The effects of social pensions on monetary and time transfers among the poor: Evidence from Peru*

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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 extreme poor and who do not have other pensions. We use survey data matched to program's administrative registers and exploit the discontinuity around the welfare index that determines eligibility in order 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 a week. The result is consistent with the increase in the number of young children in the household and with the reduction of time spent on leisure activities for men.

Key words: social pensions, family transfers, poverty, ageing

JEL-classification: H55, I38, J14, J26

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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 poverty in old-age and complement standard social security systems unprepared to cope with large informal labour markets. These programs provide transfers, generally small compared to national income averages, to targeted poor elderly individuals, yet they can be relatively important for the budgets of poor individuals. This policy can help to protect the vulnerable older adults, and simultaneously have unintended effects for the recipients and/or other members in the household. One of the programmes most studied early in the literature is the 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 detect the first impacts of the pension transfer on the recipients and on their families (improvements on 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 to study the effects of other social pension programs on alternative 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 treat 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 transfers and time transfers within the household and with other households. We exploit rich survey data matched to administrative information of the welfare index used to verify eligibility to the program, to identify the causal effects of the program.

Nikolov and Bonci (2020) provide an interesting review about how social pensions displace

[1]For example, de Carvalho-Filho (2008, 2012) note a large decrease in recipient's labour supply in Brazil. For Mexico, it has been found increases in school enrolment of co-residing children (Gutierrez et al. 2017), a reduction of 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 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).

private transfers, which could diminish the power of the pension to protect against the poverty risk. However, it is also possible that new family members may join the recipient's household attracted by the new source of income, and in doing so bring in their own sources of income –thereby improving the household's income pool– which can improve insurance against economic risks. In this case, the economic situation of the household could improve, even in the scenario of diminishing private transfers. As the final effect should also take into account the increase in the size of the household, this is ultimately a 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 the households. Juarez (2009) finds a substantial effect of 86% of a generous transfer from the *Nutrition Transfer for Senior Adults* program implemented among 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 the household savings rates reduce in households with young members. For the South Africa's *Old Age Pension Program*, Jensen (2003) finds a crowding-out effect of 25%-30% in the 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) program on displacing private transfers, but they find that the program increases food income and expenses and reduces labour supply by 3%, especially in the agricultural sector. Contrary to these studies, Hernani-Limarino and Mena (2015), Behrman et al. (2011) and Chen and Tan (2018), Nikolov and Adelman (2019) find little evidence of a crowding-out of private transfers in Bolivia, Chile, Singapore, and China, respectively.

Not many studies have investigated the effects of social pension programs on transfers of time. One of the few is Li et al. (2018) which finds that the China's New Rural Pension Program (NRPP) increased the time for grandchildren care. In the case of the South African social pension programme, 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 analysing 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 only significant among men and not among women. Regarding the effects on time allocations, no statistically significant effects are found on working hours, but we do find a substantial increase in the hours dedicated to childcare. However, this effect is concentrated among men, who show a significant increase from 1 to 6 hours a week in the time spent on childcare at the

cutoff. Eligible men also reduce their hours spent on leisure activities as well as the likelihood of spending time in volunteering and participating in social activities. Conversely, women increase their likelihood of participating in social activities and in home management.

We also detect program effects on the size and composition of the household. The household size of eligible individuals increase in 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 year 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, but on the other hand the program reduces family transfers and increases the size of the household. In such a case, the effectiveness of the program may be compromised, as the pension amount is not fully added to the general household budget. This could limit the effectiveness of the pension transfers in improving the economic conditions of eligible people, but will depend on the extent of potential new sources of income brought in by the new household members. Just by looking at the statistically significant results of our non-parametric regressions, we find no evidence that the program has lost 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– has not increased or decreased due to the program.

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

2 The Pension 65 program

The program *Pension 65* gives 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 extreme 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 the presidency of Ollanta Humala. The program has 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, whilst the average in Latin America was 0.39% (Arenas de Mesa 2019). In terms of generosity, the program is among the ones offering the lowest replacement rates in Latin America. On average, non-contributory pensions represent 17.8% of the average salary in this 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, the transfer was equivalent to 87% and 71% of the values of the extreme

poverty lines in 2015 (the year when our data was collected) for the rural and urban areas, respectively. The transfer amount has never increased since the introduction of the program in 2011, which implies a loss in purchase power of about 52%.[2] The Ministry of Development and Social Inclusion (MIDIS) administrates the program, and the Ministry of Economy and Finance (MEF) allocates fiscal resources from general revenues to finance the program.

The roll-out of *Pension 65* started in October 2011 by assessing the enrolment of individuals residing in the poorest districts located in six prioritised departments (Apurimac, Ayacucho, Huancavelica, Puno, Ica and Huanuco). The program was quickly expanded, and by May 2012, the program was present in all the departments that were part of a previous small scale pilot program of PNC, that is 9 additional departments.[3]

To be eligible, the individuals must live in a household classified as extreme poor by the national targeting system SISFOH. The goal of this system is providing guidance about which populations –according to their levels of structural poverty– could be targeted by specific social programs. SISFOH is fed with socioeconomic information of the household and its members collected on-site by government officers. A series of specific censuses have been implemented to collect and update the socioeconomic information. For this study, the large roll-out census of 2012 was utilised to design the sample framework. The information collected for SISFOH include the access to (and quality of) public services (water, electricity, sewage), type of fuel used in the household, type and quality of the materials used in the construction of the dwelling, home overcrowding, highest educational attainment of the members and the head of household, access to health insurance, etc. This information is used to compute a composite welfare index according to the official methodology involving different weights and variables (see Valderrama and Pichihua 2011). Then, the index is compared to region-specific cutoffs and identifies groups of households classifies as extreme poor, non-extreme poor, and non-poor. This classification is valid for 3 and 4 years in urban and rural areas, respectively. It is worth mentioning that the individuals know the group their household belong to, but they do not know the value of their welfare index or how to compute the index. Moreover, the values of the regional cutoffs are unknown to the public.

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) in order to study the causal effects of *Pension 65*. The baseline survey was carried out between October and November of

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

[3]The *Bono Gratitud* pilot program existed from October 2010 to August 2011 reaching a total 21,783 recipients in 14 departments. Individuals classified as extreme poor and older than 75 were eligible for this pilot program that provided a transfer was 100 Soles.

2012, and the follow-up survey was collected between July and September 2015. The survey was collected in 12 (out of 24) departments that had completed the roll-out of the SISFOH collection data, so that the sample framework design only considered these departments. The sample framework was intentionally designed to implement a regression discontinuity design (RDD) by exploiting the follow-up survey. This framework is composed of households where at least one member is aged between 65 and 80 and have 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 criteria of the welfare index used by the program: extreme poor and non-extreme poor, leaving aside non-poor personas.

The sampling procedure to select the households for ESBAM is probabilistic, independent in each department, and stratified by rural and urban areas. The primary sampling units (PSU) are defined as the census units in urban areas (blocks) and villages (*centro poblado*) in rural areas. In a first step, there is selection of PSU within each department and area according to a selection probability that is proportional to the total number of households. Then, in a second step there is a systematic random sampling of households.[4]

The Figure A.1 in the Appendix gives a better idea about how close to the cutoff the individuals of our sample are. In comparison to the national distribution of the score SISFOH, the ESBAM sample is located in the neighbouring of the eligibility threshold. Households located in the right side of the threshold are non-extreme poor and thus are just ineligible for the program, and households located in the left side of the threshold are extreme poor and just eligible for the program. Our strategy exploits the discontinuity generated in the probability of being eligible to the program generated by the value of the SISFOH score. Differences between eligible and ineligible individuals observed at the eligibility cutoff are considered to be potential effects of the program, that the intention-to-treat (ITT) effects. The subsection 3 discusses with more detail the identification strategy.

We use the ESBAM follow-up survey of 2015 to run our RDD. The final sample is composed of 3,494 individuals, of which 2,278 are eligible and 1,216 are ineligible. There were 3,885 individuals in the baseline of 2012 with complete information for their SISFOH score and consistent information about their status in the program.[5] From the baseline sample, 373 individuals were not found in the follow-up survey, and 18 could not be found in the modules of family financial transfers. From 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 statistical significant relationship between the attrition condition and the SISFOH score and the eligibility status.[6]

The ESBAM survey includes several demographic variables capturing individual and house-

[4]For more methodological details consult MIDIS (2013).

[5]For example, recipients of the program at 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 about the sample of the baseline survey.

[6]Correlations between attrition condition and the SISFOH score and eligibility status with the baseline sample produce p-values equal to 0.327 and 0.337, respectively.

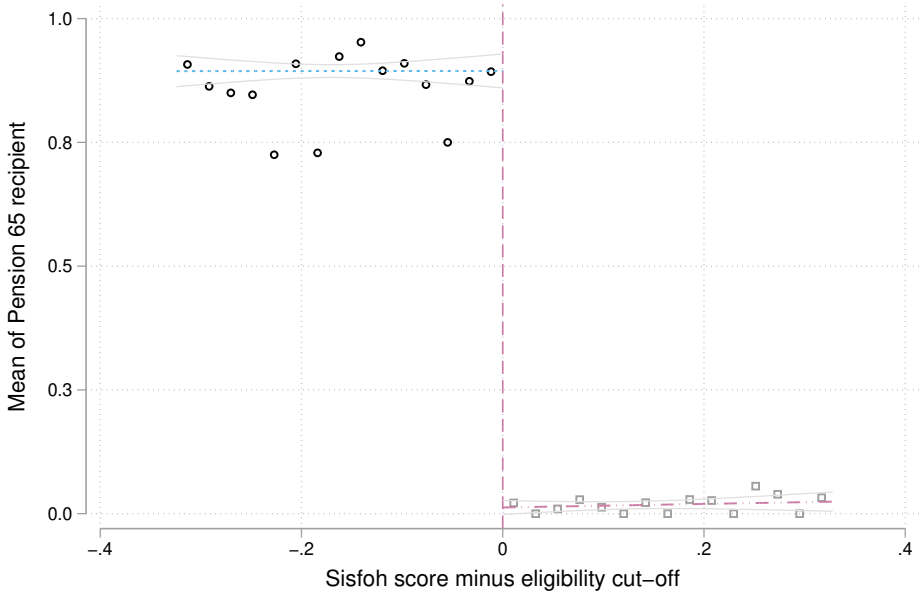
hold characteristics, health, well-being, income, transfers, consumption, etc. the SISFOH score information comes from administrative registers. The information is collected via face-to-face interviews. We focus on economic variables like private transfers, income and consumption, as well as on variables capturing time transfers like time allocated for working, companion, child care, etc. We also exploit a module on time use for 10 distinctive activities. The detailed definition of the variables used in the analysis are reported in Tables A.2 and A.4 in the Appendix, while the Tables A.6 and A.8 show the descriptive statistics of these variables.

3.2 Empirical strategy

As we described earlier, the eligibility of an individuals to the program is defined by a minimum age of 65, not receiving any other pension, and living in a household officially classified as extreme poor by the SISFOH system. This classification is done by comparing the SISFOH score of the individual's household with regional cutoffs, such as those with a score below the cutoff are extreme poor and eligible to the program, whilst those with a score above the cutoff are non-extreme poor and are ineligible to the program. Variation of the index around threshold provides a natural experiment that randomly assigns program eligibility, leading to observing people who people is just eligible or narrowly ineligible. This setting allow us to identify the expected effects of the program

The figure 1 plots the SISFOH score centred at zero (i.e. the index minus its eligibility threshold), so that negative values indicate the individual lives in a extremely poverty household and is eligible to the program. Positive values of the SISFOH score indicate that the individual live in a non-extreme poor household and is not eligible to 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 being eligible by crossing the threshold significantly increases the probability to receive a pension transfer (in 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 (not eligible). In practice, ITT estimates are typically formed by parametric fitting functions in the region around the threshold. Assuming linearity, the following econometric specification can be used to find the expected effects of the program:

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

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 an outcome variable in particular, z_i is the SISFOH score centred at the regional cutoff of eligibility, and E_i is an indicator variable for eligibility to the program (E_i=1 if $z_i < 0$ and E_i=1 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.[7]

This strategy allows us to estimate the intention-to-treat (ITT) effects, that is we analyse the overall potential effects of the program on the population based on their eligibility status, and not only on the persons that effectively receive the treatment. We argue that the discontinuity at the cutoff observed in Figure 1 is substantially large and hence allow us to focus on the estimation of ITT effects.

[7]Following the recommendation by Abadie et al. (2020) to deal with design uncertainty, we use clusters at the PSU level of our data to adjust the standard errors of the estimates.

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

3.3 RD validity

The potential manipulation of the running variable (The SISFOH score in our analysis) by the recipients in order to become eligible to the program is a problem that can challenge the identification in RD designs. If this happens, the running variable will not be random around the eligibility threshold, rendering invalid the identification of effects in the RDD (Lee and Lemieux, 2010). However, we consider this is unlikely for the following reasons. First, individuals are unlikely to know the precise algorithm behind the computation of the SISFOH score. While the methodology is publicly accessible, it is complex to fully understand and replicate it. Second, the 15 different regional eligibility cutoffs (a mix of region, geographical area, and rural and urban areas) are unknown to the public, and therefore the individuals cannot be certain about the results of manipulating (if they do) their scores. Third, most of the variables used in the index construction are filled-in and verified by government officials and therefore difficult to manipulate (e.g. roof and floor material of the house). Fourth, while there are other social programs in Peru utilising the SISFOH score, so that a household could potentially learn how to advantageously affect its score, no other major social program in Peru uses the extreme poverty SISFOH eligibility criteria. Other programs use the poverty eligibility SISFOH criteria, that is they distinguish between the groups of poor (including extreme and non-extreme poor) and non-poor households. As our sample is composed of households who are extreme poor or non-extreme poor, we can rule out the possibility that our households have learned from other programs to manipulate their score and be classified as extreme poor. Therefore, manipulation would be unlikely.

In any case, to address the manipulation concern we implement some tests that re-assures us about the validity of our RDD. We perform the Cattaneo et al. (2018) test to assess the continuity of our running variable around the eligibility cutoff. The Figure A.2 in the Appendix does not reveal discontinuity around the eligibility cutoff; we cannot reject the null hypothesis of continuity of the density of the running variable around the cutoff ($p\text{-}value = 0.55$). with the test of Bugni and Canay (2021), we cannot reject this hypothesis either ($p\text{-}value = 0.76$). Another manipulation test consists in assessing whether some predetermined characteristics of the individuals change discontinuously at the threshold. The idea is examining whether eligible people are similar to ineligible people in terms of observable characteristics near the cutoff (Cattaneo et al. 2020). The argument is that we should not find systematic differences between individu-

als with similar values for this variable if there is not manipulation n the running variable. The Table A.9 in the Appendix reports that there are not significant effects of the program on the covariates gender, age, years of education, and being the head of the household. Therefore, there are not discontinuities for these covariates.

In Section 5 we perform additional robustness checks to assess the stability and sensitivity of our estimated effects. All these tests assure us that we are indeed identifying a causal effect of the program.

4 Results

4.1 Main results

Table 1 reports the overall ITT effects of the program on the amount of monetary transfers from other households received by the individual and its probability. Being eligible to the program 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 differentiated by domestic or foreign origin, family transfers are statistically significant only for those from abroad. We also estimate the effect on the the probability of receiving transfers (see Table 1's bottom panel). 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 or foreign transfers. Overall, we do find a crowding-out effect of the program on reducing monetary transfers by 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 control applicants 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 for which individuals are asked to 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, so that we can add this activity to our list 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 program on working hours or on the probability of working evaluated at the eligibility cutoff. This result is line with Bando et al. (2020), who also employ an RDD, and find no impact of *Pension 65* on working hours. This result may contrast with evidence gathered in other studies evaluating the impact of social pension programs, which generally find a reduction in the extensive and intensive margin of labour supply. However, differences could arise from different methodological approaches.[8]

[8]For instance, if we run a simple linear regression as the one in equation 1 in all the bandwidth (so, no kernel weights nor optimal bandwidths), we obtain an average treatment effect of -6.2 working hours (*p-value*=0.011) for the eligible individuals and a constant of 21.5 hours for the ineligibles, implying a drop of 29% in worked hours. However, as mentioned before, this result mat be biased due to observations further away of the cutoff.

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 control applicants 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.

One result that stands out is the increase in time spent on childcare. There is an increase of 4.15 hours per week compared to a baseline of 1.8 hours, i.e. the effort spent on childcare increases by 230%. The likelihood of spending hours on childcare also increases. The effect of the pension is a 18 p.p. increase in the probability of spending hours 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 on the number of hours used for 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 question in the survey, this activity includes tasks such as bookkeeping, distributing the budget, collecting social assistance and picking up children from the nursery. The pension also increases the number of hours spent caring for own gardens and animals (a non-economic activity), with an effect of 3.1 hours more from a baseline at the cutoff of 1.6 hours.

The program also reduce the hours spent on some activities. According to the ESBAM survey, the activity called "Using of free time for leisure activities" invlve activities such as Watching television, reading to distract oneself, 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 only observed in hours, but not in the probability of spending time on leisure activities. In addition, there is a reduction in the number of hours and the likelihood of spending time on volunteering. The program reduces the number of hours of volunteering by 1.4 hours per week compared to the baseline at the cutoff of 0.6 hours, while the corresponding probability is reduced by 14 p.p. compared to the 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 precisely the number of hours spent on these time transfers, but at least we can observe whether or not the individual engages in these activities. 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 the interactions between the eligible elderly 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 2 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 control applicants 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 the effects of the program by gender for the outcomes that are statistically significant (at least at 10% confidence level) for at least one gender. The complete list of results are 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, but 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 crowing-out effect equal to 97%. A reduction in private transfers from abroad received by men is also observed. As for the probability of receiving private monetary transfers, the program reduces it by 25 p.p. for women from a baseline of 42 p.p., which is equivalent to a reduction of 60%. The probability for men 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 found increase in the hours spent in childcare is statistically significant only among men. The effect is a substantial increase of 6 hours in spent time in childcare by older men from a baseline number of hours at the cutoff of 1 hour. One of the few studies many studies documenting an effect of social pensions on childcare is Li et al. (2018). They find that the China's New Rural Pension Program (NRPP) increased the time for grandchildren care, albeit their identification rests of village-level participation in the social pension rather than individual participation. Ambler (2016) analyses the South African social pension program and finds an increase in the bargaining power of women, explained by the large change in their

incomes with respect to the situation before the transfer.This change was greater for women than for men due to labour withdrawal of men. In our case, we do no have a clear variable to measure bargaining power in household decisions, but we could conjecture that some power changes could be operating behind the increase in childcare provision of older men.

Eligible men also reduce their time spent with family and/or social activities.[9] The effect of the program is a reduction of 9.7 hours from a baseline at the cutoff of 13.7 hours. Regarding the effect of the program on the likelihood of spending time on certain activities, there is an increase in time spent on childcare among men (in line with the previous result with hours) and an increase in time spent on household management and organisation among both women and men. In contrast, the program reduces the time of men spent in leisure activities and volunteering. For example, the program effect is a 43 p.p. reduction in the probability of spending time in 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.

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 control applicants 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.

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

Eligible women reduce their interactions –receiving or giving company– with people outside the household, but the result is not statistically significant for men. Regarding the self-assessed help given to the household, we find statistical significant results only for men. We observe that the program increases the likelihood of men providing financial help and childcare to the household, which is line with our previous results.

4.3 Results at the household level

So far we have conducted our analysis at the individual level, specifically comparing eligible and ineligible older adults. To better understand some of the results for the individuals, we need to look at the household. Table A.14 shows the effects of the program on the composition of the household both overall and by age and gender groups. The program increases the size of the household by 0.93 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 (a 0.39 increase from a baseline of 0.04), young adults aged 18-29 (a 0.21 increase from a baseline of 0.25), and middle-aged adults aged 30-59 (a 0.26 increase from a baseline of 0.57). Distinguishing by gender, we find that the program increases the number of young girls (aged 0-5) in the household by 0.16 from a baseline number 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 number at the cutoff of 0.68. The increase in the number of young children is well aligned with the increase of childcare provided by the eligible individuals.

There are other studies that detect the effects of social pension programs on increasing the household size, as for example Aguila et al. (2020). However, other studies, such as Edmonds et al. (2005), find no effect on household size, but do find an effect on household composition. The latter study evaluates the South African social pension program and finds an increase in the presence of girls aged 0-5 and young women of childbearing age (18-23) in the households of eligible individuals. There is a risk that the reduction of family transfers jointly with the increase of the number of members in the household could reduce the effectiveness of the pension transfer. To asses the extent of this challenge, we explore the effects of the program 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 program on received public transfers and a negative effect on received private transfers. However, we do not find statistical significant effects of the program on other sources of income, nor on overall disposable income per capita. Thus, we find no evidence that the program has lost effectiveness due to changes in household size and income composition, nor that the program 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 program has reduced the labour income (mostly cash income) of the elderly, there is no evidence that it has increased or reduced the other types of income of the elderly and other

household members.[10]

5 Robustness checks

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

Change in the econometric specification

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

Placebo cutoffs

We assess whether our the program effects are sensitive to placebo changes in the threshold. To carry out this test, we choose the following thresholds located in a radius of -0.04, -0.02, 0.02, and 0.04 around the eligibility cutoff. Then, we estimate our main non-parametric regressions (Table 1 to 3) considering these new thresholds (see Table A.11 in the Appendix).

Sensitivity to observations near the cutoff

Another falsification test consist in investigating how sensitive the program effects are to the response of units that are located very close to the cutoff. The estimated effects should not be drastically determined by few observations that are very close to the cutoff. Following Cattaneo et al. (2020) we implement the "donut hole approach" to check the sensitivity of the results to the exclusion of few observations around the cutoff. The authors point out that this strategy is also helpful to assess the sensitivity of the results to the unavoidable extrapolation applied in local polynomial estimation. We run our main non-parametric regressions excluding the observations who fall within the radius of the following bandwidths located round the eligibility cutoff: 0.001, 0.004, 0.007, and 0.01. The results are reported in Table A.12 in the Appendix. The estimations indicate that, in general, the program effects on our outcomes of interest do not change much when we exclude these local observations.

6 Conclusions

Using a regression discontinuity design on a welfare index of eligibility, we evaluated the effects of Peru's social pension program, Pension 65, on private transfers of money and time. Our

[10]Table A.16 also show the program 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.

findings indicate that the program reduces the amount of incoming family transfers from other households by 70%. Additionally, the program affects the time allocated to home activities and interactions with people outside the household.

We observed an increase in childcare hours provided by men only. At the eligibility cutoff, eligible men increase their childcare hours from 1 to 7 hours per week. The program also reduces eligible individuals' interactions with people outside their household, decreasing the likelihood of giving or receiving company to those residing in other households. However, these effects are only observed for elderly women. Based on our findings, the program does not have an impact on childcare provided by elderly women, who are already engaged in more childcare than men, as observed at the cutoff. The increase in childcare provided by elderly men is in line with the rise in the number of young children aged 0-5 years among eligible individuals. Our analysis detected that the program increases the size of the household by 0.93 from a baseline household size 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 program is not straightforward, particularly in terms of whether the pension transfer could trigger individual and household decisions that could limit the program's ability to improve the economic situation of poor elderly individuals. There is a risk that reducing family transfers while increasing the number of household members could reduce the effectiveness of pension transfers. However, there is no conclusive evidence that the program has lost effectiveness due to changes in household size and income composition. Additionally, there is no evidence that the program has improved the pooling of household members' incomes.

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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

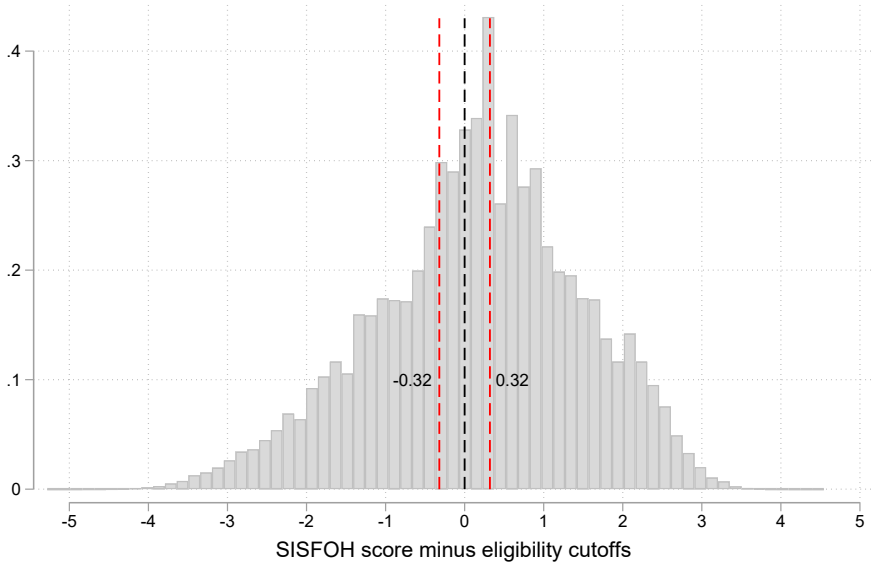
Variables	Total sample	Eligible	Ineligible	Difference	N
Transfers					
Transfers received from other households in the country	13.48	10.67	18.67	-8.00***	2,826
	(0.99)	(1.23)	(1.67)	(2.25)	
Transfers received from other households abroad	0.82	0.63	1.17	-0.54	2,826
	(0.26)	(0.32)	(0.44)	(0.62)	
Total 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)	

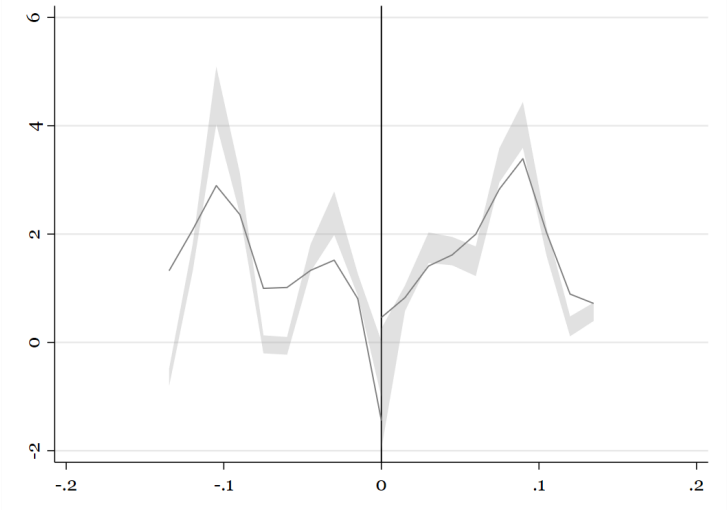
B Manipulation test and robustness checks

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 control applicants 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 control applicants 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 control applicants 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 control applicants 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 control applicants 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 control applicants 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 control applicants 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 control applicants 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.