

The Impact of Targeted Social Assistance on Labor Market Outcomes in the Republic of Georgia

A Regression Discontinuity Approach

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DRAFT: NOT FOR CITATION. This paper is still work in progress and will be completed and polished over the next few months.

Abstract

Improving living standards in an efficient and effective manner is a key concern for policy makers. Social assistance programs, in particular, have a key role to play in protecting households from shocks, ensuring a minimum level of subsistence and facilitating efficient labor market transitions. However, these programs could also unintentionally reduce incentives to work, especially in the formal sector, if the income effect is sufficiently large, their design disproportionately taxes work and/or eligibility criteria explicitly or implicitly make working formally less attractive. In addition to the extensive margin, these programs could also alter individuals' decisions in terms of hours worked and the type of work. Yet, few rigorous studies exist in developing countries that establish the causal link between social assistance and labor market outcomes. This paper analyzes the impact of a large Targeted Social Assistance (TSA) program in the Republic of Georgia on individual's labor market decisions. Applicant households are evaluated through a proxy means test to determine eligibility. A newly designed survey of approximately 2000 households and administrative data was combined with a regression discontinuity design in order to exploit the sharp discontinuities in treatment around the proxy means score threshold. Results suggest that the TSA program indeed generates work disincentives around the threshold, although these disincentives are concentrated among women: on average, women who receive TSA are 9 to 11 percentage points less likely to be economically active than women who live in households that do not receive the transfer. Our analysis indicates, for example, that disincentives effects are larger for women who are not married and have children that are school-aged. Among men, there is no statistically significant effect. These findings are supported by various robustness and falsification tests.

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1. INTRODUCTION

Improving living standards in an efficient and effective manner is a key concern for policy makers. Social assistance programs, in particular, have a key role to play in protecting households from shocks, ensuring a minimum level of subsistence and facilitating efficient labor market transitions. However, these programs could also unintentionally reduce incentives to work, especially in the formal sector, if the income effect is sufficiently large, their design disproportionately taxes work and/or eligibility criteria explicitly or implicitly make working formally less attractive. In addition to the extensive margin, these programs could also alter individuals' decisions in terms of hours worked and the type of work.³ Better understanding these effects can help policymakers in improving the design of social assistance programs as to maintain their protection function while, at the same time, encourage – rather than discourage – productive work.

Evidence from developing countries, although limited, suggests a negligible impact of social assistance transfers on labor supply, especially when transfers are not very generous (Adato & Hoddinott, 2008; Bourguignon et al., 2003; Fiszbein & Schady, 2009; Freije et al., 2006; Skoufias & Di Maro, 2008; World Bank, 2011). Studies conducted in OECD countries, however, conclude that exceptionally generous government transfers can provide disincentives to work (Barr et al., 2010; Eissa & Liebman, 1996; Eissa & Hoynes, 2005; Eissa et al., 2004; Lemieux & Milligan, 2008; Meyer & Rosenbaum, 2001). In particular, if the size of the benefits starts to approach wage rates for low-paying jobs, there is an increased probability of disincentive effects (Adema, 2006).

This paper investigates the causal effects on individuals' labor market decisions of a large cash transfer program - the Targeted Social Assistance (TSA), in the Republic of Georgia. Applicant households are evaluated through a proxy means test to determine eligibility. A newly designed survey of approximately 2000 households and administrative data was combined with a regression discontinuity design in order to exploit the sharp discontinuities in treatment around the proxy means score threshold. This paper contributes to the existing literature in two main ways: (i) investigating, in a rigorous manner, the causal link between social assistance and employment in a developing country, where relatively little evidence exists on this topic; and (ii) disentangling some of the potential channels through which the disincentives may take effect by quantifying the impacts of the program among different demographic, educational and socio-economic groups.

Georgia is an interesting case for analyzing work disincentives arising from social assistance. Less than half of individuals work formally or informally in Georgia: employment rates among the working-age population are 49 percent among men and 42 percent among women.⁴ In addition, its TSA program is large: it covers 12 percent of the Georgian population and 46 percent of individuals in the poorest quintile. The average beneficiary household received 78 GEL per month (47 USD) or 26 percent of post-transfer household consumption (39 percent among the poorest quintile).

A previous study on the labor market effect of Georgia's TSA program, using data from 2007, did not reveal any work disincentives, on average (World Bank, 2012). However, the generosity of the program has since increased (change effective in 2009) and the program has expanded through an increase in the

³ See, for example: Adato and Hoddinott (2008); Adema (2006); Eissa and Liebman (1996); Meyer and Rosenbaum (2001); Eissa and Hoynes (2005); Bourguignon, Ferreira and Leite (2003); Freije, Bando and Arce (2006); and Skoufias and Di Maro (2008). For a review of the impact of conditional cash transfer programs on labor market decisions, see Fiszbein and Schady (2009).

⁴ Household Budget Survey (2009).

proxy means test (PMT) threshold score that defines eligibility (change effective in 2008). Critically, this paper also sheds some light into the mostly likely channels that could increase the disincentive effects of the TSA.

Results suggest that the TSA program in Georgia indeed generates work disincentives around the threshold, although these disincentives are concentrated among women: on average, women who receive TSA are 11 percentage points less likely to work (formally or informally) than women who live in households that do not receive the transfer. Our analysis indicates, for example, that disincentives effects are larger for women who are not married and have children that are school-aged. Among men, there is no statistically significant effect. These findings are supported by various robustness and falsification tests. (*TBC: analysis on hours worked and types of work*).

The remainder of this paper is organized as follows. Section 2 provides a summary of the main characteristics of the TSA program. Section 3 discusses the data and methodology used. Section 4 presents the main results, and section 5 concludes.

2. GEORGIA'S TSA PROGRAM

The TSA program was launched in 2006. It is administered through a proxy means test that uses a complex formula to measure the welfare of a specific household. If the test score is below a certain threshold, the household automatically gets access to benefits. The threshold score for the TSA program is set at 57,000.⁵ The PMT formula includes over 100 household welfare indicators, encompassing information on household composition, possessions and income, expenditures, and geographic characteristics. The overall score also takes into account a subjective assessment of the household's welfare, conducted by a government representative.

As of 2011 (World Bank, 2012), the TSA program covered 12% of the Georgian population (540,000 individuals), and 46% of individuals in the poorest quintile. For each household, the benefits consisted of a core sum of 30 Georgian Lari (GEL) per month (18 USD)⁶, complemented by a benefit of 24 GEL per month (14USD) per additional family member.⁷ The average beneficiary household received 78 GEL per month (47 USD), which made up 26 percent of post-transfer household consumption (39 percent among the poorest quintile).

3. METHODOLOGY AND DATA

3.1 RESEARCH DESIGN, SAMPLING AND DATA

We use a regression discontinuity design to evaluate the impact of TSA on labor market outcomes. As such, we exploit the sharp proxy means thresholds used to determine eligibility for the program (Lee and Lemieux, 2010). The PMT score database of the Social Services Agency (SSA) was used as the sampling frame. Forty seven percent of the Georgian population has applied, and is hence included in this database (Ministry of Labor, Health and Social Affairs). The sampling frame was restricted to only include

⁵ [TBC: Put the threshold in the context of share of applicants on each side from admin data. Also, add reference on papers that discuss the program in more detail].

⁶ One Georgian Lari (GEL) was equivalent to 0.60 USD at the time of data collection.

⁷ In 2013, after data collection for this study, benefits were doubled, to a core payment of 60 GEL per month and additional payments of 48 GEL per family member.

households with scores deviating from the two thresholds by a maximum of 3000 points.⁸ The sample is representative of these select score ranges at the national, regional and urban/rural level.

A newly designed survey was administered to groups of households centered around the TSA threshold. Interviews were conducted between 12 December 2012 and 14 March 2013. In total, 2,002 households were interviewed, encompassing 6,575 working-age individuals.⁹ Twenty one percent of households were chosen from a ‘reserve’ sampling frame that was constructed to replace households in the original sampling frame which could not, or refused to, be interviewed.¹⁰ (TBC: Discuss non-response in more detail).

TABLE 1: SAMPLE COMPOSITION

	TSA
No. of Households: Treatment	1001
No. of Households: Control	1001
Total no. of individuals	6575
Total no. of working age individuals	3904

Source: RDD Survey, 2012-2013. ^A Definition of ‘working age individuals’: age groups 15-64 for men, 15-59 for women.

The selection of the final sampling frame was subject to certain conditions to ensure comparability and data quality. Firstly, households that were first included in the database on or after 1 January 2012 were excluded from the sampling frame, to ensure that the registration process for all households in the sample had been completed at the time of data collection. Secondly, those households that had not been re-scored by the SSA since 2010 were excluded, to ensure up-to-date information on households’ overall welfare status. Thirdly, households with extreme score fluctuations were excluded, i.e. households that were eligible for TSA at the time of data collection, but whose previous score had been higher than 80,000 points. Lastly, eligible households who did not receive benefits as of October 2012 were excluded from the sampling frame, and households who were not eligible but did receive assistance were also excluded.¹¹ In the SSA database as of October 2012, eight percent of the applicant population met these conditions. 11% of these households were sampled.¹²

⁸ The overall score range runs from 0 to approximately 200,000. [TBC: Expand on this decision]

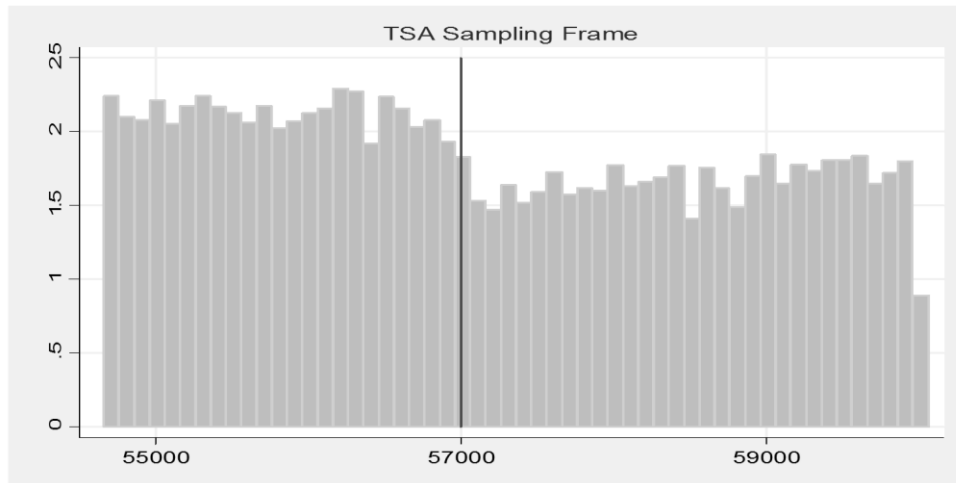
⁹ The chosen sample size was based on power calculations designed to identify at the 5 percent level of significance a five percentage point effect on average labor force participation of the TSA program. This threshold in the expected effect size was determined based on the outcomes typically found in similar studies, as well as in previous work in Georgia itself. The recommended sample size resulting from these power calculations was 1454 households around the TSA cutoff. The actual sample was about 25% larger than this.

¹⁰ Annex 2 presents an overview of reasons for non-response among these 21% [TBC: Adjust just for TSA].

¹¹ [TBC: Add information on size of these groups and reasons for exclusion].

¹² [TBC: Adjust to just TSA].

FIGURE 12: SAMPLING FRAME: DENSITY AROUND THE CUTOFF SCORE



Source: SSA database. Binsize: 100 points. [TBC: Add y-axis label]

The sample design controls for observable as well as unmeasured community-level characteristics that may impact the results of interest. In particular, and following the sampling design used in Bauhoff et al., 2010, 6-household clusters were selected within each stratum based on probability proportional to size. Clusters always include a mixture of applicant- and non-applicant households, so that observable and unmeasured community-level characteristics that may have an impact on the investigated outcomes are controlled for. Proportions and total cluster size vary somewhat due to non-response. The results presented in this paper are adjusted for this specific sampling design, unless specified otherwise.

[TBC: Description of our survey questions and topics covered, including definition of work or participation, age groups, etc]

3.2 IDENTIFICATION STRATEGY

This study uses a regression discontinuity design to assess the impact of TSA on labor force participation.

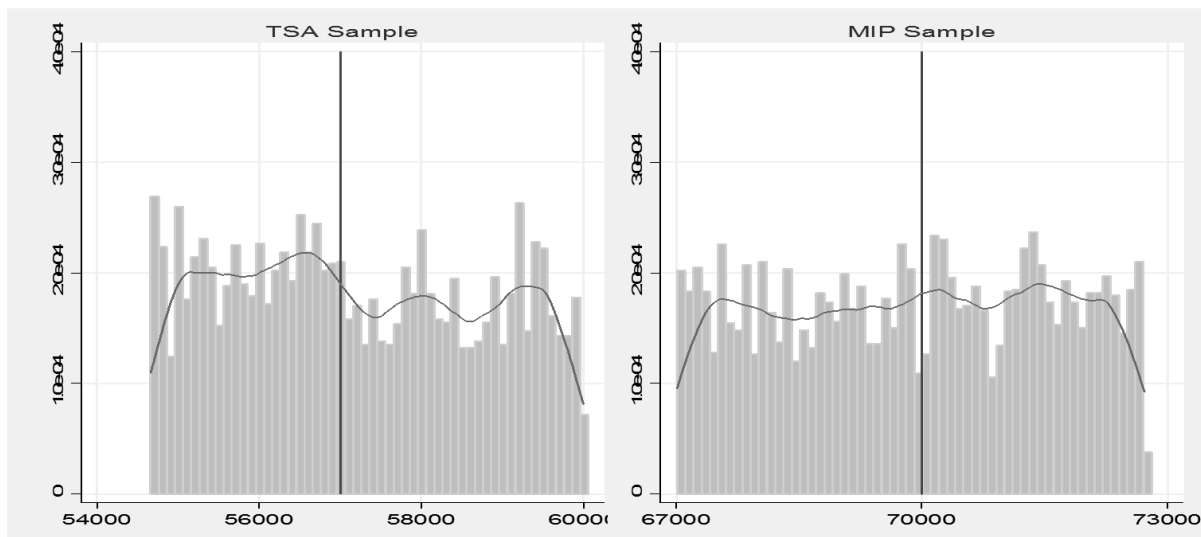
[TBC: Introduce and define here treatment and control groups]

Random assignment to treatment and control groups was tested by examining the statistical similarity of recipients and non-recipients, based on demographic and socio-economic outcomes (Annex 3). In the TSA sample, only very few characteristics are significantly different across treatment and control groups, and where these exist, the differences remain negligible in size. The most important difference between the two groups is that TSA households are more likely to live in rural areas. Correspondingly, households in the TSA sample has, for example, slightly lower levels of education. In addition to these differences correlated to urban/rural status, households in the TSA treatment groups have also slightly fewer assets (as expected, given the PMT formula).¹³ In the models presented in Section 4.1, we control these variables and further examine whether the TSA program had differential impacts in the outcomes of interest depending on these.

¹³ [TBC: Add specific numbers].

The potential existence of selection around the threshold was further examined by analyzing score densities (Figure 3). Conceptually, it is unlikely that applicants have precise control over the PMT score that will be assigned to their household. The number of welfare measures on which the score is based is very large and secondly, a subjective evaluation of household welfare is conducted by score administrators, which is difficult for households themselves to manipulate. The empirical results confirm this: initially, the sampling frame was categorized by a smooth distribution of scores. However, two recent changes have resulted in a steep decline in the number of households just above the threshold: first, since 2011, households were given the opportunity to appeal if their initial score did not fall below the 57,000 TSA threshold. The households filing for appeal were rescored, and some of them did receive a new score below 57,000. Second, in 2011, the SSA started to cross-reference its own database with other sources that contained information on the welfare of specific households. If it was found that households reported to have more assets in these other databases, and hence, that their PMT score was biased downwards, they were taken out of the SSA database and disqualified from receiving benefits.

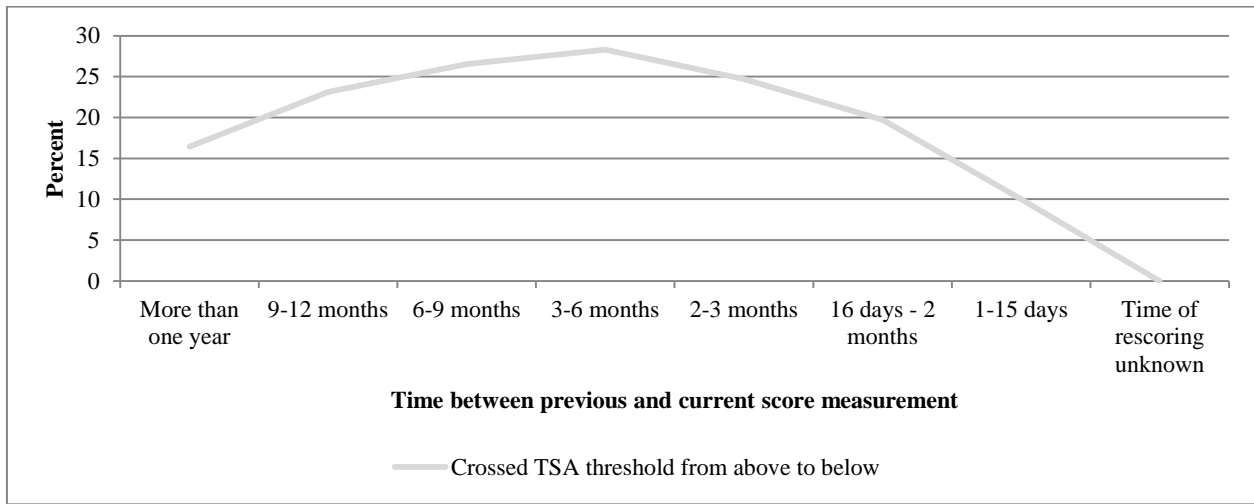
FIGURE 23: SCORE DISTRIBUTIONS IN THE SAMPLE (TBC: take out mip sample)



Source: RDD Survey, 2012-2013. Binsize: 100.

However, in the sample used for this study, very few households managed to lower their score as a result of appeal. When a household appeals, the SSA is obliged to rescore this household within 2 calendar months. Out of the total sample, only 11% was rescored within 2 months. Among this group, 45% was already receiving TSA (5% of the total sample). Among the remaining 6%, only one fifth (1% of the total sample) received a second score that was below the TSA threshold of 57,000 points (Figure 4). In the analysis presented in Section 4, we control for ‘having been rescored within 2 months’ if the household’s original score was not already below the TSA threshold.

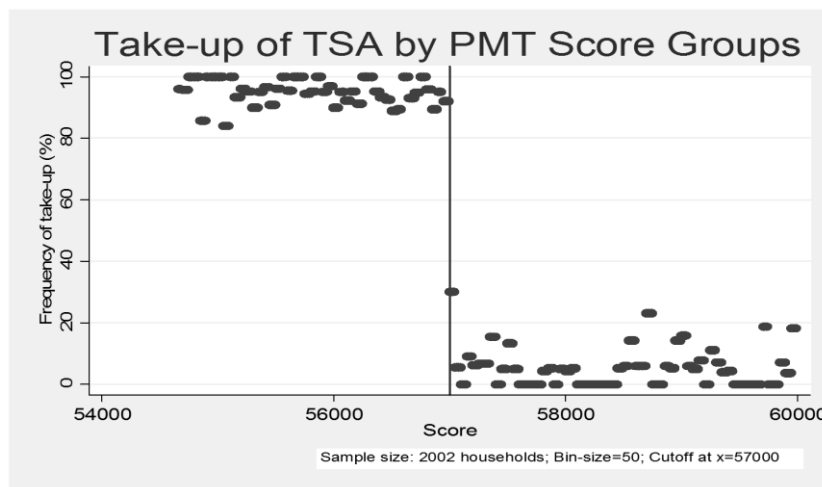
FIGURE 34: TIMEFRAME OF RESCORING AMONG SAMPLED AND RESCORED HOUSEHOLDS



Source: SSA database and RDD Survey, 2012-2013.

Self-reported receipt of TSA does not always matches eligibility according to administrative data.¹⁴ In total, only 2% of the sampled households reported to belong to a different score group than was recorded in the administrative database, and could prove this by showing a certificate with the score. However, among these households, less than half reported to indeed have a different recipient status than was recorded in the administrative database. In the analysis presented in Section 4, we replicate our models with a sub-sample that excludes these households. We also replicate our models with a sub-sample that includes only those households for whom self-reported recipient-status matches the administrative score of the household.

FIGURE 45: SELF-REPORTED TAKE-UP OF TSA AMONG SAMPLED HOUSEHOLDS



Source: RDD Survey, 2012-2013. Bin-size: 50. Cutoff at 57,000 and 70,000, respectively.

¹⁴[TBC: Add why this is a concern; use numbers just for TSA].

The following basic model was used to identify causal effects of the TSA program in the neighborhood of the eligibility threshold:¹⁵

$$Y_i = \beta_0 + \beta_1 \text{TSA}_i + \sum_{j=1}^{j=n} \beta_{ij} X_{ij} + \varepsilon_i \quad (1)$$

where Y reflects the outcome variable of interest (e.g. labor force participation status) for individual i , β_0 is a constant, TSA is a dummy variable indicating whether the individual pertains to a household that receives TSA benefits ($\text{TSA}=1$ if so; zero otherwise), β_1 is the estimated average treatment effect, j represents the j 'th control variable, and ε_i is the error term. As is discussed below, certain background characteristics, including gender, age, the household's PMT score and other socio-economic and educational characteristics were included as controls.

[TBC: state key identification assumptions]. The estimated impacts are therefore valid to the extent that these identifying assumptions hold and results identify average treatment effects around the threshold rather for the total population that receives TSA benefits.

Although households and individuals in the treatment group have been shown to closely resemble households and individuals in the control group, there may still be slight variations in outcomes due to demographic characteristics such as gender, age and household composition. In addition, small changes in welfare may influence the outcome variables to some extent. Such variations in welfare are inherent in the sampling design, due to the use of a threshold score that is based on a PMT aimed at measuring welfare. Hence, certain background characteristics, including gender and age, and the household's PMT score were included in all models to control for such effects.

In addition, not all sampled households in the treatment group have been receiving TSA for the same amount of time, and some of the households in the control groups did receive benefits in the past. We control for length of benefit receipt in the specifications below; moreover, for the latter issue, estimates would refer be lower-bound ones since the control could also exhibit some program effects as well. In addition, the PMT formula used by the SSA was changed in mid-2010, in order to let communities play a greater role in reviewing households' eligibility, and to exclude certain assets which are difficult to measure or to translate into an indicator of household welfare.

[TBC: Main conclusions from this section]

Next, we discussed the main empirical results.

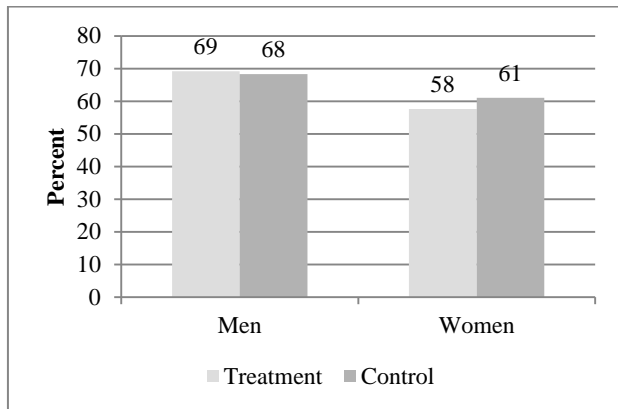
4. RESULTS

In this section, we elaborate on our findings regarding the impact of TSA on labor force participation.

Descriptive plots of labor force participation rates by treatment group suggest a stronger negative effect of TSA among women as compared to men (Annex 4). Indeed, when comparing labor force participation rates between the treatment- and control group in the total TSA sample, there are no significant differences.

¹⁵ [TBC: Insert references to seminal papers and complete specification].

FIGURE 56: LABOR FORCE PARTICIPATION IN THE TSA SAMPLE: TREATMENT AND CONTROL (TBC: adjust to relevant age groups)

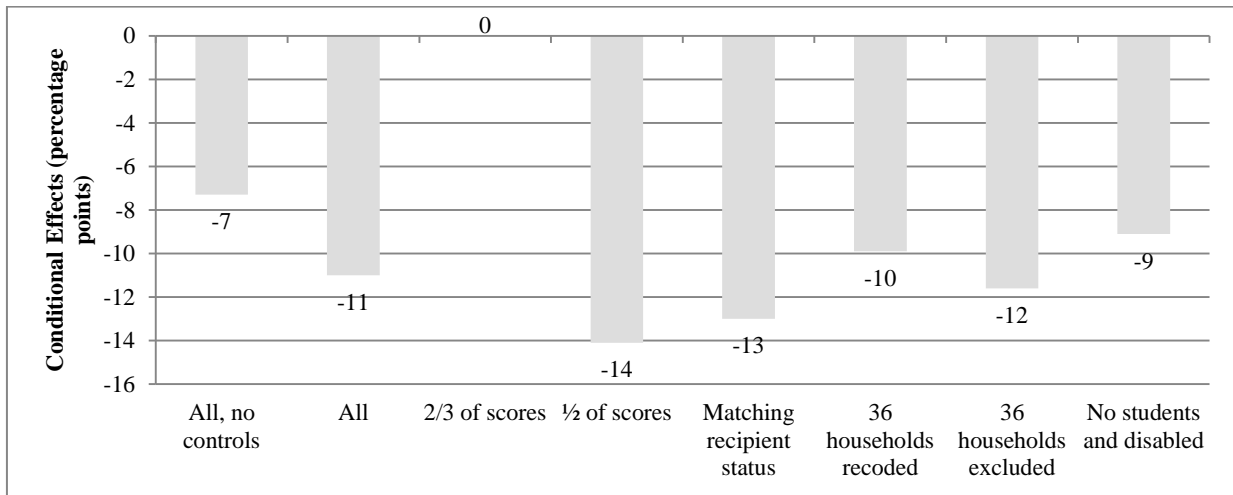


Source: RDD Survey, 2012-2013. Sample restricted to individuals of working age (15-64). When the definition of the ‘working age’ is adjusted for Georgia’s official retirement age (65 for men and 60 for women), differences in participation between the treatment and control group remain insignificant. Participation rates among women in this age-group are: 59% (treatment) and 62% (control).

When applying a regression discontinuity analysis to the data, an effect is found for women, whereas for men, the differences between treatment and control group are not significant. Annex 16 presents results for the main specifications. In models where both genders were included no effect was detected. Similarly, in models where only men were included, no effect was detected. On the other hand, in models where only women were included, a conditional effect of 9-11 percentage points was found in most models. As such, the findings from this survey suggest that able-bodied, non-student women who live in households that receive TSA are 9 percentage points less likely to join the labor force, as compared to women living in similar households, but which do not receive TSA.

Moreover, a positive interaction effect is found, among women, with the number of years during which the household has received TSA in the past. This indicates that as a household accumulates the assets received through the TSA program, the disincentive effect for women becomes smaller and may be reflecting the ability of using accumulated resources for productive activities. An interaction effect was also found between receiving TSA and age. In particular, the disincentive effect of receiving TSA seems to be weakened significantly for women who are about to enter retirement.

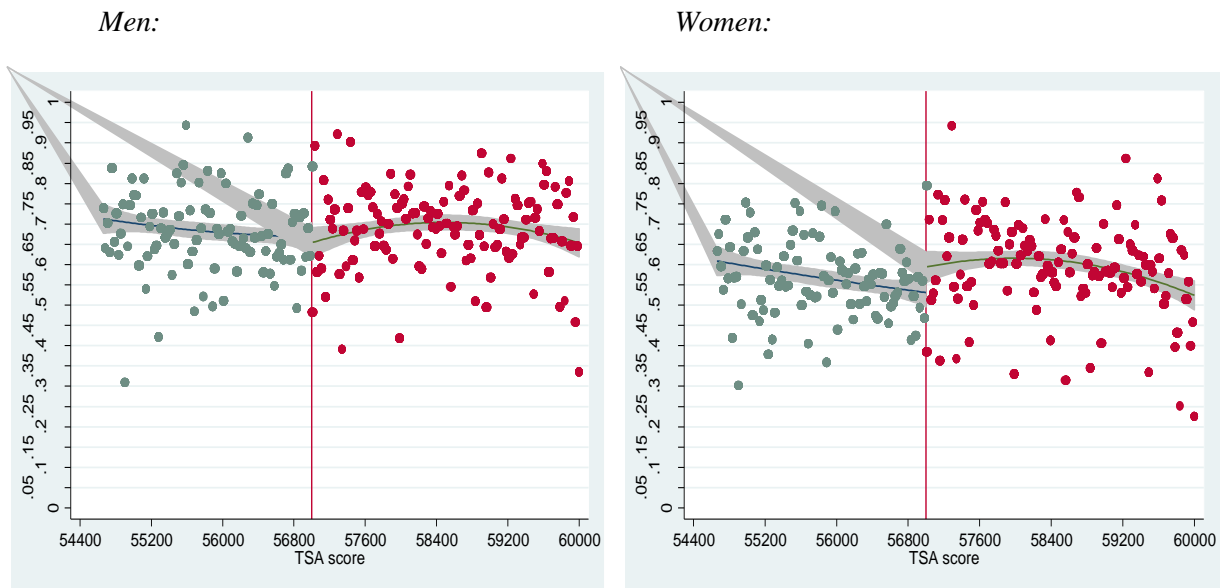
FIGURE 67: CONDITIONAL EFFECT OF RECEIVING TSA ON FEMALE LABOR FORCE PARTICIPATION



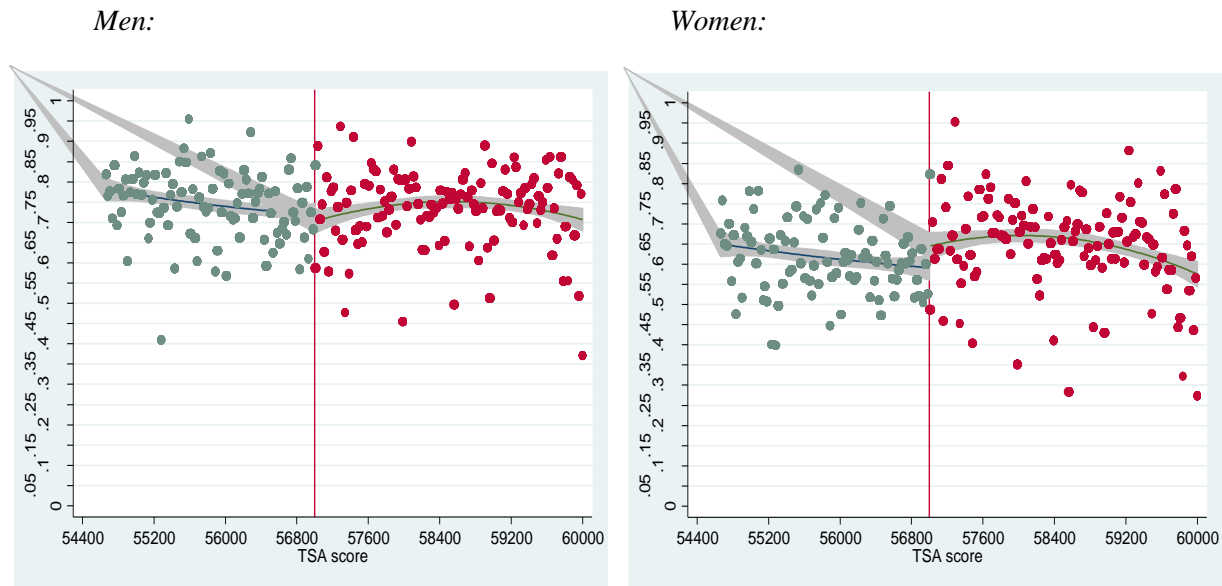
Source: RDD Survey, 2012-2013. See Annex 6, Model Set 3 for more details.

FIGURE 78: PREDICTED LABOR FORCE PARTICIPATION, BY GENDER

Including Students and Disabled:



Excluding Students and Disabled:

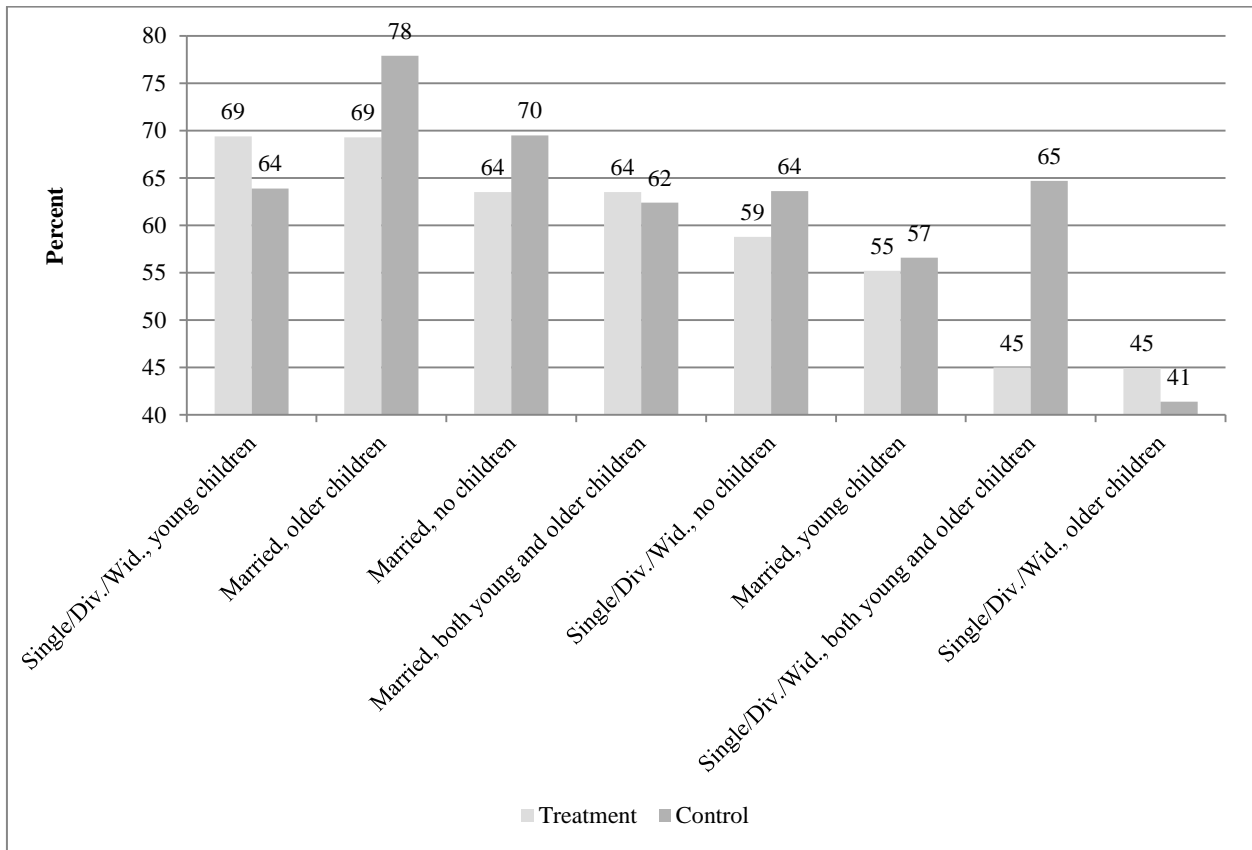


Source: RDD Survey, 2012-2013. Figures reflect the gender-separated model equivalents of Model 2 (top panel) and Model 8 (bottom panel) in Model Set 1 (Annex 6).

Further analysis reveals that this effect may be driven by a small group of women, who are either single, divorced or widowed, and who live in a household with children aged 7-17, but with no young children (aged 0-6). As shown in Annex 6, Model set 5, when the female half of the sample is split up by marital status and age of the children, and when students and disabled individuals are excluded, a disincentive effect of receiving TSA is found only for single women with older children. This group makes up about one fifth of the female half of the sample. Indeed, this is the only group of women for which there is a stark difference in participation rates – of about 20 percentage points – between the treatment and control group (Figure 9).

As a falsification test, identical regression discontinuity models were tested for one score below the actual threshold, and one score above the actual threshold. The score values chosen were 55830 and 58500. No significant differences were found between subjects below and subjects above these two random scores, supporting the findings presented above.

FIGURE 89: LABOR FORCE PARTICIPATION RATES FOR WOMEN, BY FAMILY COMPOSITION



Source: RDD Survey, 2012-2013. [TBC: statistical significance]

The results above suggest that in large part the disincentive effects found from the TSA program in Georgia are mediated by the lack of appropriate mechanisms for supporting working women, especially when they are not married and with school-aged children. In this case, it appears that the TSA program serves as a safety net that allows these women to care for their children after school hours.

[TBC: comparison wages per hour of working control and treatment individuals – controlling for different factor]

[TBC: discussion on benefits from TSA as seen from households]

5. CONCLUSION (TBC)

The results presented here suggest that recent increases in generosity of Georgia's TSA program may have generated disincentives for women to enter the labor force. For men, no statistically significant effects were found. More research is needed to determine the exact causes of any disincentive effects among women. However, results here suggest that, for example, disincentives effects are larger for women who are not married and have children that are school-aged.

The current findings are relevant for Georgia and beyond. In Georgia, these results suggest the need to carefully re-evaluate the most recent expansion of the TSA benefit program, especially in terms of its design and need for complementary services that could help lessen the disincentive effects of the program as, for example, childcare services or school activities post the regular school ours that could help women keep a job while also working.

In addition to suggesting the need for providing complementary services for working women, results also point to the potential role of supplemental measures that more directly link benefit receipt with job search, take-up of active labor market programs and/or employment responsibilities. While only 6% of TSA non-recipient households stated that at least one household member would *stop* working if the household would start receiving TSA, when asked about losing income results were strikingly different: When asked whether a negative income shock would incentivize one or more household members to *start* looking for work, about half of all TSA recipients responded positively. This probably reflects loss aversion [TBC: citation] and suggest a potential role for tighter labor market-related conditions for benefit recipients.

TBC

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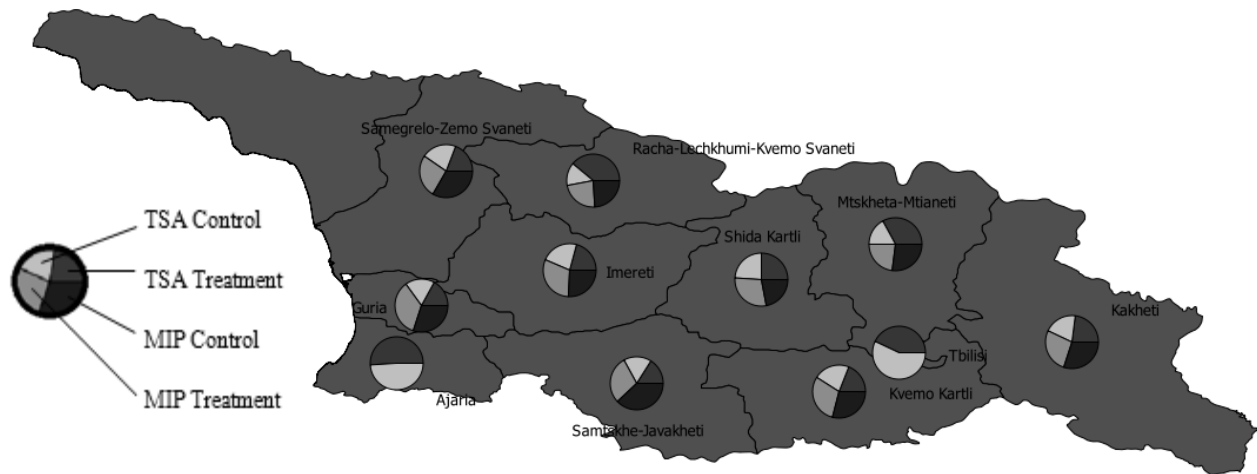
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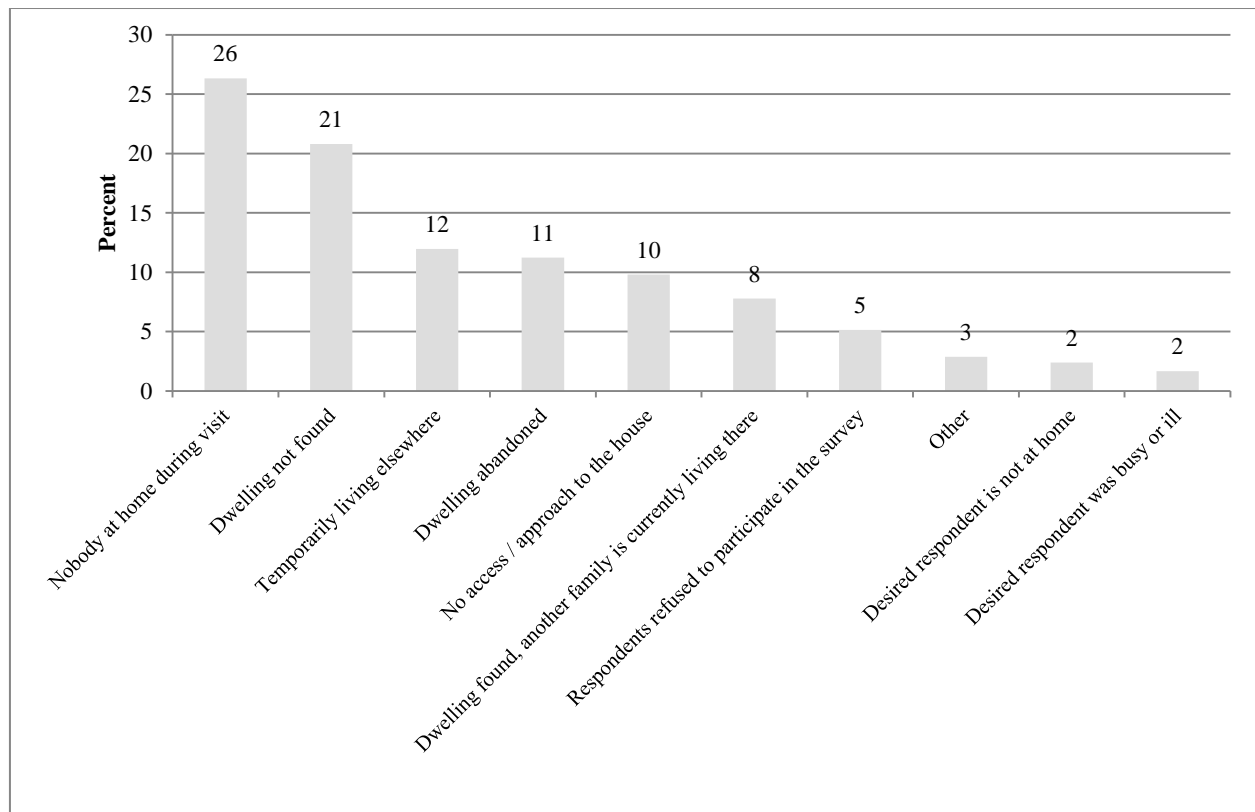
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ANNEX 1: REGIONAL SAMPLE COMPOSITION (TBC: leave just TSA)



Source: RDD Survey, 2012-2013. ^A Pie-charts reflect proportions of sampled individuals by region. Proportions are not adjusted for the complex sampling design, but reflect the actual ratios of sampled households.

ANNEX 2: REASONS FOR NON-RESPONSE



Source: RDD Survey, 2012-2013. ^A Percentages reflect the reasons for non-response among 21% originally sampled but not interviewed. [TBC: Adjust for just TSA; present for treatment and control]

ANNEX 3: DESCRIPTIVE STATISTICS (TBC: clarify eligible/receive language throughout paper)

Household Level Characteristics

	TSA				N	MIP				
	Elig. ^E	Not Elig. ^E	Diff. ^A	T-value		Elig. ^E	Not Elig. ^E	Diff. ^A	T-value	N
Urban	0.36 (0.01)	0.43 (0.01)	.07***	3.12	2002	1.74 (0.02)	1.73 (0.01)	-.01	0.52	2004
HH Size ^B	3.24 (0.06)	3.34 (0.06)	.10	1.10	2002	3.19 (0.06)	3.13 (0.06)	-.05	0.61	2004
No. of WA ind. ^C	1.98 (0.05)	2.13 (0.06)	.16**	2.11	2002	2.03 (0.05)	2.00 (0.05)	-.03	0.41	2004
Pensioners	0.50 (0.02)	0.47 (0.02)	-.03	1.38	2002	0.42 (0.02)	0.44 (0.02)	.03	1.19	2004
Internet	0.02 (0.01)	0.07 (0.01)	0.05***	5.21	2002	0.03 (0.01)	0.04 (0.01)	0.01	1.39	2004
Computer	0.04 (0.01)	0.08 (0.01)	0.04***	4.24	2002	0.05 (0.01)	0.07 (0.01)	0.02**	1.97	2004
Phone	0.63 (0.02)	0.70 (0.02)	0.08***	3.54	2002	0.68 (0.02)	0.69 (0.02)	0.01	0.54	2004
Radio and tv goods ^G	1.01 (0.02)	1.08 (0.02)	0.07***	3.16	2002	1.16 (0.02)	1.15 (0.02)	0.01	0.07	2004
Housing assets ^H	0.99 (0.04)	1.23 (0.05)	0.24***	4.45	2002	1.15 (0.04)	1.22 (0.04)	0.07	1.41	2004
Luxury goods ^I	0.10 (0.01)	0.17 (0.01)	0.07***	3.85	2002	0.14 (0.01)	0.16 (0.01)	0.02	1.02	2004
Transport goods ^J	0.02 (0.01)	0.05 (0.01)	0.03***	3.13	2002	0.07 (0.01)	0.07 (0.01)	0.00	0.32	2004
Financial products ^K	1.29 (0.03)	0.95 (0.03)	-0.34***	8.95	2002	1.00 (0.03)	1.02 (0.03)	0.02	0.74	2004
Reliability of information ^D	4.29 (0.04)	4.13 (0.04)	-.16***	3.82	2000	4.25 (0.03)	4.30 (0.03)	.05	1.44	2000
Atmosphere ^D	4.21 (0.04)	4.15 (0.04)	-.06	1.21	2000	4.19 (0.04)	4.28 (0.04)	.09**	1.99	2002
Interviewer trustworthy ^D	4.44 (0.03)	4.35 (0.03)	-.09***	2.55	1991	4.39 (0.03)	4.45 (0.03)	.05	1.63	1990

Source: RDD Survey, 2012-2013. *** p<.01, ** p<.05, * p<.1 ^A A positive number in these columns indicates that the non-eligible group has a higher average than the eligible group. A negative number indicates the reverse. ^B The number of household members. ^C The number of working age (15-64) individuals in the household. ^D Three measures were recorded of the quality of the interview: the interviewer's assessment of the reliability of provided information, of the atmosphere during the interview, and of the respondent(s)' perception of trustworthiness with respect to the interviewer. These indicators were measured on a scale from 1 to 5, with 1 being the worst grade, and 5 the best grade. ^E 'Elig.' Stands for 'Eligible households' and 'Non-elig.' Stands for non-eligible households. ^F Additional household-level covariates for which the difference in means was analyzed include: regions, household composition in terms of age groups (no. of youth aged 15-24, no. of prime aged workers aged 25-49, no. of older workers aged 50-64, and no. of children aged 0-18), and among the TSA sample, self-reported receipt of MIP. For all of these additional indicators, results were either not significant, or if they were, the difference in means was very small.

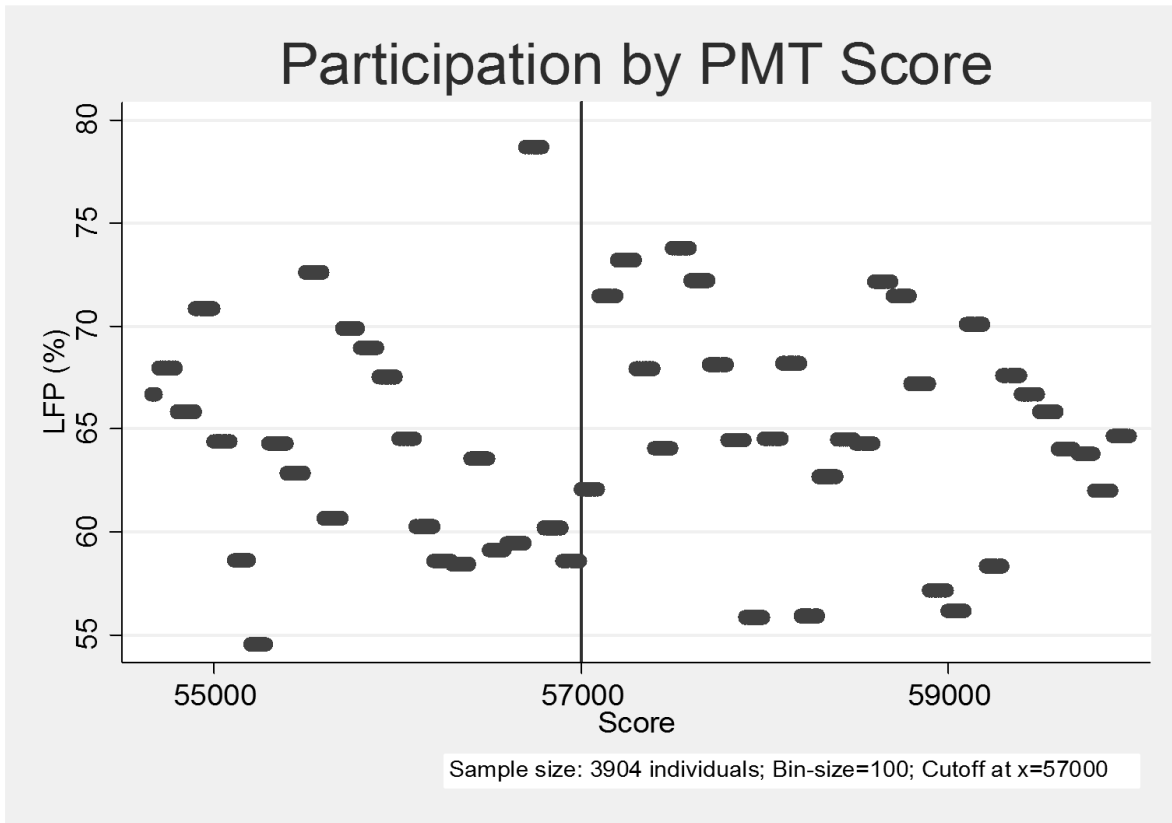
Individual Level Characteristics

	TSA				MIP					
	Elig. ^B	Not Elig. ^B	Diff. ^A	T-value	N	Elig. ^B	Not Elig. ^B	Diff. ^A	T-value	N
Gender	.54 (.01)	.54 (.01)	.00	.15	6575	.53 (.01)	.53 (.01)	.00	.51	6327
Age	4.30 (.54)	39.40 (.52)	-.90	1.25	6572	41.31 (.50)	42.11 (.53)	.79	1.11	6324
Youth (15-24)	.13 (.01)	.14 (.01)	.01	1.41	6575	.13 (.01)	.14 (.01)	.01	1.39	6331
Working age ^F	.61 (.01)	.64 (.01)	.03**	2.38	6575	.64 (.01)	.64 (.01)	.00	.02	6327
Working age (Georgian) ^F	.58 (.01)	.61 (.01)	.03**	2.27	6575	.61 (.01)	.61 (.01)	.00	.00	6327
Older workers (50-64)	.18 (.01)	.18 (.01)	.01	.80	6575	.20 (.01)	.20 (.01)	.00	.11	6331
Respondent is married	2.48 (.68)	2.20 (.30)	-.28	.38	6575	1.35 (.06)	1.47 (.10)	.12	1.05	6327
Resp. belongs to ethnic maj. IDP Status	.93 (.01)	.92 (.01)	.00	.34	6575	.94 (.01)	.92 (.01)	-.01	1.08	6331
Resp. receives pension	.45 (.01)	.45 (.01)	.00	.36	6575	.04 (.01)	.04 (.01)	.00	.40	6327
Resp. can read and write ^C	.19 (.01)	.17 (.01)	-.01	1.24	6575	.49 (.01)	.49 (.01)	.00	.34	6331
Educ.: None / Inc. Prim. ^{C,D}	.99 (.00)	1.00 (.00)	.01**	2.04	4067	.99 (.00)	1.00 (.00)	.00	1.42	4030
Educ.: Prim. ^{C,D}	.01 (.00)	.01 (.00)	.00	1.08	4056	.01 (.00)	.01 (.00)	.00	.23	4017
Educ.: Sec. ^{C,D}	.23 (.01)	.18 (.01)	-.05***	3.23	4056	.18 (.01)	.19 (.01)	.02	1.23	4017
Educ.: Ter. ^{C,D}	.68 (.01)	.69 (.01)	.01	.65	4056	.72 (.01)	.68 (.01)	-.03**	2.02	4017
No. of years formal educ. ^C	.08 (.01)	.12 (.01)	.04***	3.54	4056	.10 (.01)	.11 (.01)	.02	1.40	4017
No. of years work exp. ^E	11.16 (.07)	11.58 (.07)	.42***	4.75	4017	11.53 (.07)	11.60 (.07)	.07	.80	3981
	14.90 (.36)	14.83 (.34)	-.08	.17	2619	16.09 (.40)	15.59 (.41)	-.50	.92	2489

Source: RDD Survey, 2012-2013. *** p<.01, ** p<.05, * p<.1 ^A A positive number in these columns indicates that the non-eligible group has a higher average than the eligible group. A negative number indicates the reverse. ^B 'Elig.' Stands for 'Eligible households' and 'Non-elig.' Stands for non-eligible households. ^C Sample restricted to subjects aged 16-65, and not enrolled in grades 1-9. ^D Education levels were split up as follows: None or Incomplete Primary, Primary, Secondary (incl basic/vocational), Tertiary. ^E Sample restricted to subjects aged 15-64. ^F 'Working Age' refers to individuals aged 15-64. 'Working Age (Georgian)' refers to men aged 15-64 and women aged 15-59. This takes into account the fact that the official retirement age for women in Georgia is 60 rather than 65. ^G Additional covariates for which the difference in means was analyzed include: 5-year age cohorts, and (among those of working age who are without jobs) the month and year in which the respondent had last worked. For all of these additional indicators, results were either not significant, or if they were, the difference in means was very small.

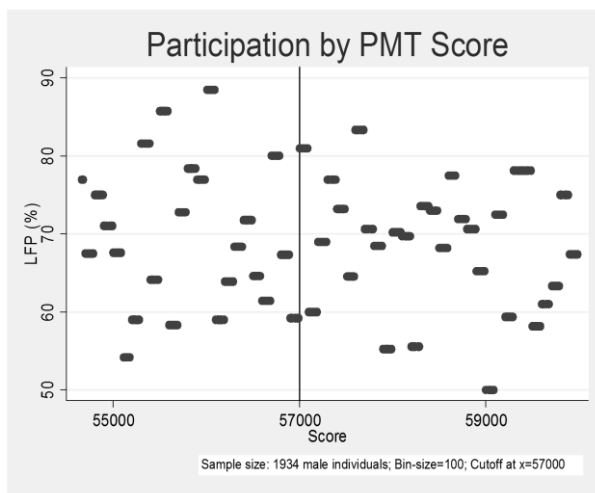
ANNEX 4: LABOR FORCE PARTICIPATION BY SCORE GROUP

Aggregate:

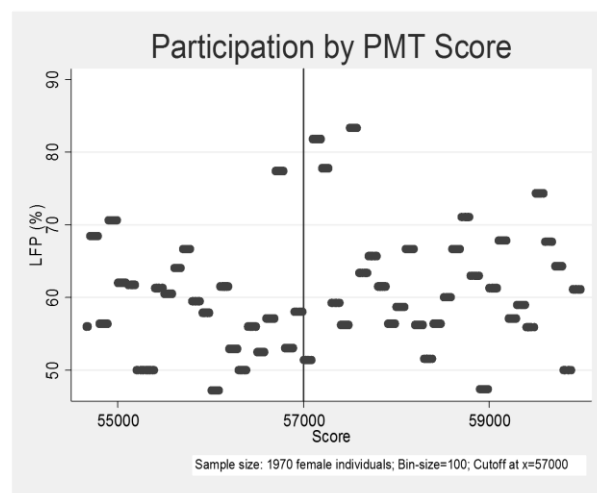


Source: RDD Survey, 2012-2013.

Men:



Women:



Source: RDD Survey, 2012-2013.

ANNEX 5: MEAN VALUES OF INCLUDED VARIABLES – LABOR FORCE PARTICIPATION

Variable (Range of values in brackets)	Full Sample		Excl. Students & Disabled	
	Mean	St. Dev.	Mean	St. Dev.
Score-group: Control	0.52	0.50	1.52	0.50
Score (54660-60000)	57241	1545	57247	1542
Score squared (2.99E+09-3.60E+09)	3.28E+09	2E+08	3.28E+09	1.77E+08
No. Of years having received TSA (0-7)	2.05	2.16	2.03	2.16
Household was rescored within 2 months ^A	0.08	0.27	0.07	0.26
Urban	0.38	0.49	0.37	0.48
Household size (1-11)	4.62	1.77	4.63	1.77
Region: Adjara	0.11	0.32	0.11	0.31
Region: Guria	0.04	0.19	0.04	0.20
Region: Imereti	0.20	0.40	0.20	0.40
Region: Kakheti	0.11	0.31	0.11	0.31
Region: Mtskheta-Mtianeti	0.03	0.18	0.04	0.19
Region: Racha-Leckhumi, qvemo Svneti	0.03	0.17	0.03	0.17
Region: Samegrelo, zemo Svaneti	0.11	0.32	0.11	0.32
Region: Samtskhe-Javakheti	0.02	0.15	0.02	0.14
Region: Tbilisi	0.15	0.36	0.15	0.35
Region: Kvemo Kartli	0.07	0.25	0.06	0.24
Region: Shida Kartli	0.13	0.33	0.13	0.33
Household has own business	0.60	0.49	0.61	0.49
Labor intensity in the household ^B (0-0.857; 0-0.8333)	0.26	0.23	0.26	0.23
Monthly per capita non-wage income, excl. TSA ^C (-32.6667-800)	36.53	55.81	34.63	52.67
Interviewer (1-44)	21	13	22	13
Male	0.50	0.50	0.49	0.50
15-19	0.12	0.32	0.06	0.23
20-24	0.12	0.32	0.12	0.32
25-29	0.11	0.32	0.13	0.33
30-34	0.11	0.31	0.12	0.32
35-39	0.10	0.30	0.11	0.31
40-44	0.09	0.29	0.10	0.29
45-49	0.11	0.31	0.12	0.32
50-54	0.10	0.31	0.11	0.31
55-59	0.11	0.31	0.11	0.31
60-64	0.04	0.20	0.04	0.19
Belongs to an ethnic minority	0.06	0.24	0.06	0.23
Education level: None or Incomplete Primary	0.01	0.08	0.00	0.05
Education level: Primary	0.23	0.42	0.20	0.40

Education level: Secondary (incl basic/vocational)	0.67	0.47	0.69	0.46
Education level: Tertiary	0.10	0.30	0.10	0.31
Household has pensioners ^D	0.36	0.48	0.35	0.48
Family composition: Single/Div./Wid., no children	0.16	0.36	0.15	0.36
Family composition: Single/Div./Wid., young children	0.05	0.22	0.06	0.23
Family composition: Single/Div./Wid., older children	0.16	0.37	0.12	0.32
Family composition: Single/Div./Wid., both young and older children	0.04	0.19	0.03	0.18
Family composition: Married, no children	0.19	0.40	0.20	0.40
Family composition: Married, young children	0.16	0.36	0.17	0.38
Family composition: Married, older children	0.15	0.36	0.17	0.37
Family composition: Married, both young and older children	0.09	0.29	0.10	0.30
Subject is the head of the household	0.25	0.43	0.27	0.44
Subject is a student	0.08	0.27		
Subject is disabled	0.05	0.23		
Obs.	3904		3393	

Source: RDD Survey, 2012-2013. ^A Households were only categorized as ‘rescored within 2 months’ if their original score was not below the TSA cut-off score of 57000. ^B The ‘Labor intensity’ in the household was defined as the number of working household members, excluding the subject being analyzed, divided by the total household size. ^C 2.15% of all sampled households reported a TSA income that was higher than the reported overall household income. Hence, there are a number of overall income values in this variable which fall below zero. ^D ‘Pensioners’ are defined as individuals aged 65 and over for men, and aged 60 and over for women, reflecting the official retirement ages in Georgia.

ANNEX 6: LABOR FORCE PARTICIPATION – REGRESSION DISCONTINUITY MODEL
RESULTS [TBC: need to take out regions and other variables from regressions]1. BOTH
GENDERS COMBINED: BASIC MODELS

[TBC: clarify dependent variable and move this discussion to text] . The models below are probit models. These were replicated using linear probability models.

Dependent variable: Dummy for Labor Force Participation

	(1) All, no controls	(2) All	(3) 2/3 of scores	(4) ½ of scores	(5) Mat- ching recipient status	(6) 36 house- holds recorded	(7) 36 house- holds excluded	(8) No students and disabled
Recipient	-.052 (.034)	-.066* (.038)	-.093* (.049)	-.122** (.057)	-.060 (.039)	-.059 (.037)	-.065* (.038)	-.052 (.034)
Score	-.000 (.000)	-.000 (.001)	-.000 (.001)	.002 (.003)	-.001 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.000)
Score squared		.000 (.000)	.000 (.000)	-.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)
No. of years during which the household has received TSA		-.003 (.006)	.001 (.007)	-.001 (.008)	-.004 (.006)	-.003 (.006)	-.002 (.006)	-.002 (.005)
Household has been rescored ^A		-.013 (.034)	.024 (.041)	.021 (.045)	-.026 (.036)	-.013 (.034)	-.013 (.034)	.015 (.031)
Age-group: 20- 24		.252*** (.027)	.251*** (.034)	.280*** (.042)	.245*** (.030)	.251*** (.027)	.253*** (.027)	.183*** (.022)
Age-group: 25- 29		.262*** (.026)	.266*** (.031)	.289*** (.042)	.262*** (.028)	.262*** (.026)	.264*** (.027)	.198*** (.021)
Age-group: 30- 34		.296*** (.023)	.304*** (.027)	.314*** (.042)	.297*** (.024)	.296*** (.023)	.296*** (.023)	.222*** (.019)
Age-group: 35- 39		.323*** (.020)	.324*** (.025)	.349*** (.042)	.320*** (.021)	.323*** (.020)	.323*** (.020)	.241*** (.016)
Age-group: 40- 44		.331*** (.018)	.347*** (.022)	.369*** (.043)	.333*** (.019)	.331*** (.018)	.333*** (.018)	.243*** (.015)
Age-group: 45- 49		.330*** (.019)	.326*** (.025)	.345*** (.041)	.330*** (.020)	.330*** (.019)	.332*** (.019)	.249*** (.016)
Age-group: 50- 54		.291*** (.025)	.305*** (.029)	.317*** (.043)	.295*** (.026)	.290*** (.025)	.293*** (.025)	.218*** (.020)
Age-group: 55- 59		.307*** (.023)	.315*** (.028)	.337*** (.043)	.315*** (.024)	.307*** (.023)	.311*** (.023)	.225*** (.020)
Age-group: 60- 64		.182*** (.042)	.180*** (.051)	.180*** (.063)	.170*** (.046)	.182*** (.042)	.185*** (.042)	.133*** (.035)
Urban		.082*** (.031)	.044 (.037)	.040 (.039)	.088*** (.032)	.082*** (.031)	.080** (.031)	.067** (.027)
Household size		.001	.004	.007	.002	.000	.000	-.001

	(.009)	(.010)	(.011)	(.009)	(.008)	(.009)	(.007)
Region: Adjara	-.122***	-.088*	-.047	-.133***	-.122***	-.120***	-.111**
	(.046)	(.052)	(.055)	(.047)	(.046)	(.046)	(.047)
Region: Guria	-.209***	-.236***	-.254***	-.196***	-.209***	-.208***	-.213***
	(.056)	(.070)	(.067)	(.055)	(.056)	(.056)	(.053)
Region: Kakheti	-.195***	-.198***	-.193***	-.190***	-.196***	-.197***	-.190***
	(.045)	(.050)	(.056)	(.046)	(.045)	(.045)	(.046)
Region: Mtskheta-Mtianeti	-.199***	-.232***	-.199***	-.207***	-.198***	-.201***	-.204***
	(.069)	(.077)	(.071)	(.070)	(.069)	(.069)	(.064)
Region: Racha-Leckhumi, qvemo Svneti	-.136***	-.073	-.072	-.148***	-.136***	-.132***	-.102*
	(.049)	(.060)	(.076)	(.051)	(.049)	(.049)	(.058)
Region: Samegrelo, zemo Svaneti	-.179***	-.195***	-.169**	-.184***	-.178***	-.178***	-.175***
	(.054)	(.064)	(.066)	(.056)	(.054)	(.055)	(.053)
Region: Samtskhe-Javakheti	-.076	-.041	-.078	-.096**	-.076	-.075	-.020
	(.056)	(.059)	(.065)	(.049)	(.056)	(.056)	(.062)
Region: Tbilisi	-.232***	-.257***	-.215***	-.236***	-.231***	-.234***	-.229***
	(.042)	(.049)	(.051)	(.043)	(.043)	(.042)	(.043)
Region: Kvemo Kartli	-.039	-.064	-.089	-.078	-.039	-.030	-.043
	(.056)	(.064)	(.074)	(.066)	(.056)	(.057)	(.051)
Region: Shida Kartli	-.185***	-.197***	-.199***	-.188***	-.185***	-.184***	-.182***
	(.043)	(.051)	(.054)	(.043)	(.043)	(.043)	(.043)
Household has its own business	.333***	.331***	.327***	.338***	.333***	.331***	.324***
	(.030)	(.036)	(.040)	(.032)	(.031)	(.031)	(.029)
Labor intensity ^B	.105	.081	.096	.118*	.106	.103	.090
	(.065)	(.079)	(.088)	(.068)	(.065)	(.066)	(.059)
Monthly per capita non-wage income, minus TSA ^C	.001***	.001***	.001***	.001***	.001***	.001***	.001***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Interviewer ID	.002*	.001	.003**	.002*	.002*	.001	.002**
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Male	.126***	.133***	.130***	.123***	.126***	.124***	.110***
	(.019)	(.024)	(.028)	(.020)	(.019)	(.019)	(.017)
Belongs to an ethnic minority	-.069	-.056	-.025	-.063	-.069	-.065	-.046
	(.046)	(.062)	(.064)	(.046)	(.046)	(.046)	(.041)
Education level: Primary	.260**	.193	.233	.244*	.260**	.260**	.168
	(.115)	(.127)	(.149)	(.126)	(.116)	(.116)	(.128)
Education level: Secondary (incl basic/vocational)	.304*	.172	.236	.287*	.303*	.301*	.195
	(.162)	(.160)	(.195)	(.172)	(.163)	(.163)	(.205)
Education level: Tertiary	.300***	.239***	.255**	.289***	.300***	.298***	.206**
	(.071)	(.090)	(.108)	(.079)	(.071)	(.072)	(.082)
Household has pensioners ^D	-.005	-.030	-.048	-.006	-.004	-.005	-.008
	(.023)	(.028)	(.033)	(.025)	(.023)	(.024)	(.020)
Family composition: Single/Div./Wid	.074*	.040	.063	.059	.074*	.073*	.054
	(.043)	(.056)	(.061)	(.046)	(.043)	(.043)	(.037)
., young children	-.003	-.043	-.061	.004	-.002	-.003	-.018
	(.041)	(.053)	(.061)	(.042)	(.041)	(.041)	(.039)

Single/Div./Wid ., older children								
Family composition:	.033 (.061)	-.042 (.079)	-.097 (.094)	.015 (.063)	.033 (.061)	.033 (.062)	.036 (.054)	
Single/Div./Wid ., both young and older children								
Family composition:	-.051 (.033)	-.103** (.040)	-.074 (.047)	-.058* (.035)	-.051 (.033)	-.055* (.033)	-.055* (.030)	
Married, no children								
Family composition:	-.045 (.040)	-.112** (.052)	-.107* (.060)	-.047 (.042)	-.044 (.040)	-.047 (.040)	-.063* (.037)	
Married, young children								
Family composition:	-.013 (.041)	-.048 (.051)	-.052 (.059)	-.018 (.042)	-.013 (.041)	-.016 (.041)	-.015 (.036)	
Married, older children								
Family composition:	-.056 (.050)	-.133** (.068)	-.127* (.077)	-.069 (.054)	-.055 (.050)	-.056 (.050)	-.051 (.046)	
Married, both young and older children								
Subject is the head of the household	.110*** (.024)	.122*** (.027)	.125*** (.032)	.112*** (.026)	.110*** (.024)	.111*** (.024)	.096*** (.020)	
Subject is a student	-.338*** (.051)	-.368*** (.065)	-.305*** (.075)	-.337*** (.053)	-.337*** (.051)	-.335*** (.051)		
Subject is disabled	-.675*** (.018)	-.684*** (.023)	-.673*** (.039)	-.673*** (.019)	-.675*** (.018)	-.674*** (.018)		
Observations	3,904	3,894	2,533	1,994	3,591	3,894	3,383	
Wald-chi ²	2.372	.	.	.	.	.	.
Degrees of Freedom	2	45	45	45	45	45	43	
Pseudo-r ²	.000582	.287	.300	.297	.289	.287	.190	

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Model Notes: In models (1) and (2), all observations are used. In model (3), only observations from households that were within 2/3 of the total score range were used. As such, the score range used for this model was 55440-59000 instead of 54660-60000. In model (4), only observations from households that were within 1/2 of the total score range were used. As such, the score range used for this model was 55830-58500 instead of 54660-60000. In model (5), only observations were used from households where the score recorded in administrative data matched the self-reported recipient-status of TSA. In model (6), the 36 households which can reasonably be identified as not having a correctly recorded administrative score were recoded, so that instead of following the administrative scores, the self-reported recipient-status for these households was chosen. In model (7), these 36 households were excluded from the analysis. In model (8), students and individuals with a disability were excluded from the analysis. Variable Notes: ^A Households were only categorized as 'rescored within 2 months' if their original score was not below the TSA cut-off score of 57000. ^B The 'Labor intensity' in the household was defined as the number of working household members, excluding the subject being analyzed, divided by the total household size. ^C 2.15% of all sampled households reported a TSA income that was higher than the reported overall household income. Hence, there are a number of overall income values in this variable which fall below zero. ^D 'Pensioners' are defined as individuals aged 65 and over for men, and aged 60 and over for women, reflecting the official retirement ages in Georgia. Reference categories include: Age-group: 15-19; Region: Imereti; Education level: None or incomplete primary; Family composition: Single with no children.

2. WOMEN: BASIC MODELS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All, no contr ols	All	2/3 of scores	½ of scores	Mat- ching recipient status	36 house- holds recoded	36 house- holds excluded	No students and disabled
Recipient	-.073* (.044)	-.110** (.054)	-.112 (.072)	-.141* (.083)	-.130** (.056)	-.099* (.052)	-.116** (.054)	-.091* (.052)
Score	-.000 (.000)	-.000 (.001)	.002 (.002)	.009** (.004)	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.001)
Score squared		.000 (.000)	-.000 (.000)	-.000** (.000)	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)
No. of years during which the household has received TSA		.004 (.008)	.007 (.011)	.010 (.012)	.004 (.008)	.004 (.008)	.004 (.008)	.004 (.008)
Household has been rescored ^A		-.019 (.047)	.036 (.056)	.044 (.064)	-.037 (.049)	-.020 (.047)	-.022 (.047)	.003 (.045)
Age-group: 20-24		.262*** (.046)	.264*** (.058)	.289*** (.060)	.245*** (.051)	.261*** (.046)	.260*** (.046)	.185*** (.043)
Age-group: 25-29		.273*** (.045)	.274*** (.055)	.290*** (.061)	.264*** (.048)	.273*** (.045)	.271*** (.045)	.205*** (.041)
Age-group: 30-34		.312*** (.038)	.333*** (.044)	.327*** (.052)	.304*** (.041)	.311*** (.038)	.308*** (.039)	.242*** (.035)
Age-group: 35-39		.373*** (.030)	.383*** (.033)	.390*** (.036)	.359*** (.033)	.373*** (.030)	.370*** (.031)	.293*** (.027)
Age-group: 40-44		.379*** (.030)	.405*** (.026)	.425*** (.024)	.370*** (.031)	.378*** (.030)	.379*** (.030)	.295*** (.027)
Age-group: 45-49		.383*** (.029)	.381*** (.030)	.394*** (.031)	.374*** (.031)	.383*** (.029)	.384*** (.029)	.300*** (.027)
Age-group: 50-54		.362*** (.033)	.372*** (.037)	.372*** (.043)	.359*** (.035)	.361*** (.034)	.363*** (.033)	.278*** (.031)
Age-group: 55-59		.366*** (.036)	.386*** (.038)	.397*** (.040)	.365*** (.037)	.366*** (.036)	.368*** (.035)	.281*** (.033)
Urban		.114*** (.043)	.056 (.051)	.062 (.057)	.131*** (.045)	.114*** (.043)	.112*** (.043)	.102*** (.039)
Household size		-.018 (.011)	-.006 (.013)	-.004 (.015)	-.019 (.012)	-.018 (.011)	-.019* (.011)	-.017 (.011)
Region: Adjara		-.119* (.062)	-.096 (.076)	-.051 (.079)	-.136** (.064)	-.119* (.062)	-.118* (.063)	-.141** (.066)
Region: Guria		-.217*** (.080)	-.226*** (.086)	-.252*** (.082)	-.261*** (.081)	-.217*** (.080)	-.216*** (.080)	-.267*** (.075)
Region: Kakheti		-.180*** (.059)	-.185*** (.067)	-.193** (.076)	-.177*** (.060)	-.179*** (.059)	-.181*** (.060)	-.209*** (.063)
Region: Mtskheta- Mtianeti		-.095 (.095)	-.086 (.091)	-.026 (.104)	-.105 (.095)	-.094 (.095)	-.099 (.095)	-.135 (.087)
Region: Racha- Leckhumi, qvemo Svaneti		-.295*** (.055)	-.285*** (.087)	-.277** (.109)	-.316*** (.054)	-.294*** (.055)	-.291*** (.055)	-.312*** (.070)
Region: Samegrelo, zemo Svaneti		-.160** (.067)	-.161** (.077)	-.119 (.080)	-.172** (.070)	-.157** (.067)	-.157** (.068)	-.169** (.068)

Region:	.087	.163*	.097	.059	.088	.087	.119
Samtskhe- Javakheti	(.093)	(.099)	(.111)	(.104)	(.093)	(.093)	(.088)
Region: Tbilisi	-.235***	-.229***	-.175**	-.239***	-.234***	-.236***	-.264***
	(.052)	(.066)	(.072)	(.054)	(.052)	(.053)	(.055)
Region: Kvemo Kartli	-.043	-.110	-.158	-.090	-.043	-.029	-.082
	(.071)	(.094)	(.103)	(.082)	(.071)	(.071)	(.066)
Region: Shida Kartli	-.185***	-.172**	-.169**	-.199***	-.185***	-.184***	-.203***
	(.054)	(.067)	(.071)	(.054)	(.054)	(.054)	(.057)
Household has its own business	.375***	.374***	.382***	.386***	.374***	.373***	.381***
	(.040)	(.046)	(.049)	(.042)	(.040)	(.040)	(.038)
Labor intensity ^B	.068	.058	.090	.087	.070	.065	.056
	(.083)	(.107)	(.117)	(.086)	(.083)	(.084)	(.080)
Monthly per capita non-wage income, minus TSA ^C	.001***	.001***	.001***	.001**	.001***	.001***	.001***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Interviewer ID	.003**	.003*	.005***	.003**	.003**	.003**	.003***
	(.001)	(.002)	(.002)	(.001)	(.001)	(.001)	(.001)
Belongs to an ethnic minority	-.045	.007	.092	-.045	-.045	-.042	-.037
	(.066)	(.085)	(.085)	(.064)	(.066)	(.066)	(.061)
Education level: Primary	.104	.166	.180	.104	.102	.100	-.103
	(.143)	(.175)	(.167)	(.143)	(.143)	(.143)	(.247)
Education level: Secondary (incl basic/vocational)	.140	.162	.191	.147	.138	.135	-.077
	(.154)	(.200)	(.189)	(.154)	(.155)	(.154)	(.211)
Education level: Tertiary	.229**	.252*	.249*	.226**	.229**	.221*	.048
	(.112)	(.136)	(.134)	(.113)	(.113)	(.115)	(.212)
Household has pensioners ^D	-.018	-.076*	-.099**	-.012	-.018	-.017	-.023
	(.032)	(.039)	(.045)	(.034)	(.032)	(.033)	(.029)
Family composition: Single/Div./Wid., young children	.064	-.004	.031	.045	.065	.060	.058
	(.062)	(.084)	(.096)	(.067)	(.062)	(.062)	(.056)
Family composition: Single/Div./Wid., older children	-.037	-.103	-.122	-.039	-.037	-.039	-.058
	(.058)	(.071)	(.082)	(.061)	(.058)	(.058)	(.059)
Family composition: Single/Div./Wid., both young and older children	.076	-.045	-.137	.062	.076	.073	.078
	(.078)	(.109)	(.124)	(.078)	(.078)	(.078)	(.074)
Family composition: Married, no children	-.107**	-.153**	-.127*	-.123**	-.106**	-.118**	-.106**
	(.048)	(.062)	(.072)	(.051)	(.048)	(.048)	(.047)
Family composition: Married, young children	-.135**	-.220***	-.214**	-.148**	-.134**	-.138**	-.153***
	(.056)	(.073)	(.088)	(.059)	(.056)	(.056)	(.057)
Family composition: Married, older children	-.006	-.085	-.109	-.014	-.006	-.012	-.015
	(.058)	(.073)	(.085)	(.061)	(.058)	(.058)	(.055)
Family	-.060	-.146	-.163	-.070	-.059	-.059	-.057

composition:		(.074)	(.091)	(.106)	(.078)	(.074)	(.074)	(.072)
Married, both young and older children								
Subject is the head of the household		.094** (.040)	.098** (.047)	.097* (.054)	.106** (.043)	.094** (.040)	.098** (.040)	.095*** (.035)
Subject is a student		-.297*** (.075)	-.349*** (.090)	-.355*** (.102)	-.321*** (.077)	-.297*** (.075)	-.299*** (.075)	
Subject is disabled		-.630*** (.023)	-.647*** (.009)	-.637 (.)	-.632*** (.024)	-.630*** (.023)	-.630*** (.023)	
Observations	1,970	1,964	1,281	1,024	1,810	1,964	1,945	1,724
Wald-chi ²	3.625	.	.	.	.	.	.	.
Degrees of Freedom	2	43	43	43	43	43	43	41
Pseudo-r ²	.0014	.267	.285	.295	.275	.267	.267	.198
	0							

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Model Notes: In models (1) and (2), all observations are used. In model (3), only observations from households that were within 2/3 of the total score range were used. As such, the score range used for this model was 55440-59000 instead of 54660-60000. In model (4), only observations from households that were within 1/2 of the total score range were used. As such, the score range used for this model was 55830-58500 instead of 54660-60000. In model (5), only observations were used from households where the score recorded in administrative data matched the self-reported recipient-status of TSA. In model (6), the 36 households which can reasonably be identified as not having a correctly recorded administrative score were recoded, so that instead of following the administrative scores, the self-reported recipient-status for these households was chosen. In model (7), these 36 households were excluded from the analysis. In model (8), students and individuals with a disability were excluded from the analysis. Variable Notes: ^A Households were only categorized as 'rescored within 2 months' if their original score was not below the TSA cut-off score of 57000. ^B The 'Labor intensity' in the household was defined as the number of working household members, excluding the subject being analyzed, divided by the total household size. ^C 2.15% of all sampled households reported a TSA income that was higher than the reported overall household income. Hence, there are a number of overall income values in this variable which fall below zero. ^D 'Pensioners' are defined as individuals aged 65 and over for men, and aged 60 and over for women, reflecting the official retirement ages in Georgia. Reference categories include: Age-group: 15-19; Region: Imereti; Education level: None or incomplete primary; Family composition: Single with no children.

2. WOMEN: MODELS WITH INTERACTION EFFECTS

	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Score	Score ²	TSA History	Age	Educa- tion	Urban	All
Recipient	-1.000*** (.000)	-1.000*** (.000)	-.145** (.057)	-.108 (.113)	-.992 (.676)	-.087 (.057)	-.996 (2.751)
Score	-.005* (.003)	-.005* (.003)	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.004 (.003)
Score squared	.000* (.000)	.000* (.000)	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)
No. of years during which the household has received TSA	.001 (.044)	.001 (.044)	-.000 (.044)	.010 (.044)	.004 (.044)	.003 (.045)	.006 (.043)
Household has been rescored ^A	.004 (.008)	.004 (.008)	-.014 (.011)	.004 (.008)	.004 (.008)	.004 (.008)	-.013 (.011)
Age-group: 20-24	.187*** (.043)	.187*** (.043)	.190*** (.042)	.212*** (.050)	.184*** (.044)	.185*** (.043)	.218*** (.056)
Age-group: 25-29	.207*** (.041)	.207*** (.041)	.209*** (.040)	.202*** (.056)	.203*** (.043)	.204*** (.041)	.212*** (.060)
Age-group: 30-34	.244*** (.035)	.244*** (.035)	.244*** (.034)	.236*** (.049)	.240*** (.039)	.242*** (.035)	.237*** (.057)
Age-group: 35-39	.294*** (.027)	.294*** (.028)	.294*** (.027)	.290*** (.034)	.291*** (.034)	.293*** (.027)	.293*** (.052)
Age-group: 40-44	.296*** (.026)	.296*** (.028)	.295*** (.026)	.305*** (.032)	.294*** (.032)	.295*** (.027)	.306*** (.053)
Age-group: 45-49	.301*** (.026)	.301*** (.028)	.300*** (.026)	.274*** (.040)	.298*** (.033)	.300*** (.027)	.276*** (.053)
Age-group: 50-54	.280*** (.030)	.280*** (.031)	.279*** (.030)	.263*** (.042)	.276*** (.036)	.278*** (.031)	.265*** (.054)
Age-group: 55-59	.283*** (.033)	.283*** (.034)	.284*** (.033)	.239*** (.051)	.279*** (.038)	.281*** (.033)	.245*** (.058)
Urban	.102*** (.039)	.102*** (.039)	.102*** (.039)	.107*** (.039)	.101** (.039)	.107** (.044)	.107*** (.040)
Household size	-.018* (.011)	-.018* (.011)	-.018* (.011)	-.018* (.011)	-.017* (.011)	-.018* (.011)	-.018* (.011)
Region: Adjara	-.138** (.065)	-.138** (.065)	-.151** (.066)	-.138** (.066)	-.141** (.065)	-.141** (.065)	-.146** (.066)
Region: Guria	-.273*** (.077)	-.274*** (.077)	-.269*** (.076)	-.268*** (.075)	-.267*** (.075)	-.267*** (.075)	-.278*** (.078)
Region: Kakheti	-.212*** (.063)	-.212*** (.063)	-.211*** (.063)	-.213*** (.063)	-.213*** (.064)	-.209*** (.063)	-.217*** (.063)
Region: Mtskheta- Mtianeti	-.129 (.087)	-.129 (.087)	-.133 (.087)	-.142 (.088)	-.134 (.087)	-.135 (.087)	-.135 (.088)
Region: Racha- Leckhumi, qvemo Svneti	-.311*** (.070)	-.311*** (.070)	-.330*** (.072)	-.332*** (.071)	-.312*** (.070)	-.312*** (.070)	-.350*** (.074)
Region: Samegrelo, zemo Svaneti	-.172** (.068)	-.172** (.068)	-.179*** (.068)	-.167** (.068)	-.170** (.068)	-.169** (.068)	-.181*** (.069)
Region: Samtskhe- Javakheti	.120 (.088)	.120 (.088)	.119 (.087)	.114 (.089)	.118 (.089)	.119 (.088)	.116 (.088)
Region: Tbilisi	-.263*** (.056)	-.263*** (.056)	-.267*** (.056)	-.265*** (.056)	-.264*** (.056)	-.264*** (.055)	-.268*** (.058)
Region: Kvemo Kartli	-.081 (.056)	-.081 (.056)	-.081 (.056)	-.084 (.056)	-.083 (.056)	-.081 (.055)	-.082 (.058)

	(.067)	(.067)	(.066)	(.067)	(.066)	(.066)	(.068)
Region: Shida Kartli	-.202***	-.202***	-.203***	-.205***	-.204***	-.204***	-.203***
	(.058)	(.058)	(.057)	(.057)	(.058)	(.057)	(.058)
Household has its own business	.385***	.385***	.383***	.390***	.379***	.381***	.395***
Labor intensity ^B	.050	.050	.053	.052	.059	.057	.042
	(.079)	(.080)	(.080)	(.080)	(.080)	(.080)	(.080)
Monthly per capita non-wage income, minus TSA ^C	.001***	.001***	.001***	.001***	.001***	.001***	.001***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Interviewer ID	.003***	.003***	.003***	.003***	.003***	.003***	.003***
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Belongs to an ethnic minority	-.038	-.038	-.037	-.029	-.034	-.037	-.030
	(.062)	(.062)	(.061)	(.062)	(.062)	(.061)	(.062)
Education level: Primary	-.078	-.078	-.095	-.139	-.918	-.103	-.107
	(.232)	(.232)	(.243)	(.253)	(1.441)	(.248)	(.235)
Education level: Secondary (incl basic/vocational)	-.055	-.055	-.070	-.103	-.804	-.077	-.075
	(.206)	(.206)	(.210)	(.206)	(4.548)	(.212)	(.200)
Education level: Tertiary	.074	.073	.056	.020	-.871	.048	.053
	(.194)	(.194)	(.206)	(.221)	(1.545)	(.213)	(.199)
Household has pensioners ^D	-.022	-.022	-.020	-.027	-.022	-.023	-.024
	(.029)	(.029)	(.029)	(.029)	(.029)	(.029)	(.029)
Family composition: Single/Div./Wid., young children	.063	.063	.062	.066	.057	.058	.074
	(.056)	(.056)	(.055)	(.055)	(.056)	(.056)	(.055)
Family composition: Single/Div./Wid., older children	-.058	-.059	-.054	-.059	-.058	-.058	-.055
	(.059)	(.059)	(.058)	(.059)	(.058)	(.059)	(.059)
Family composition: Single/Div./Wid., both young and older children	.080	.080	.083	.083	.077	.078	.090
	(.074)	(.074)	(.072)	(.073)	(.074)	(.074)	(.071)
Family composition: Married, no children	-.108**	-.108**	-.103**	-.095**	-.105**	-.106**	-.094**
	(.047)	(.047)	(.047)	(.047)	(.048)	(.047)	(.048)
Family composition: Married, young children	-.151***	-.151***	-.148***	-.146***	-.152***	-.152***	-.139**
	(.057)	(.057)	(.056)	(.057)	(.057)	(.057)	(.057)
Family composition: Married, older children	-.017	-.017	-.009	-.014	-.014	-.014	-.011
	(.056)	(.056)	(.055)	(.055)	(.055)	(.055)	(.056)
Family composition: Married, both young and older children	-.056	-.056	-.054	-.051	-.055	-.056	-.048
	(.072)	(.072)	(.072)	(.072)	(.072)	(.072)	(.072)
Subject is the head of the household	.093***	.093***	.099***	.098***	.094***	.095***	.101***
	(.035)	(.036)	(.035)	(.035)	(.035)	(.035)	(.036)
Recipient * Score	.000*						-.000
	(.000)						(.006)
Recipient * Score ²		.000*					.000
		(.000)					(.000)
Recipient * No. of years having received TSA			.030**				.029**
			(.015)				(.015)
Recipient * Age 20-24				-.108			-.111
				(.139)			(.140)
Recipient * Age 25-29				-.001			-.010
				(.121)			(.123)

Recipient * Age 30-34					.016 (.122)		.024 (.120)
Recipient * Age 35-39					.005 (.122)		-.004 (.123)
Recipient * Age 40-44					-.091 (.143)		-.090 (.142)
Recipient * Age 45-49					.113 (.096)		.116 (.096)
Recipient * Age 50-54					.048 (.112)		.051 (.111)
Recipient * Age 55-59					.145* (.087)		.145 (.089)
Recipient * Education level: Primary						.461 (1.942)	
Recipient * Education level: Secondary						.898 (3.479)	
Recipient * Education level: Tertiary						.377 (1.030)	
Recipient * Urban							-.009 (.051)
P-value of recipient-terms (combined)	0.04	0.09	0.02	0.08	0.51	0.20	0.07
Observations	1,724	1,724	1,724	1,724	1,724	1,724	1,724
Wald-chi ²	.	.	.	.	.	.	.
Degrees of Freedom	42	41	42	49	44	42	51
Pseudo-r ²	.200	.200	.200	.204	.199	.198	.207

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Model Notes: In all models, students and individuals with a disability were excluded from the analysis. Variable Notes: ^A Households were only categorized as 'rescored within 2 months' if their original score was not below the TSA cut-off score of 57000. ^B The 'Labor intensity' in the household was defined as the number of working household members, excluding the subject being analyzed, divided by the total household size. ^C 2.15% of all sampled households reported a TSA income that was higher than the reported overall household income. Hence, there are a number of overall income values in this variable which fall below zero. ^D 'Pensioners' are defined as individuals aged 65 and over for men, and aged 60 and over for women, reflecting the official retirement ages in Georgia. Reference categories include: Age-group: 15-19; Region: Imereti; Education level: None or incomplete primary; Family composition: Single with no children.

3. WOMEN: MODELS BY MARITAL STATUS AND AGE OF CHILDREN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Single, no children	Single, young children	Single, older children	Single, both young and older children	Married, no children	Married, young children	Married, older children	Married, both young and older children
Recipient	-0.167 (0.149)	0.001 (0.181)	-0.303* (0.162)	0.000 (0.000)	-0.140 (0.142)	-0.089 (0.159)	-0.098 (0.090)	0.055 (0.220)
Score	0.002 (0.002)	0.003 (0.002)	-0.001 (0.002)	0.000 (0.000)	0.000 (0.001)	0.002 (0.001)	-0.002 (0.001)	-0.001 (0.003)
Score squared	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Household has been rescored ^A	-0.115 (0.162)	0.100* (0.059)	0.328*** (0.076)	0.000 (0.000)	0.037 (0.103)	0.205 (0.196)	-0.011 (0.084)	-0.220 (0.190)
No. of years during which the household has received TSA	0.017 (0.020)	0.082** (0.034)	0.059** (0.027)	0.000 (0.000)	0.016 (0.018)	-0.034 (0.030)	-0.026* (0.014)	-0.036 (0.053)
Urban	0.190** (0.078)	0.200 (0.193)	0.082 (0.115)	1.000 (0.000)	0.091 (0.086)	0.076 (0.119)	0.016 (0.062)	-0.108 (0.195)
Household size	-0.026 (0.032)	0.008 (0.031)	-0.083* (0.049)	0.000 (0.000)	-0.022 (0.029)	-0.043 (0.038)	-0.037 (0.024)	-0.064 (0.087)
Region: Adjara	- 0.299** (0.151)	- 0.941*** (0.030)	0.181 (0.211)	0.000 (0.000)	-0.161 (0.123)	-0.162 (0.117)	-0.012 (0.094)	-0.220 (0.237)
Region: Guria	-0.285 (0.229)	- 0.929*** (0.029)	0.054 (0.242)			-0.468 (0.381)	-0.485** (0.223)	- 0.515*** (0.164)
Region: Kakheti	0.081 (0.121)	- 0.969*** (0.025)	-0.182 (0.191)		-0.202 (0.131)	-0.489 (0.335)	-0.403** (0.164)	-0.347 (0.250)
Region: Mtskheta- Mtianeti	-0.032 (0.173)	- 0.955*** (0.024)	-0.167 (0.225)	1.000*** (0.000)	-0.142 (0.280)	-0.263 (0.237)	0.122*** (0.043)	-0.513** (0.255)
Region: Racha- Leckhumi, qvemo Svaneti	-0.120 (0.212)	- 0.917*** (0.036)	-0.372 (0.250)		-0.182 (0.166)	-0.560 (0.656)	-0.260 (0.262)	
Region: Samegrelo, zemo Svaneti	-0.223 (0.136)	- 0.948*** (0.027)	-0.014 (0.182)		-0.137 (0.120)	-0.147 (0.151)	-0.234* (0.131)	-0.334 (0.278)
Region: Samtskhe- Javakheti			0.238 (0.154)		-0.034 (0.200)	0.222 (0.304)		
Region: Tbilisi	- 0.264** (0.132)	- 1.000*** (0.000)	-0.339** (0.143)	0.000 (0.000)	-0.238 (0.154)	-0.358** (0.161)	-0.125 (0.140)	-0.262 (0.275)
Region: Kvemo Kartli	-0.434* (0.226)	- 0.984*** (0.013)	0.161 (0.200)	-1.000 (0.000)	0.152 (0.126)	-0.034 (0.213)	-0.035 (0.117)	-0.001 (0.220)
Region: Shida Kartli	-0.009 (0.116)	- 0.968***	-0.229 (0.152)	0.000 (0.000)	-0.103 (0.118)	-0.400* (0.211)	-0.144 (0.116)	-0.302 (0.256)

		(0.020)						
Household has its own business	0.190**	0.263	0.186*	1.000	0.408***	0.713***	0.454***	0.573*
	(0.081)	(0.193)	(0.106)	(0.000)	(0.118)	(0.125)	(0.092)	(0.337)
Labor intensity ^B	0.341**	-0.087	0.595**	0.000	0.058	-0.782	0.147	-0.027
	(0.158)	(0.329)	(0.272)	(0.000)	(0.145)	(0.496)	(0.147)	(0.400)
Monthly per capita non-wage income, minus TSA ^C	0.001**	0.002	-0.001	0.000	0.001	0.003	0.002***	0.007
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)	(0.009)
Interviewer ID	-0.001	-0.005	0.010**	0.000	0.003	0.008*	0.004*	0.003
	(0.003)	(0.004)	(0.004)	(0.000)	(0.002)	(0.005)	(0.002)	(0.005)
Age-group: 20-24	0.138	0.829***	0.373***	-1.000	0.161	0.851	0.102	0.404
	(0.091)	(0.095)	(0.064)	(0.000)	(0.169)	(8.973)	(0.090)	(5.007)
Age-group: 25-29	0.040	0.776***	0.379***	0.000	0.153	0.888	0.150***	0.807
	(0.114)	(0.112)	(0.045)	(0.000)	(0.172)	(8.120)	(0.030)	(12.278)
Age-group: 30-34	-0.064	0.494***	0.440***	0.000		0.643	0.179***	0.902
	(0.175)	(0.113)	(0.057)	(0.000)		(7.158)	(0.051)	(9.586)
Age-group: 35-39	-0.042	0.222***	0.411***		0.249*	0.550	0.268***	0.779
	(0.195)	(0.064)	(0.063)		(0.143)	(4.524)	(0.067)	(11.559)
Age-group: 40-44	0.151*		0.403***	0.000	0.252	0.582	0.252***	0.528
	(0.081)		(0.060)	(0.000)	(0.157)	(5.085)	(0.059)	(8.000)
Age-group: 45-49	0.028	0.259***	0.404***	-1.000	0.313*	0.668	0.184***	0.463
	(0.132)	(0.073)	(0.047)	(0.000)	(0.185)	(6.197)	(0.054)	(5.113)
Age-group: 50-54	0.078		0.378***	-1.000	0.264	0.689	0.164***	0.470
	(0.126)		(0.045)	(0.000)	(0.202)	(6.599)	(0.038)	(6.553)
Age-group: 55-59	0.027	0.396***	0.240*	0.000	0.297	0.690	0.163***	0.520
	(0.137)	(0.101)	(0.137)	(0.000)	(0.205)	(6.809)	(0.029)	(7.053)
Belongs to an ethnic minority	0.123	0.104	-0.303*	-1.000	0.035	-0.081	-0.316*	0.004
	(0.087)	(0.070)	(0.175)	(0.000)	(0.119)	(0.187)	(0.177)	(0.221)
Education level: Primary	0.154**	-	-		-0.898	0.243		
	(0.078)	0.829***	0.477***		(3.213)	(0.352)		
		(0.169)	(0.132)					
Education level: Secondary (incl basic/vocational)	0.163	-	-0.204*	0.000	-0.679	0.038	0.002	0.026
	(0.108)	0.353***	(0.123)	(0.000)	(10.890)	(0.351)	(0.060)	(0.100)
		(0.094)						
Education level: Tertiary				-1.000	-0.876	0.314	0.138***	0.298
				(0.000)	(3.409)	(0.420)	(0.038)	(0.617)
Household has pensioners ^D	-0.185*	0.112	0.202**	0.000	-0.012	-0.047	-0.063	-0.115
	(0.097)	(0.071)	(0.097)	(0.000)	(0.066)	(0.087)	(0.055)	(0.163)
Subject is the head of the household	0.009	0.075	0.286***	0.000	0.125	0.280	0.088*	0.324
	(0.092)	(0.077)	(0.096)	(0.000)	(0.082)	(0.382)	(0.048)	(0.797)
Observations	225	94	227	53	308	289	287	172
Wald-chi ²	.	.	.	.	.	.	.	.
Degrees of Freedom	32	28	33	24	32	34	32	31
Pseudo-r ²	0.234	0.387	0.362	1	0.250	0.340	0.387	0.348

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Model Notes: In all models, students and individuals with a disability were excluded from the analysis. Variable Notes: ^A Households were only categorized as 'rescored within 2 months' if their original score was not below the TSA cut-off score of 57000. ^B The 'Labor intensity' in the household was defined as the number of working household members, excluding the subject being analyzed, divided by the total household size. ^C 2.15% of all sampled households reported a TSA income that was higher than the reported overall household income. Hence, there are a number of overall income values in this variable which fall below zero. ^D 'Pensioners' are defined as individuals aged 65 and over for men, and aged 60 and over for women, reflecting the official retirement ages in Georgia. Reference categories include: Age-group: 15-19; Region: Imereti; Education level: None or incomplete primary.

