhs	-12.41	15.99	0.44	29.23	1,430	-50.58*	25.84	0.05	51.95	734
Transfer indicator (1/0)										
Received from other hhs in the country	-0.18*	0.11	0.09	0.36	881	-0.24**	0.10	0.01	0.36	944
Received from other hhs abroad	-0.05	0.03	0.11	0.03	635	-0.06*	0.03	0.07	0.04	732
Total received from other hhs	-0.25**	0.12	0.03	0.42	647	-0.23**	0.10	0.02	0.36	944
Time transfers (weekly hours)										
Childcare	2.33	2.44	0.34	2.99	819	5.98***	2.17	0.01	1.02	713
Time with family and/or social activities	4.02	3.55	0.26	6.35	328	-9.65*	5.12	0.06	13.69	339
Time transfer indicator (1/0)										
Childcare	-0.00	0.16	1.00	0.25	1,595	0.29***	0.09	0.00	0.10	931
Home management and organisation	0.14*	0.08	0.09	0.11	1,595	0.15*	0.09	0.10	0.18	1,848
Time with family and/or social activities	0.28*	0.16	0.08	0.62	313	-0.15	0.10	0.16	0.72	1,003
Using of free time for leisure activities	0.11	0.18	0.54	0.75	225	-0.43***	0.15	0.00	0.94	347
Volunteering	0.00	0.12	0.98	0.03	1,595	-0.16**	0.08	0.04	0.15	715
Support from/to other hhs (1/0)										
Receive company	-0.21*	0.12	0.07	0.39	1,361	-0.24	0.17	0.17	0.38	360
Give company	-0.33***	0.12	0.01	0.48	667	-0.16	0.43	0.72	0.35	1,772
Help provided in the household (1/0)										
Provide finance help to the household	0.09	0.09	0.32	0.59	1,375	0.14*	0.08	0.06	0.74	1,890
Provide help with child care	-0.05	0.10	0.65	0.31	872	0.33***	0.09	0.00	0.14	778

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual. The monetary variables are expressed in monthly Soles of 2015. The table only reports the results for the outcomes that are statistically significant (at least at 10% confidence level) for at least one gender. The complete results for all the outcomes are reported in the Appendix.

Eligible women reduce their interactions –receiving or giving companionship– with people outside the household, but this result is not statistically significant for men. Regarding self-assessed help provided to the household, we find statistically significant results only for men. We observe that the programme increases the likelihood that men provide financial help and childcare to the household, which is in line with our previous results.

4.3 Results at the household level

So far, we have conducted our analysis at the individual level, specifically by comparing eligible and ineligible older adults. To better understand some of the individual-level results, we need to examine the household. Table A.14 shows the effects of the programme on household composition overall and by age and gender groups. The programme increases household size by 0.93 members from a baseline household size at the cutoff of 2.84, which implies 33% more

members residing in eligible households at the cutoff. Furthermore, there is a sizeable increase in the shares of young children aged 0-5 (an increase of 0.39 from a baseline of 0.04), young adults aged 18-29 (an increase of 0.21 from a baseline of 0.25), and middle-aged adults aged 30-59 (an increase of 0.26 from a baseline of 0.57). By gender, we find that the programme increases the number of young girls (aged 0-5) in the household by 0.16 from a baseline at the cutoff of 0.04, and also the number of older men (aged 30-59) in the household by 0.27 from a baseline at the cutoff of 0.68. The increase in the number of young children is well aligned with the increase in childcare provided by eligible individuals.

There are other studies that detect effects of social pension programmes on increasing household size, for example Aguila et al. (2020). However, other studies, such as Edmonds et al. (2005), find no effect on household size, although they do find an effect on household composition. The latter study evaluates the South African social pension programme and finds an increase in the presence of girls aged 0-5 and young women of childbearing age (18-23) in households with eligible individuals. There is a risk that the reduction in family transfers, together with the increase in the number of household members, could reduce the effectiveness of the pension transfer. To assess the extent of this challenge, we explore the effects of the programme on a measure of household disposable income per capita, which includes private and public transfers and labour and non-labour income from all household members (see Table A.15 in the Appendix). As expected, we find a positive effect of the programme on public transfers received and a negative effect on private transfers received. However, we do not find statistically significant effects of the programme on other income sources, nor on overall disposable income per capita. Thus, we find no evidence that the programme has lost effectiveness due to changes in household size and income composition, nor that it has improved the pooling of household members' incomes. This is also supported by the results in Table A.16 in the Appendix, which show that while the programme has reduced the labour income (mostly cash income) of older adults, there is no evidence that it has increased or reduced other types of income among older adults or other household members.[9]

[9]Table A.16 also shows the programme effects on private transfers given to other households. This variable can only be measured at the household level, so it has not appeared in previous results. Although there is an increase in the amount of transfers given to other households, it is not statistically significant.

5 Robustness checks

We perform a series of robustness checks on our main regression results to test the sensitivity, stability and robustness of the estimated effects.

Change in the econometric specification

We assess whether programme effects are sensitive to potential changes in the econometric specification. We include covariates (gender, age, years of education, and head-of-household status) in our main non-parametric regressions (Tables 1 to 3) and find no changes in statistical significance for the outcomes, while effect magnitudes change only slightly (see Table A.10 in the Appendix). The only outcome that becomes statistically insignificant is self-perceived childcare help provided within the household.

Placebo cutoffs

We assess whether programme effects are sensitive to placebo changes in the threshold. To carry out this test, we choose placebo thresholds at -0.04, -0.02, 0.02, and 0.04 around the eligibility cutoff. We then estimate our main non-parametric regressions (Tables 1 to 3) using these alternative thresholds (see Table A.11 in the Appendix).

Sensitivity to observations near the cutoff

Another falsification test consists of investigating how sensitive programme effects are to the response of units located very close to the cutoff. Estimated effects should not be driven disproportionately by a few observations near the cutoff. Following Cattaneo et al. (2020), we implement the "donut hole" approach to assess the sensitivity of the results to excluding a small number of observations around the cutoff. The authors note that this strategy is also useful for assessing sensitivity to the unavoidable extrapolation involved in local polynomial estimation. We run our main non-parametric regressions excluding observations within the following distances of the eligibility cutoff: 0.001, 0.004, 0.007, and 0.01. The results are reported in Table A.12 in the Appendix. The estimates indicate that, in general, programme effects on our outcomes of interest do not change substantially when these local observations are excluded.

6 Conclusions

Using a regression discontinuity design on a welfare eligibility index, we evaluate the effects of Peru's social pension programme, *Pension 65*, on private transfers of money and time. Our findings indicate that the programme reduces the amount of incoming family transfers from other households by 70%. Additionally, the programme affects the time allocated to home activities and interactions with people outside the household.

We observe an increase in childcare hours provided by men only. At the eligibility cutoff, eligible men increase their childcare time from 1 to 7 hours per week. The programme also reduces eligible individuals' interactions with people outside their household, decreasing the likelihood of giving or receiving company with those residing in other households. However, these effects are observed only among older women. Based on our findings, the programme does not affect childcare provided by older women, who are already engaged in more childcare than men at the cutoff. The increase in childcare provided by older men is in line with the rise in the number of young children aged 0-5 years among eligible individuals. Our analysis also shows that the programme increases household size by 0.93 members from a baseline of 2.84 at the cutoff, implying an increase of 33% in the number of members residing in eligible households at the cutoff.

Assessing the effectiveness of the programme is not straightforward, particularly in terms of whether the pension transfer may trigger individual and household decisions that limit the programme's ability to improve the economic situation of poor older individuals. There is a risk that reduced family transfers together with a larger number of household members could lower the effectiveness of pension transfers. However, we find no conclusive evidence that the programme loses effectiveness due to changes in household size and income composition. In addition, we find no evidence that the programme improves income pooling among household members.

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Appendix

A Variable definitions and descriptive statistics

Table A.1: Definition of individual variables

Variable	Definition
Covariates	
Woman	It takes value 1 if the individual is female, and 0 otherwise.
Age	Exact age of the individual.
Years of education	Number of completed years of education.
Married	It takes value 1 if the individual is married, and 0 otherwise.
Household head	It takes value 1 if the individual is head of household, and 0 otherwise.
Monetary variables	
Transfers received from other households in the country	Amount of monetary transfers (monthly Soles) from other households in the country received by the elderly individual.
Total transfers received from other households abroad	Amount of monetary transfers (monthly Soles) from other households abroad received by the elderly individual.
Total transfers received from other households	Amount of total monetary transfers (monthly Soles) from other households received by the elderly individual.
Time variables (hours a week)	
Working	It is the total number of hours worked during the last week, including main and secondary occupations.
Cooking activities	It is the total number of hours of cooking.
Housekeeping	It is the total number of hours of management and cleaning of the house.
Care and making of clothes	It is the total hours spent in sewing and caring for clothes.
Childcare	It is the total number of hours spent during the last week in looking after babies, children and young people in the household.
Home management and organisation	It is the total number of hours spent in keeping accounts, distributing the budget, collecting transfers from Juntos program or others, taking a baby or child to day care (in Cuna Mas program, among others).
Time with family and/ or social activities	It is the total number of hours spent in hanging out with other member of the household (talking, listening to music, watching TV) and/ or in attending recreational social activities
Using of free time for leisure activities	It is the total number of hours spent reading for distraction, walking, taking a nap, doing sports or exercises, talking with friends, drawing, painting, dancing or other artistic activities.
Caring for gardens and animals	It is the number of hours spent in caring for vegetable gardens and animals in the household
Volunteering	It is the total number of hours spent for volunteer work in organisations or institutions (i.e. neighbourhood chores, participate in assemblies, union or political group).
Support from/to other households (1/0)	
Receive company from people outside the household	It takes value 1 if the individual received company last week from people residing in other households, and 0 otherwise.
Receive emotional support from people outside the household	It takes value 1 if the individual received emotional support last week from people residing in other households, and 0 otherwise
Give company to people outside the household	It takes value 1 if the individual provided company last week to people residing in other households, and 0 otherwise
Give emotional support to people outside the household	It takes value 1 if the individual provided emotional support last week to people residing in other households, and 0 otherwise

Table A.2: Definition of individual variables

Variable	Definition
Help provided in the household (1/0)	The variables of this group are computed from a question on the frequency with which the individual provides different types of help. The variables take the value of one if the person provides help 'always' or 'sometimes'; and they take the value of zero if the person provides help 'very little' or 'never'.
Provide finance help to the household	It takes the value of 1 if the person considers she helps financially the household and, 0 otherwise.
Provide help with household chores	It takes the value of 1 if the individual considers she helps with household chores (housekeeping, cooking, etc.), and 0 otherwise.
Provide help with child care	It takes the value of 1 if the individual considers she helps with child care, and 0 otherwise.
Provide advice	It takes the value of 1 if the individual considers she helps with advice and expertise.

Table A.3: Definition of household variables

Variable	Definition
Transfers	
Transfers received from other households in the country	Amount of monetary transfers (monthly Soles) from other households in the country received by all the members of the household.
Transfers received from other households abroad	Amount of monetary transfers (monthly Soles per capita) from other households abroad received by all the members of the household.
Total transfers received from other households	Total amount of monetary transfers (monthly Soles per capita) from other households received by all the members of the household.
Transfer given to other households	Total amount of monetary transfers (monthly Soles per capita) from all the household members given to other households.
Public transfer from Pension 65	Total amount of monetary transfers (monthly Soles per capita) received by the Pension 65 program.
Public transfer from Juntos	Total amount of monetary transfers (monthly Soles per capita) received by the Juntos program.
Income	
Total labour income (cash) of the household	Total labour income in cash (monthly Soles per capita) of all household members.
Labour income (cash) of the elderly	Total labour income in cash (monthly Soles per capita) of the elderly individuals residing in the household.
Labour income (cash) of other household members	Total labour income in cash (monthly Soles) of other members of the household than the elderly individuals.
Total labour income (in-kind) of the household	Total labour in-kind income (monthly Soles per capita) of all household members.
Total labour income (in-kind) of the elderly	Total labour in-kind income (monthly Soles per capita) of the elderly individuals residing in the household.
Total labour income (in-kind) of the other household member	Total labour in-kind income (monthly Soles per capita) of other members of the household than the elderly individuals.
Total labour income (cash and in-kind) of the household	Total labour income in cash and in-kind (monthly Soles per capita) of all household members.
Labour income (cash and in-kind) of the elderly	Total labour income in cash and in-kind (monthly Soles- per capita) of the elderly individuals residing in the household.
Labour income (cash and in-kind) of other household members	Total labour income in cash and in-kind (monthly Soles per capita) of other members of the household than the elderly individuals.
Household non-labour income	Total income(monthly Soles per capita) from rent or interest payments.
Household disposable income	Total disposable income (monthly Soles per capita) from labour activity, non-labour activity, net transfers and other social benefits.

Table A.4: Definition of household variables

Variable	Definition
Household composition	
Number of members in the household	It is the number of members residing in the household.
Total number of women in the household	It is the number of women members residing in the household.
Total number of men in the household	It is the number of men members residing in the household.
Children (0-5 years old)	It is the number of children from 0 to 5 years old residing in the household.
Children (6-11 years old)	It is the number of children from 6 to 11 years old residing in the household.
Children (12-17 years old)	It is the number of children from 12 to 17 years old residing in the household.
Young adults (18-29 years old)	It is the number of young adults from 18 to 29 years old residing in the household.
Middle-aged adults (30-59 years old)	It is the number of adults from 30 to 59 years old residing in the household.
Older adults (60+ years old)	It is the number of older adults over 60 years old residing in the household.
Household composition	
Girls (0-5 years old)	It is the number of girls from 0 to 5 years old residing in the household.
Girls (6-11 years old)	It is the number of girls from 6 to 11 years old residing in the household.
Girls (12-17 years old)	It is the number of girls from 12 to 17 years old residing in the household.
Young adult women (18-29 years old)	It is the number of young women from 18 to 29 years old residing in the household.
Middle-aged adult women (30-59 years old)	It is the number of adult women from 30 to 59 years old residing in the household.
Old women (60+ years old)	It is the number of old women over 60 years old residing in the household.
Boys (0-5 years old)	It is the number of boys from 0 to 5 years old residing in the household.
Boys (6-11 years old)	It is the number of boys from 6 to 11 years old residing in the household.
Boys (12-17 years old)	It is the number of boys from 12 to 17 years old residing in the household.
Young adult men (18-29 years old)	It is the number of young men from 18 to 29 years old residing in the household.
Middle-aged adult men (30-59 years old)	It is the number of adult men from 30 to 59 years old residing in the household.
Old men (60+ years old)	It is the number of old men over 60 years old residing in the household.

Table A.5: Descriptive statistics at the individual level

Variables	Total sample	Eligible	Ineligible	Difference	N
Covariates					
Woman	0.46	0.44	0.48	-0.04***	3,494
	(0.01)	(0.01)	(0.01)	(0.01)	
Age	74.18	74.26	74.03	0.23	3,494
	(0.07)	(0.09)	(0.12)	(0.17)	
Years of education	2.60	2.41	2.96	-0.55***	3,494
	(0.05)	(0.06)	(0.08)	(0.11)	
Household head	0.65	0.66	0.64	0.01	3,494
	(0.01)	(0.01)	(0.01)	(0.01)	
Transfer amount (Soles)					
Received from other hhs in the country	17.09	12.06	26.52	-14.47***	3,494
	(1.21)	(1.49)	(2.04)	(3.04)	
Received from other hhs abroad	1.01	0.81	1.38	-0.57	3,494
	(0.31)	(0.38)	(0.52)	(0.74)	
Total received from other hhss	18.10	12.87	27.90	-15.03***	3,494
	(1.27)	(1.57)	(2.15)	(3.35)	
Transfer indicator (1/0)					
Received from other hhs in the country	0.22	0.18	0.27	-0.09***	3,494
	(0.01)	(0.01)	(0.01)	(0.02)	
Received from other hhs abroad	0.01	0.01	0.01	-0.01	3,494
	(0.00)	(0.00)	(0.00)	(0.00)	
Total received from other hhs	0.22	0.19	0.28	-0.09***	3,494
	(0.01)	(0.01)	(0.01)	(0.02)	
Time transfers in weekly hours					
Working	17.99	17.29	19.31	-2.03**	3,491
	(0.36)	(0.44)	(0.61)	(0.79)	
Cooking activities	7.51	7.74	7.08	0.66**	3,466
	(0.16)	(0.19)	(0.26)	(0.29)	
Housekeeping	2.49	2.52	2.43	0.10	3,487
	(0.08)	(0.10)	(0.13)	(0.15)	
Care and making of clothes	1.10	1.12	1.06	0.06	3,480
	(0.05)	(0.06)	(0.08)	(0.11)	
Childcare	2.87	2.62	3.33	-0.71*	3,478
	(0.16)	(0.20)	(0.27)	(0.38)	
Home management and organisation	0.32	0.37	0.22	0.15**	3,489
	(0.03)	(0.04)	(0.05)	(0.06)	
Time with family and/or social activities	8.47	8.79	7.87	0.93**	3,476
	(0.20)	(0.24)	(0.33)	(0.45)	
Using of free time for leisure activities	11.56	11.84	11.04	0.81	3,475
	(0.27)	(0.34)	(0.46)	(0.68)	
Caring for gardens and animals	3.10	3.33	2.66	0.67**	3,484
	(0.13)	(0.16)	(0.22)	(0.29)	
Volunteering	0.28	0.32	0.22	0.10*	3,486
	(0.03)	(0.04)	(0.06)	(0.06)	

Table A.6: Descriptive statistics at the individual level

Variables	Total sample	Eligible	Ineligible	Difference	N
Time transfers in weekly hours (1/0)					
Working	0.56	0.55	0.59	-0.03*	3,491
	(0.01)	(0.01)	(0.01)	(0.02)	
Cooking activities	0.66	0.67	0.65	0.02	3,489
	(0.01)	(0.01)	(0.01)	(0.02)	
Housekeeping	0.76	0.78	0.73	0.05***	3,489
	(0.01)	(0.01)	(0.01)	(0.01)	
Care and making of clothes	0.47	0.47	0.46	0.01	3,489
	(0.01)	(0.01)	(0.01)	(0.02)	
Childcare	0.19	0.18	0.21	-0.03**	3,489
	(0.01)	(0.01)	(0.01)	(0.02)	
Home management and organisation	0.20	0.22	0.16	0.05***	3,489
	(0.01)	(0.01)	(0.01)	(0.02)	
Time with family and/or social activities	0.73	0.73	0.72	0.00	3,489
	(0.01)	(0.01)	(0.01)	(0.02)	
Using of free time for leisure activities	0.78	0.78	0.78	0.00	3,489
	(0.01)	(0.01)	(0.01)	(0.02)	
Caring for gardens and animals	0.55	0.57	0.51	0.06***	3,489
	(0.01)	(0.01)	(0.01)	(0.02)	
Volunteering	0.05	0.05	0.06	-0.01	3,489
	(0.00)	(0.00)	(0.01)	(0.01)	
Support from/to other households)					
Receive company	0.35	0.36	0.33	0.03*	3,494
	(0.01)	(0.01)	(0.01)	(0.02)	
Receive emotional support	0.73	0.74	0.73	0.01	3,494
	(0.01)	(0.01)	(0.01)	(0.02)	
Give company	0.37	0.37	0.36	0.01	3,494
	(0.01)	(0.01)	(0.01)	(0.02)	
Give emotional support	0.87	0.87	0.87	-0.00	3,494
	(0.01)	(0.01)	(0.01)	(0.01)	
Help provided in the household)					
Provide finance help to the household	0.76	0.83	0.62	0.21***	3,492
	(0.01)	(0.01)	(0.01)	(0.02)	
Provide help with household chores	0.78	0.80	0.74	0.06***	3,492
	(0.01)	(0.01)	(0.01)	(0.02)	
Provide help with childcare	0.22	0.21	0.23	-0.02	3,492
	(0.01)	(0.01)	(0.01)	(0.02)	
Provide advice	0.91	0.91	0.90	0.01	3,492
	(0.00)	(0.01)	(0.01)	(0.01)	

Table A.7: Descriptive statistics at the household level

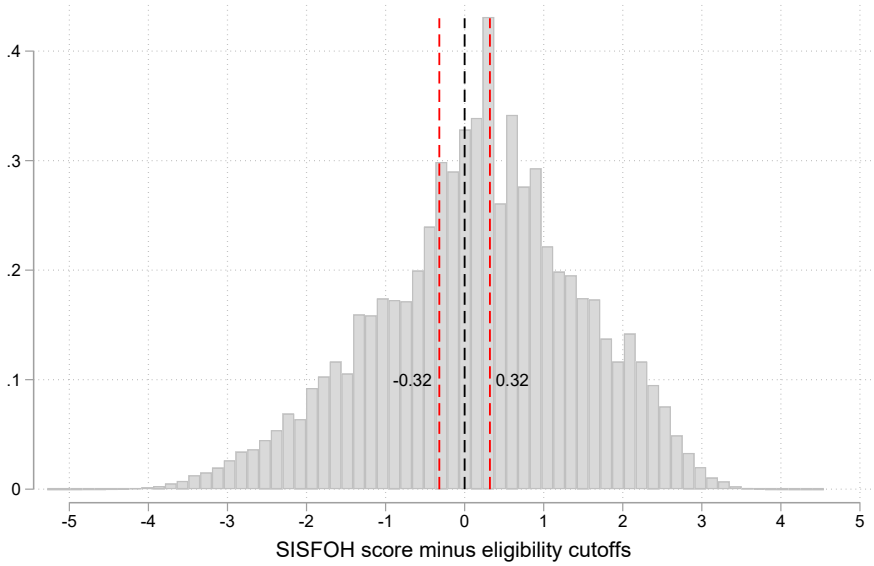
Variables	Total sample	Eligible	Ineligible	Difference	N
Transfers					
Transfers received from other households in the country	13.48	10.67	18.67	-8.00***	2,826
	(0.99)	(1.23)	(1.67)	(2.25)	
Transfers received from other households abroad	0.82	0.63	1.17	-0.54	2,826
	(0.26)	(0.32)	(0.44)	(0.62)	
Total transfers received from other households	14.30	11.30	19.84	-8.55***	2,826
	(1.07)	(1.32)	(1.80)	(2.49)	
Transfers given to other households	2.04	2.17	1.79	0.38	2,825
	(0.20)	(0.25)	(0.35)	(0.42)	
Public transfers from Pension 65	43.60	66.46	1.40	65.07***	2,826
	(0.88)	(0.82)	(1.11)	(1.30)	
Public transfers from Juntos	2.51	2.39	2.73	-0.34	2,826
	(0.15)	(0.18)	(0.25)	(0.30)	
Income					
Total labour income (cash) of the household	137.80	123.19	164.78	-41.59***	2,826
	(3.95)	(4.88)	(6.63)	(9.16)	
Labour income (cash) of the elderly	55.12	50.86	62.99	-12.13*	2,826
	(2.51)	(3.12)	(4.26)	(6.18)	
Labour income (cash) of other household members	82.68	72.33	101.79	-29.46***	2,826
	(3.20)	(3.96)	(5.39)	(6.72)	
Total labour income (in-kind) of the household	24.16	26.19	20.41	5.79	2,826
	(2.45)	(3.04)	(4.13)	(4.69)	
Labour income (in-kind) of the elderly	17.18	19.89	12.16	7.74*	2,826
	(2.36)	(2.93)	(3.98)	(4.52)	
Labour income (in-kind) of other household members	6.98	6.30	8.25	-1.94	2,826
	(0.64)	(0.79)	(1.08)	(1.27)	
Total labour labour income (cash and in-kind) of the household	161.97	149.39	185.19	-35.79***	2,826
	(4.74)	(5.87)	(7.98)	(10.32)	
Labour income (cash and in-kind) of the elderly	72.29	70.76	75.15	-4.39	2,826
	(3.63)	(4.51)	(6.13)	(8.01)	
Labour income (cash and in-kind) of other household members	89.67	78.63	110.04	-31.41***	2,826
	(3.34)	(4.13)	(5.62)	(6.94)	
Household non-labour income	11.83	9.38	16.35	-6.97***	2,826
	(1.04)	(1.29)	(1.75)	(2.23)	
Household disposable income	232.23	236.75	223.94	12.81	2,825
	(4.89)	(6.07)	(8.25)	(11.22)	
Household size					
Number of members	2.89	2.79	3.06	-0.27***	2,826
	(0.03)	(0.04)	(0.06)	(0.08)	
Number of women	1.46	1.40	1.56	-0.16***	2,826
	(0.02)	(0.03)	(0.04)	(0.05)	
Number of men	1.43	1.39	1.50	-0.11**	2,826
	(0.02)	(0.03)	(0.03)	(0.04)	

Table A.8: Descriptive statistics at the household level

Variables	Total sample	Eligible	Ineligible	Difference	N
Age groups					
Children (0-5 y/o)	0.13	0.12	0.14	-0.02	2,826
	(0.01)	(0.01)	(0.01)	(0.02)	
Children (6-11 y/o)	0.18	0.17	0.20	-0.03	2,826
	(0.01)	(0.01)	(0.02)	(0.02)	
Children (12-17 y/o)	0.19	0.18	0.21	-0.04*	2,826
	(0.01)	(0.01)	(0.02)	(0.02)	
Young adults (18-29 y/o)	0.26	0.23	0.32	-0.09***	2,826
	(0.01)	(0.01)	(0.02)	(0.03)	
Middle-aged adults (30-59 y/o)	0.55	0.52	0.62	-0.10***	2,826
	(0.02)	(0.02)	(0.03)	(0.03)	
Older adults (60+ y/o)	1.57	1.58	1.57	0.01	2,826
	(0.01)	(0.01)	(0.02)	(0.02)	
Women age groups					
Girls (0-5 y/o)	0.06	0.06	0.07	-0.01	2,826
	(0.00)	(0.01)	(0.01)	(0.01)	
Girls (6-11 y/o)	0.09	0.09	0.08	0.00	2,826
	(0.01)	(0.01)	(0.01)	(0.01)	
Girls (12-17 y/o)	0.08	0.08	0.09	-0.02	2,826
	(0.01)	(0.01)	(0.01)	(0.01)	
Young adult women (18-29 y/o)	0.13	0.12	0.16	-0.04**	2,826
	(0.01)	(0.01)	(0.01)	(0.02)	
Middle-aged adult women (30-59 y/o)	0.29	0.27	0.34	-0.07***	2,826
	(0.01)	(0.01)	(0.02)	(0.02)	
Old women (60+ y/o)	0.80	0.79	0.82	-0.04*	2,826
	(0.01)	(0.01)	(0.01)	(0.02)	
Men age groups					
Boys (0-5 y/o)	0.07	0.06	0.07	-0.01	2,826
	(0.01)	(0.01)	(0.01)	(0.01)	
Boys (6-11 y/o)	0.09	0.08	0.11	-0.03**	2,826
	(0.01)	(0.01)	(0.01)	(0.01)	
Boys (12-17 y/o)	0.10	0.10	0.12	-0.02	2,826
	(0.01)	(0.01)	(0.01)	(0.01)	
Young men (18-29 y/o)	0.13	0.11	0.17	-0.06***	2,826
	(0.01)	(0.01)	(0.01)	(0.02)	
Middle-aged adult men (30-59 y/o)	0.26	0.25	0.28	-0.03	2,826
	(0.01)	(0.01)	(0.02)	(0.02)	
Old men (60+ y/o)	0.77	0.79	0.75	0.04**	2,826
	(0.01)	(0.01)	(0.01)	(0.02)	

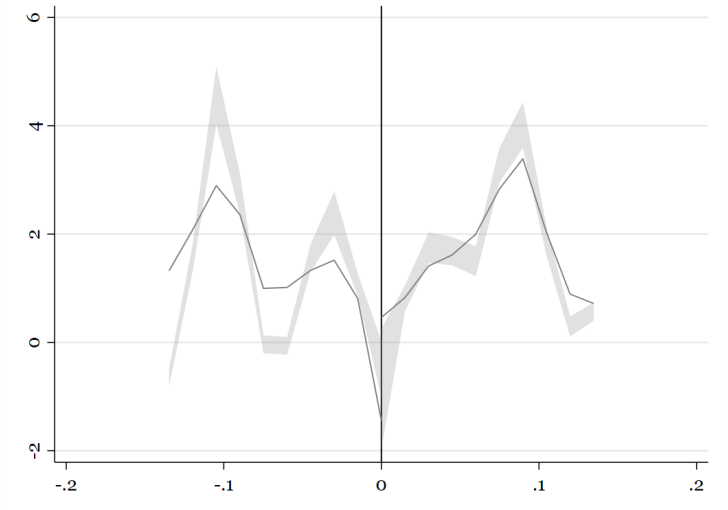
B Manipulation test and robustness checks

Figure A.1: Definition of the ESBAM bandwidth within SISFOH score



Notes: This figure plots the national distribution of the standardised running variable among households, that is the SISFOH score minus eligibility cutoffs. The vertical red lines indicate the maximum and minimum values (bandwidth) found for the standardised running variable in the ESBAM sample. The sampling framework correspond to observations located within this bandwidth. The data come from the SISFOH census of 2012/2013.

Figure A.2: Manipulation test based on density discontinuity



Note: Cattaneo et al. (2018) test. The figure shows a local estimation of the discontinuity of the SISFOH index density around the threshold, using a bandwidth size of 0.045 points of the running variable in the left side of the cutoff and in the right side of the cutoff. No significant discontinuity is found. The *p-value* is 0.549.

Table A.9: Effects of Pension 65 on covariates

	Effect	S.E.	P-value	Control	Obs.
Woman (1/0)	-0.056	0.086	0.516	0.467	1,340
Age	-0.825	0.840	0.326	74.126	1,393
Years of education	-0.053	0.521	0.918	3.074	3,489
Household head (1/0)	-0.084	0.082	0.306	0.695	1,314

Notes: Notes: The table reports the ITT estimates using the listed covariates as dependent variables (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual.

Table A.10: Effects of Pension 65 after including covariates

Variable	Effect	Std Err	P-value	Control	N
Transfer amount (Soles)					
Received from other hhs in the country	-17.74	12.30	0.15	-99.21	1,821
Received from other hhs abroad	-11.99**	5.91	0.04	-32.11	1,246
Total received from other hhss	-28.48*	15.34	0.06	-132.32	1,441
Transfer indicator (1/0)					
Received from other hhs in the country	-0.21**	0.08	0.01	-0.16	1,725
Received from other hhs abroad	-0.05*	0.03	0.05	-0.04	1,314
Total received from other hhs	-0.27***	0.09	0.00	-0.12	1,315
Time transfers in weekly hours					
Working	-0.17	4.78	0.97	78.11	1,321
Cooking activities	-0.80	1.51	0.59	25.02	1,222
Housekeeping	0.31	0.55	0.57	3.38	1,331
Care and making of clothes	-0.05	1.50	0.97	3.11	3,475
Childcare	3.93**	1.68	0.02	17.56	1,409
Home management and organisation	0.29	0.24	0.23	0.66	1,331
Time with family and/or social activities	-2.54	3.17	0.42	5.69	3,108
Using of free time for leisure activities	-5.02**	2.21	0.02	-3.85	3,033
Caring for gardens and animals	3.14**	1.27	0.01	10.61	764
Volunteering	-1.28**	0.51	0.01	0.18	434
Time transfers indicator (1/0)					
Working	0.07	0.12	0.59	2.54	689
Cooking activities	-0.05	0.21	0.80	1.24	3,271
Housekeeping	0.00	0.06	0.96	1.33	3,302
Care and making of clothes	0.06	0.12	0.63	1.27	740
Childcare	0.17**	0.07	0.02	1.15	1,861
Home management and organisation	0.16*	0.08	0.06	0.29	3,484
Time with family and/or social activities	-0.06	0.09	0.51	0.55	1,826
Using of free time for leisure activities	-0.13	0.12	0.27	0.99	634
Caring for gardens and animals	0.02	0.09	0.83	1.25	1,816
Volunteering	-0.15*	0.08	0.07	-0.09	646
Support from/ to other households(1/0)					
Receive company	-0.24*	0.13	0.06	-0.10	764
Receive emotional support	-0.17**	0.09	0.05	1.17	1,352
Give company	-0.33***	0.10	0.00	0.04	1,234
Give emotional support	-0.01	0.06	0.86	0.90	3,166
Help provided in the household (1/0)					
Provide finance help to the household	0.12*	0.06	0.05	1.40	3,414
Provide help with household chores	0.10	0.08	0.23	1.89	1,234
Provide help with childcare	0.12	0.13	0.34	1.04	3,487
Provide advice	0.11	0.08	0.15	1.25	1,351

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual. The monetary variables are expressed in monthly Soles of 2015.

Table A.11: Effects of Pension 65 under alternative cutoffs

Variables	-0.04		-0.02		0.00		0.02		0.04	
	Effect	S.E	Effect	S.E	Effect	S.E	Effect	S.E	Effect	S.E
Monetary transfers (Soles)										
Received from other hhs in the country	1.22	19.29	-19.75	19.33	-18.34	12.41	-21.86*	12.66	22.68*	13.28
Received from other hhs abroad	9.78	6.81	-3.56	5.99	-12.32**	5.94	-4.87*	2.68	1.52	1.28
Total received from other hhss	21.55	38.33	-19.40	24.62	-29.79*	15.55	-28.38**	14.10	23.49**	11.86
Transfer indicator (1/0)										
Received from other hhs in the country	0.10	0.08	-0.06	0.08	-0.21**	0.08	-0.27**	0.12	0.29**	0.14
Received from other hhs abroad	0.03	0.02	0.02	0.04	-0.05**	0.03	-0.01	0.02	0.01	0.01
Total received from other hhs	0.11	0.08	-0.05	0.09	-0.29***	0.09	-0.27**	0.12	0.30***	0.11
Time transfers (weekly hours)										
Working	7.45**	3.79	0.69	4.45	0.37	5.04	-10.16*	5.78	9.37	6.80
Cooking activities	0.46	1.27	0.58	1.27	-0.23	1.39	2.05*	1.24	-0.09	1.19
Housekeeping	-1.03	0.82	0.75	0.67	0.34	0.58	0.42	0.66	-0.36	0.92
Care and making of clothes	0.53	0.33	0.31	0.34	-0.13	0.40	-0.31	0.29	0.37	0.35
Childcare	1.62	1.65	1.08	1.84	4.15**	1.72	3.75	2.56	-3.86*	2.03
Home management and organisation	-0.09	0.07	0.19	0.13	0.30	0.24	0.27	0.20	-0.21	0.41
Time with family and/or social activities	-0.82	1.90	4.89**	2.36	-1.68	4.06	-4.44*	2.55	-1.68	1.99
Using of free time for leisure activities	1.07	9.04	1.43	3.69	-4.34**	2.12	-4.05	2.52	-2.85	2.78
Caring for gardens and animals	-3.61***	1.34	1.64	4.32	3.11**	1.28	6.14***	1.42	-5.18***	1.85
Volunteering	-0.03	0.23	0.57**	0.26	-1.40**	0.57	0.27	0.30	3.20	2.26
Time transfer indicator (1/0)										
Working	0.19**	0.09	0.06	0.10	0.05	0.12	-0.26**	0.11	0.06	0.13
Cooking activities	0.00	0.09	0.04	0.10	0.02	0.08	0.09	0.10	0.19**	0.09
Housekeeping	0.08	0.07	0.17**	0.08	0.01	0.07	-0.06	0.07	-0.02	0.06
Care and making of clothes	0.12	0.10	0.30***	0.11	0.02	0.10	-0.41***	0.14	0.37**	0.16
Childcare	0.09	0.06	0.08	0.13	0.18**	0.07	0.01	0.11	-0.15	0.11
Home management and organisation	0.01	0.06	0.21***	0.07	0.15**	0.07	-0.15	0.15	-0.02	0.08
Time with family and/or social activities	-0.06	0.10	0.27**	0.11	-0.04	0.10	-0.22*	0.13	0.03	0.09
Using of free time for leisure activities	0.10	0.11	0.33**	0.14	-0.15	0.12	-0.24	0.23	0.25*	0.14
Caring for gardens and animals	-0.14*	0.07	0.30**	0.14	0.08	0.11	0.12	0.11	-0.10	0.10
Volunteering	0.04	0.04	0.09*	0.05	-0.14*	0.08	-0.04	0.04	0.14	0.10
Support from/to other hhs										
Receive company	0.11	0.08	0.13	0.10	-0.27**	0.14	-0.16**	0.07	0.15	0.11
Receive emotional support	-0.04	0.07	-0.01	0.09	-0.18**	0.09	-0.09	0.07	0.22**	0.10
Give company	0.10	0.09	-0.03	0.09	-0.40***	0.13	-0.21**	0.10	0.40***	0.12
Give emotional support	-0.05	0.07	0.09	0.07	-0.01	0.08	-0.02	0.07	-0.03	0.05
Help provided in the household (1/0)										
Provide finance help to the household	-0.07	0.08	0.08	0.07	0.12*	0.06	0.09	0.08	-0.16*	0.09
Provide help with household chores	0.01	0.06	0.04	0.11	0.08	0.08	0.05	0.09	-0.01	0.09
Provide help with childcare	0.10*	0.06	0.15**	0.06	0.16**	0.08	-0.11	0.13	-0.11	0.12
Provide advice	-0.02	0.04	-0.08	0.08	0.10	0.07	0.06	0.06	-0.01	0.05

Notes: The table reports the ITT estimates for alternative cutoffs using equation 1. The column in the middle report the ITT effects for the true cutoff. The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual. The monetary variables are expressed in monthly Soles of 2015.

Table A.12: Effects of Pension 65 to observations near the cut-off (donut-hole approach)

Variables	0.001 (5 obs)		0.004 (11 obs)		0.007 (33 obs)		0.01 (37 obs)	
	Effect	S.E	Effect	S.E	Effect	S.E	Effect	S.E
Transfer amount (Soles)								
Received from other hhs in the country	-17.29	12.53	-17.17	12.71	-22.00	17.06	-17.40	16.73
Received from other hhs abroad	-12.75**	6.04	-13.43**	6.24	-19.50*	10.75	-24.20*	13.43
Total received from other hhss	-29.32*	15.99	-28.13*	16.12	-48.02*	26.04	-49.02*	26.74
Transfer indicator (1/0)								
Received from other hhs in the country	-0.20**	0.08	-0.21**	0.08	-0.20**	0.09	-0.19**	0.09
Received from other hhs abroad	-0.05*	0.03	-0.06**	0.03	-0.09*	0.05	-0.10	0.06
Total received from other hhs	-0.29***	0.10	-0.23***	0.09	-0.22**	0.09	-0.22**	0.09
Time transfers in weekly hours								
Working	-1.72	4.45	-2.08	4.55	-8.25**	3.72	-2.89	4.55
Cooking activities	0.66	1.12	1.09	1.34	1.03	1.44	0.79	1.23
Housekeeping	0.76	0.63	0.93	0.58	0.37	0.66	0.34	0.69
Care and making of clothes	-0.14	0.44	-0.29	0.44	-0.45	0.54	-0.42	0.57
Childcare	4.31**	1.80	3.77**	1.68	4.76**	2.12	4.79**	2.21
Home management and organisation	0.33	0.25	0.87	0.93	0.33	0.29	0.33	0.30
Time with family and/or social activities	-2.16	3.24	-3.06	2.01	0.05	2.39	-0.13	2.45
Using of free time for leisure activities	-7.20***	2.57	-7.55***	2.79	-7.81**	3.05	-7.99**	3.39
Caring for gardens and animals	2.97**	1.38	4.97**	1.93	5.27***	1.94	2.86*	1.67
Volunteering	-1.64**	0.71	-0.05	0.28	0.21	0.36	0.23	0.37
Time variables indicators (1/0)								
Working	0.02	0.12	0.06	0.15	-0.01	0.13	-0.02	0.13
Cooking activities	0.02	0.08	0.04	0.08	-0.03	0.09	-0.01	0.09
Housekeeping	-0.00	0.06	-0.01	0.06	-0.28**	0.13	-0.18	0.12
Care and making of clothes	-0.09	0.08	-0.10	0.08	-0.04	0.10	0.02	0.11
Childcare	0.18**	0.07	0.17**	0.08	0.18**	0.07	0.21**	0.08
Home management and organisation	0.19**	0.10	0.22**	0.10	0.13	0.09	0.12	0.10
Time with family and/or social activities	0.03	0.11	0.15	0.14	0.12	0.17	0.19	0.20
Using of free time for leisure activities	-0.31***	0.12	-0.16	0.41	-0.51***	0.17	-0.56***	0.18
Caring for gardens and animals	0.08	0.11	0.14	0.11	0.21	0.14	0.22	0.15
Volunteering	-0.23***	0.08	-0.24***	0.08	-0.04	0.06	-0.07	0.07
Support from/to other households								
Receive company	-0.21**	0.10	-0.19	0.14	-0.10	0.08	-0.09	0.08
Receive emotional support	-0.15*	0.09	-0.15*	0.09	-0.08	0.08	-0.08	0.08
Give company	-0.38***	0.13	-0.32***	0.10	-0.16**	0.08	-0.17**	0.08
Give emotional support	-0.01	0.05	-0.02	0.09	-0.02	0.05	-0.01	0.06
Help provided in the household								
Provide finance help to the household	0.17**	0.08	0.26***	0.10	0.14	0.10	0.17	0.11
Provide help with household chores	0.08	0.08	0.08	0.08	0.02	0.08	0.05	0.09
Provide help with childcare	0.13	0.09	0.14*	0.09	0.17*	0.09	0.18**	0.09
Provide advice	0.13*	0.07	0.11	0.07	0.06	0.04	0.05	0.05

Notes: The table reports the ITT estimates for various outcomes (Equation 1) after the exclusion of observations around the cut-off. The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual. The monetary variables are expressed in per capita monthly Soles of 2015.

C Effects of Pension 65 by gender

Table A.13: Effects of Pension 65 on individual transfers by gender (complete list)

Variable	Women					Men				
	Effect	Std Err	P-val	Control	N	Effect	Std Err	P-val	Control	N
Monetary transfers (Soles)										
Received from other hhs in the country	-5.08	16.53	0.76	21.70	1,598	-30.15	20.04	0.13	38.82	944
Received from other hhs abroad	-5.72	4.06	0.16	3.73	656	-17.46*	9.93	0.08	10.46	717
Total received from other hhs	-12.41	15.99	0.44	29.23	1,430	-50.58*	25.84	0.05	51.95	734
Transfer indicator (1/0)										
Received from other hhs in the country	-0.18*	0.11	0.09	0.36	881	-0.24**	0.10	0.01	0.36	944
Received from other hhs abroad	-0.05	0.03	0.11	0.03	635	-0.06*	0.03	0.07	0.04	732
Total received from other hhs	-0.25**	0.12	0.03	0.42	647	-0.23**	0.10	0.02	0.36	944
Time transfers (weekly hours)										
Working	5.13	5.41	0.34	12.84	632	-6.75	5.52	0.22	27.70	1,656
Cooking activities	-0.74	3.69	0.84	10.94	1,577	-0.44	1.06	0.68	3.47	1,707
Housekeeping	-0.13	0.88	0.88	3.12	1,426	0.78	0.66	0.24	1.24	704
Care and making of clothes	-0.51	0.63	0.42	1.74	302	-0.09	0.42	0.82	0.26	669
Childcare	2.33	2.44	0.34	2.99	819	5.98***	2.17	0.01	1.02	713
Home management and organisation	0.64	1.10	0.56	0.01	1,580	0.46	0.30	0.13	0.06	732
Time with family and/or social activities	4.02	3.55	0.26	6.35	328	-9.65*	5.12	0.06	13.69	339
Using of free time for leisure activities	1.18	3.65	0.75	8.44	305	-7.36	4.56	0.11	11.40	780
Caring for gardens and animals	1.27	0.91	0.16	1.08	566	2.80	1.91	0.14	2.45	776
Voluntary work for organisations	-0.75	0.79	0.34	0.06	294	-0.42	0.32	0.19	0.50	1,716
Time transfer indicator (1/0)										
Working	0.08	0.12	0.53	0.45	630	-0.02	0.12	0.85	0.72	721
Cooking activities	0.01	0.07	0.84	0.86	1,439	0.07	0.14	0.64	0.49	710
Housekeeping	0.04	0.07	0.51	0.83	1,595	-0.05	0.09	0.59	0.76	1,737
Care and making of clothes	0.02	0.17	0.89	0.53	809	0.05	0.19	0.78	0.21	360
Childcare	-0.00	0.16	1.00	0.25	1,595	0.29***	0.09	0.00	0.10	931
Home management and organisation	0.14*	0.08	0.09	0.11	1,595	0.15*	0.09	0.10	0.18	1,848
Time with family and/or social activities	0.28*	0.16	0.08	0.62	313	-0.15	0.10	0.16	0.72	1,003
Using of free time for leisure activities	0.11	0.18	0.54	0.75	225	-0.43***	0.15	0.00	0.94	347
Caring for gardens and animals	-0.03	0.14	0.83	0.48	655	0.15	0.12	0.21	0.39	784
Voluntary work for organisations	0.00	0.12	0.98	0.03	1,595	-0.16**	0.08	0.04	0.15	715
Support from/to other hhs (1/0)										
Receive company	-0.21*	0.12	0.07	0.39	1,361	-0.24	0.17	0.17	0.38	360
Receive emotional support	-0.14	0.11	0.20	0.79	802	-0.17	0.11	0.12	0.77	761
Give company	-0.33***	0.12	0.01	0.48	667	-0.16	0.43	0.72	0.35	1,772
Give emotional support	0.07	0.08	0.33	0.88	882	-0.09	0.09	0.32	0.84	932
Help provided in the household (1/0)										
Provide finance help to the household	0.09	0.09	0.32	0.59	1,375	0.14*	0.08	0.06	0.74	1,890
Provide help with household chores	-0.03	0.06	0.58	0.87	1,451	0.19	0.14	0.20	0.66	719
Provide help with childcare	-0.05	0.10	0.65	0.31	872	0.33***	0.09	0.00	0.14	778
Provide advice	0.11	0.13	0.37	0.84	656	0.06	0.05	0.27	0.90	1,654

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the individual. The monetary variables are expressed in per capita monthly Soles of 2015.

D Effects of Pension 65 at the household level

Table A.14: Effects of Pension 65 on household composition

Variable	Effect	Std Err	P-value	Control	N
Size and composition					
Number of members	0.93**	0.39	0.02	2.84	1,519
Number of women	0.39*	0.24	0.10	1.48	2,670
Number of men	0.93***	0.32	0.00	1.29	391
Age groups					
Children (0-5 y/o)	0.39***	0.14	0.01	0.04	367
Children (6-11 y/o)	0.16	0.11	0.16	0.19	2,586
Children (12-17 y/o)	0.10	0.08	0.24	0.20	2,743
Young adults (18-29 y/o)	0.21**	0.10	0.04	0.25	2,822
Middle-aged adults (30-59 y/o)	0.26*	0.14	0.07	0.57	2,822
Older adults (60+ y/o)	0.20	0.12	0.11	1.47	1,037
Women age groups					
Girls (0-5 y/o)	0.16**	0.07	0.04	0.04	996
Girls (6-11 y/o)	0.10	0.12	0.42	0.05	2,822
Girls (12-17 y/o)	-0.10	0.08	0.19	0.14	564
Young adult women (18-29 y/o)	0.04	0.09	0.66	0.18	1,526
Middle-aged adult women (30-59 y/o)	0.04	0.12	0.75	0.35	1,168
Old women (60+ y/o)	0.05	0.07	0.46	0.81	2,583
Men age groups					
Boys (0-5 y/o)	0.07	0.05	0.17	0.03	1,074
Boys (6-11 y/o)	-0.00	0.06	1.00	0.13	2,822
Boys (12-17 y/o)	0.13	0.08	0.10	0.08	1,093
Young men (18-29 y/o)	0.08	0.07	0.26	0.09	1,477
Middle-aged adult men (30-59 y/o)	0.16	0.11	0.15	0.24	2,822
Old men (60+ y/o)	0.27**	0.13	0.04	0.68	518

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the household.

Table A.15: Effects of Pension 65 on household disposable income

Variable	Effect	Std Err	P-value	Control	N
a. Labour income (cash)	-22.11	49.58	0.66	170.71	1,495
b. Labour income (in-kind)	7.70	6.14	0.21	2.85	528
c. Non-labour income	-50.47	30.72	0.10	61.51	386
d. Transfers received from other households	-21.52*	12.62	0.09	31.65	1,162
e. Transfers given to other households	4.99	3.56	0.16	0.64	1,132
f. Public transfers from Pension 65	46.53***	7.09	0.00	1.30	2,790
g. Public transfers from Juntos	1.24	1.34	0.36	2.71	2,420
Household disposable income (a+b+c+d-e+f+g)	-58.37	81.01	0.47	286.43	1,033

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the household. The monetary variables are expressed in per capita monthly Soles of 2015.

Table A.16: Effects of Pension 65 on household income and transfers

Variable	Effect	Std Err	P-value	Control	N
Transfers					
Transfers received from other households in the country	-12.31	9.26	0.18	24.89	1,409
Transfers received from other households abroad	-8.54*	4.83	0.08	5.95	1,162
Total transfers received from other households	-21.52*	12.62	0.09	31.65	1,162
Transfers given to other households	4.99	3.56	0.16	0.64	1,132
Income					
Labour income (cash) of the elderly	-86.28***	31.56	0.01	102.44	996
Labour income (in-kind) of the elderly	3.66	4.41	0.41	1.44	391
Labour income (cash and in-kind) of the elderly	-68.16**	27.66	0.01	94.66	1,166
Labour income (cash) of other household members	26.97	45.90	0.56	86.98	1,493
Labour income (in-kind) of other household members	1.54	3.99	0.70	-1.29	1,199
Labour income (cash and in-kind) of other household members	31.46	45.67	0.49	85.58	1,509
Total labour income (cash) of the household	-22.11	49.58	0.66	170.71	1,495
Total labour income (in-kind) of the household	7.70	6.14	0.21	2.85	528
Total labour labour income (cash and in-kind) of the household	-23.59	51.52	0.65	175.77	1,498

Notes: The table reports the ITT estimates for various outcomes (Equation 1). The models use triangular kernel, local polynomial and the optimal bandwidth for point estimation as suggested by Calonico et al. (2015). The column *Effect* contains the ITT effects of the program, whereas the column *Control* reports the constant of the ITT regression, showing the variable mean for ineligible individuals at the cut-off. The standard errors (and p-values) correspond to robust biased-corrected estimations and are clustered by the Primary Sampling Unit (PSU) of the sampling framing. $*p < 0.10$, $**p < 0.05$, and $***p < 0.01$ indicate statistically significance levels according to clustered standard errors. The unit of analysis is the household. The monetary variables are expressed in per capita monthly Soles of 2015.

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