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EDUCATING CHILDREN TO SAVE: AN EXPERIMENTAL APPROACH TO FINANCIAL EDUCATION OF PUPILS IN PRIMARY SCHOOLS

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Educating Children to Save: an Experimental Approach to Financial Education of Pupils in Primary Schools

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Abstract

Financial education is today a primary issue. We experimentally test whether a programme ("treatment") of financial education on savings, targeted to children aged 8 and 9, is effective and to what extent. We measure the interest rate required by the children before and after the treatment to accept to postpone a reward, compute its variation and compare this with that of a control group. We find that children are sensitive to the programme, and that this decreases the children's impatience. We also find some gender differences that cast some doubts about the gender neutrality of programmes of financial education.

Keywords: children; financial literacy, savings; experiment

JEL codes: A20; C93; G02; I20

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1. Introduction

The relevance of financial literacy in the economics literature has grown during the last years. A number of papers deal with its effect on individuals' financial decisions (van Rooij et al., 2011), retirement choices (Lusardi and Mitchell, 2007 and van Rooij et al., 2012), participation to mutual and pension funds, etc. This literature generally shows that financial literacy helps people to invest their savings and to take their retirement decisions in a more conscious way than individuals without any financial literacy do. A major question, however, is: when – in the life of an individual – should start financial education? Should it be treated as a "traditional" subject such as grammar, mathematics, geography, or should it be taught in parallel extra-curricular courses? There is in fact evidence that its level is low among young adults (Lusardi et al., 2010) and college students without financial education are more likely to be indebted than peers with some financial knowledge (Norvilitis et al., 2006). Young adults are savers and workers, and, as such, they must decide how to invest their savings and whether enter pension plans or not. This may suggest that young people should be exposed to financial education. However, strategies for education the young (and especially the children) are still controversial and diverse, partly because also the empirical evidence on their effectiveness is inconclusive and points to different directions (McCormick, 2009). Some existing programs have indeed been targeted to children (Fox et al., 2005 and Kubasu and Ayuo, 2014) and have been effective (Moon et al., 2014).

From the USA (Fox et al., 2005) to the twenty-seven members of the EU (Habschick et al., 2007) governments, central banks and other primary financial institutions and authorities have designed and implemented programs of financial literacy in primary schools in the most of the developed countries. Most of these programs have shown effective in increasing the financial knowledge of the children. For example, Gross et al. (2005) use focus groups to assess the efficacy of financial education in the USA in a sample of undergraduate students. They find positive effects on the financial knowledge of the treated. Bayer et al. (2009) find similar results using a survey targeted to adults. Carlin and Robinson (2012) find that students who received a financial 19-hours financial literacy curriculum save more, repay debts faster and rely less on credit than peers who did not attend the same program. With reference to Italy, Becchetti et al. (2013) find that financial education in high-schools increasing the propensity of the people to read economic articles in newspapers. Romagnoli and Trifilidis (2013) assess the impact of a program of financial education in a sample of Italian primary schools; they find that the pupils treated with the educational program showed more financial knowledge that the non-treated peers one year after the treatment.

Children are not unusual experimental subjects: several works have provided empirical evidence on economic issues through experiments with children (Holt, 1999; Bucciol et al., 2011; Bucciol and Piovesan, 2011); also children as young as 5 or 6 have proved to be reliable experimental subjects (Roos et al., 2005; Chan and McNeal, 2006 and Leiser and Halachmi, 2006). In particular, some of these works have used designs based on non-monetary incentives to teach children basic economics (Rupp, 2014). Of course, children do not always behave as the adults. Harbaugh et al. (2002) show that, when evaluating the probability of a gain or of a loss, children under-weigh low probabilities and over-weigh high probabilities much more than adults do. In a sample of adult Americans Bishai (2004) shows that inter-temporal discount rates decrease with age, but increase with IQ. Hence, children are not comparable to adults under many aspects; however, they are the target of many programs of financial literacy, and therefore assessing whether these are effective or not is interesting per se in order to test whether to continue providing them with these programs and to which topics they are the most sensitive. Last, but not least, our study investigates also whether there is some gender effect. This is relevant, as the existence of gender differences in financial knowledge and in the approach to financial investments is a well-known issue.

This paper aims at adding evidence about the effectiveness of teaching children of primary schools the importance of savings. Why is this an important subject for financial literacy? Savings are the expression of individuals' time preferences for the allocation of money (income). These preferences are fundamental "in theories of savings and investment, economic growth, interest rate determination and asset pricing, addiction, […]"[1] Some studies have inquired how patient children actually are. Otto et al. (2006) show that children between 6 and 9 are already able to understand what saving is about and to allocate their money to savings programs. Bettinger and Slonim (2007) test this with a sample of subjects ages between 5 and 16; they find that boys are more impatient than girls, that mathematical scores at school are not predictors of patience and that children's choices are consistent with hyperbolic discount, i.e. children are able to take rational decisions. Castillo et al. (2011) experimentally find that male children are more impatient than female peers. However, Andersen et al. (2008) had already shown that adults' time preferences are consistent with hyperbolic discount and therefore, under this aspect, children and adults do not show significant differences in the ways they reason. This suggests that children are appropriate subjects to run an experiment on time preferences.

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[1] Becker and Mulligan (1997), p. 729.

We pay also particular attention to the gender effect. Indeed, males are generally more literate than females (Lusardi et al., 2010 and Fonseca et al., 2012). This may just reflect some differences between males and females in their interest for financial issues (on gender differences in preferences over different economic matters, see Croson and Gneezy, 1999 and Migheli, 2014). Our study investigates whether financial education is effective when taught to children of primary school using an experimental approach that allows for evaluating the effectiveness of a program of financial education targeted to children. So far only very few scholars have used experiments to evaluate the efficacy of programs of financial education. The advantage of using an experiment in policy evaluation is that "While laboratory processes are simple in comparison to naturally occurring processes, they are real processes in the sense that real people participate for real and substantial profits and follow real rules in doing so. It is precisely because they are real that they are interesting."[2] Our experiment is based on a project of the "Museo del Risparmio" in Torino (Savings Museum, MoR henceforth) of Torino aimed at teaching the children the importance of savings. We assess the impact of this treatment on the intertemporal discount rate of the treated, measuring it before and after the treatment, controlling for both the risk aversion of the subjects and for the learning effect (using a control group of non-treated). The results of this experiment show that education about the relevance of savings is effective also at the age of 8 and 9.

2. Experimental design and procedure

As already anticipated in the introduction, we recruited pupils form the third and fourth year of primary schools (i.e. children aged between 8 and 9) from Torino and Moncalieri (a town immediately close to Torino). The experiment involved three phases. The first was a game aimed at measuring the risk aversion of the subjects, the second aimed at measuring their intertemporal patience before the treatment, and the third phase measured the same as the second after the treatment. We describe each of these phases and the treatment in detail below. The experimenter randomly chose the schools and the secretary of Collegio Carlo Alberto telephonically contacted the directors of these schools to explain the purposes of our research and to ask permission of proposing the experiment to the pupils. Once the director had accepted, s/he chose the class for the experiment. While this procedure was not completely random (the director of a school may have chosen the best class to give a good impression of the school), the pupils were not informed about the experiment, and the procedure was the same for all the schools involved. Given the age of the

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[2] Plott (1982), p. 1486.

subjects we chose to base the experiment on the strategy method (Selten, 1967), instead of using PCs in a lab. Andersen et al. (2006) show that, in spite of some flaws, this method produces robust findings about individuals' risk aversion and discount rates. Given this, our procedure is very close to Andersen et al. (2008), but their subjects are adults and the time horizon is longer (6 months in their case, one in ours). A total of 171 children participated in the experiment. Of these, 87 were males, 77 females, while 7 did not reveal their gender.

The children were given three paper sheets, one for each phase of the experiment. They have to give their answers on those papers, using pens provided by the experimenters.

First phase: the experimenter went to the chosen class and asked the pupils to fill the form A presented in appendix 1. The experimenters explained that, for each row of the table, they had to choose the option they preferred (either A or B). Under option A they would have received 10 candies for sure; under option B they could have received either 20 or 0 candies. This depended a lottery that was presented before the pupils started filling in the forms. After collecting the forms filled in, the experimenters would have drawn a number between 1 and 10 from an urn (that was shown to them). This number would have determined the payoff of the subjects who preferred column B to column A, since the experimenters would have paid each subject his/her choice in the row corresponding to the drawn number. This procedure allowed for scaling the probability of winning 20 candies between 0 and 100 percent.

This lottery allows for assessing whether and to which extent a subject is risk-averse. The median outcome was set to be render the risk-neutral subjects indifferent between choosing column A or column B. In this way, a risk neutral-subject would prefer A up to row 4, would be indifferent at row 5, and then would prefer column B to column A since row 6. A risk-averse individual would switch from A to B between row 6 and row 10, a risk-lover subject would switch from A to B before row 5. The players who choose the lottery instead of the certain reward are only the 39% of the total. However, they constitute an important control group: Becker and Mulligan (1997) propose a theoretical model, which shows that time preferences are (also) endogenously determined; in particular the wealthier the subject the more patient s/he is. Ifcher and Zarghamee (2011) empirically show that happiness reduces people's time preferences over money. The first phase of the experiment allows also to control for this effect. Indeed we not only measure risk aversion, but we also differentiate the initial wealth of the subjects through the lottery, as not all the children win it and not all of them chose the same column of the table.

Second phase: in this phase the subjects played a second game, whose aim is to measure how impatient they are. The game proposes two alternatives: they can obtain other 10 candies the day after or a larger number (between 11 and 20) after one month. For each row of the table they had to indicate their preference; at the end of the game a number from 1 to 10 would have been drawn from the urn. This would correspond to the "winning row": as in the previous game, only one of the possible outcomes was actually paid. Also in this case the switching point (i.e. the row at which the subject changes its preference between column A and column B) gives information about the individual. In particular, it gives a proxy of the inter-temporal discount rate of the child. Of course, the discount rates implied by the game are very high compared to the reality, but this is common to experiments on this topic. The gains have to be substantial for the subjects and the time available to run experiments is usually limited (see for instance Andersen et al., 2008, where the annualized interest rates of the game are clearly out-of-market).

Third phase. This includes both what we call the "treatment" and the second round of the same game as phase 2. The treatment, conceived by the Museo del Risparmio, was a one-hour activity aimed at familiarizing the children with the idea and the consequences of saving. First, they were requested to draw something they would desire to have on a paper. This desire could be a good (a car, a musical instrument, a new pair of shoes, etc.), a pet (dog, cat, horse, etc.) or something else such as a dance course, and so on. The experimenters did not give any clue on what they could draw, but a general indication that they would have to draw something they did really desire to have. After the drawings were done (it took about 15 minutes) they children were seated in front of a board, and one of the experimenters explained them the meaning of savings, also by the means of their drawings. In particular, the children were shown that their weekly pocket money would have not sufficed to buy their "dreams", but that saving these weekly amounts, in the end would have provided them with the sum necessary to buy their dream. The last part of the treatment involved them in a game. The children were given a picture of some good (a photo camera, a bike, a dollhouse, a videogame) reporting the market price below. Then they received a sort of calendar and the experimenter gave a specimen of a 5-euro note to each of them. This amount was insufficient to buy any of the goods represented in the pictures previously given to the subjects. The experimenters showed them that they would have had to receive other notes before being able to buy the goods in the pictures. The children were then invited to put the received note in the first cell of the calendar. Then a second note was given to them, and they put it in the second cell of the calendar and so on, until each of them had enough money to buy the good in the picture. The 5-

euro note represented their weekly pocket money, while the number of filled cells in the calendar represented the number of weeks they had to save their pocket money before being able to buy the good in the picture.

After this game ended, the children played again the same game as before the treatment. In this way, we can assess the effect of the treatment. Of course, the treated group is compared to a control group formed by children of the same age as the treated, who played twice – at a week of distance – the game described in phase 2. This allows to isolate the learning effect: the game itself is likely to increase the financial literacy of the children, as they are given a sort of income (in candies) and they face a choice that involves interest rates and savings. In other words, the group of the treated is exposed to a double treatment, while the control subjects are exposed only to one treatment.

The results of the experiment are then analysed using STATA 10. First of all, we transform the ordinal answers received by the subjects in a cardinal variable: indeed each row of the game represents a given interest rate. Therefore, we attribute this interest rate to each row in order to transform the ordinal variable in a cardinal variable, easier to use. Then, as we are interested in the effect of the treatment(s), we compute the difference between the interest rate requested in the second round of the game and that requested in the first round. For "requested interest rate" we mean the interest rate at which the subjects switch their choice from column A (certain reward) to column B (lottery). Indeed this is the interest rate requested by the subject to prefer the uncertain environment rather than the certain. We therefore test whether this interest rate has varied after the treatment. To disentangle the learning effect and the treatment effect we also compare the results of the treated with those of the non-treated.

3. Results

The results show a couple of interesting things: 1) the treatment has an effect on the subjects, but 2) it is much stronger on males than on females. Tables 1 – show the variation of the interest rate required by the children between the second and the first repetition of the game. Table 1 highlights that while the group of non-treated becomes more impatient, the other becomes more patient after the game. This suggests that the children actually learn from the games proposed by the MoR. However, the same table also shows that the result is driven by the male sub-sample: the females' impatience grows both in the group of treated and in that of non-treated (and the

difference is not significant). However, we perform further analysis in order to capture the effects of other individual characteristics such as the parents' education. Table 2 compares the variation of the required interest rate, according to the educational level of each parent. The figures in the table suggest that this effect is heterogeneous and depends on the combination between the child's and the parent's genders. In particular, female children react "adversely" to their mother's education: female subjects whose mother has tertiary education become more impatient. Nevertheless, the treatment has some effect: treated females become more impatient, but much less than the non-treated. Male subjects are not sensitive to parents' education, but always react differently than females. While the treatment was designed to teach the children the value of savings, in order to induce them to save (more), it is seems to be effective on males, but not on females.

The next two tables investigate whether weekly allowances (Table 3) and savings (Table 4) have any effect on the variation between the ex-ante and the ex-post interest rate required by the subjects. In particular, males who already have savings become more patient after the treatment, while this is not the case for females, whose interest rate is higher after than before. However, deepening the analysis, the picture that emerges is different. Considering the male sub-sample, it seems that the treatment renders the males with and without allowance similar in terms of patience. As for the females, the effect appears to be the opposite: those with an allowance become more impatient after the treatment, while the opposite happens for those without allowance. Once again the data confirm that the same treatment has different effects on female subjects. Savings have a stronger effect than allowances and have, apparently, an effect analogous to that of financial literacy. The interpretation of this is, however, intuitive: children who have savings already have almost certainly been taught by their parents what savings are, and why and for what they are important. Hence, these children have already received some financial education, at least about savings. The figures in Table 6 show two relevant facts: the treatment of the MoR has no effect on the children who already have savings, while is effective on the others. Moreover the treatment of the MoR has the effect of rendering the non-savers as patient as the savers both in the case of females and of males, suggesting that institutional and parental education on savings are substitutes. As already highlighted, females and males displayed anyway different behaviours; in particular, the treated females with savings result more impatient than the non-treated females with savings, while the starting point (i.e. the interest rate required in the first round of the game) was statistically the same (i.e. in round 1 both the treated and the non-treated female savers showed the same degree of impatience). Teaching these female children about the importance of

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savings resulted in a small increase in their impatience, as the interest rate required to wait for the candies increased, while the opposite happened to the non-treated. For this last group the explanation may be that the repetition of the game works as a sort of financial education (but unfortunately this is not testable), and, therefore, there is some effect also on the non-treated.

The last two tables present a multivariate analysis based on tobit regressions. Indeed the interest rates required by the subjects to choose a future rather than an immediate reward are bounded to 100% by the experimenters. As a consequence, some of the subjects may have desired higher (lower) interest rates, but, as these were not available, they chose the highest (lowest) as possible. The same reasoning applies to the variable of interest used so far and in the next tables. Some of the subjects could have wanted to increase or to decrease the interest rate required to postpone the reward more than allowed by the experimenters. For this reason, we use a tobit analysis, censoring the dependent variable at its extremes.

Table 5 shows three different specifications (for robustness check) for the whole sample. The control of interest in this case is the dummy for being treated (1 if treated, 0 otherwise), i.e. for participating to the programme of financial literacy of the MoR. The other controls are socio-demographic variables that include parents' education, age of the child, his/her grade in maths, the ideal number of candies s/he would like to eat each day (this measures roughly the strength of the child's preference for candies), whether the child receives a weekly allowance, whther s/he has already savings and a dummy which captures whether the child won participated to and won the lottery in the first game (that used to control for the subjects' risk aversion). The figures reported in the table show that the treatment of the MoR is effective in reducing the impatience of the subjects: indeed the coefficient for the dummy "treated" is always negative, statistically significant and almost invariable to different specifications of the model. This suggests that, although the repetition of the same game in phases two and three may work as financial education, also the MoR's treatment works as such. Moreover, the result is robust to the introduction of parents' education, savings and allowances as controls. This suggests that, while having savings has already an effect on the children's patience, the treatment added something. We can observe that, controlling for several variables, both the effect of the weekly allowance and that of savings disappear. However, since we are regressing the variation in the interest rate required on asset of controls for the whole sample, and since we know that allowances and savings have a different effect on males and on females, the absence of statistical significance may be due to the pooling.

Table 6 proposes the same regressions as Table 5, but separating male subjects from females. This was necessary, given the gender differences highlighted by the previous analyses. While we expected different effects of the treatment for males and for females, the multivariate analysis depicts a scenario that is less heterogeneous than expected. Indeed, the treatment appears to be effective also on female children. The coefficient for this dummy is statistically less significant and smaller than for males, but still significant and of appreciable magnitude. We can observe another couple of interesting results. First, the education of the parents has different effects for males and females. In particular, daughters of women with secondary education as highest level become much more patient than all the other female subjects. Males' patience tends to react negatively to mother's education and positively to father's, in the sense that the males' impatience increases with mother's education, but decreases with father's. The second interesting result is that the weekly allowance renders the females more impatient both than males (no matter if with or without allowance) and than females without allowance, while winning the initial lottery has exactly the opposite effect on the female participants (and has no effect on males). This may suggest that, while males perceive no difference between a monetary and an in-kind endowment, the females consider the two as different. An alternative explanation may be that males and females perceive differently endowments that are completely exogenous (the allowance) or contingent (the candies) to the situation (the experiment)[3].

To sum up, our results show that teaching the children the importance and the usefulness of savings renders them more patient, i.e. pushes them to save more than in absence of specific education on savings.

4. Conclusions

The original idea of this paper was to test whether educating children about the meaning and the importance of savings is effective. In order to perform the analysis we conducted an experiment aimed at measuring the interest rate required by children aged between 8 and 9 to accept to wait some days for getting some candies, instead of receiving it immediately. Of course,

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[3] On this general topic, see Croson and Gneezy (1999) and Li et al. (2006).

savings are fostered by patience (Carlino, 1982) and therefore the interest rate required to postpone consumption is a very good proxy for the individual's intention to save.

The experiment, organised with the Museo del Risparmio of Torino and with the Collegio "Carlo Alberto", shows that educating children about savings is effective to reduce their impatience and, as a consequence, to foster their willingness to save. However the experiment highlights also that males and females react somewhat differently to the treatment. On the one hand, the policy indication that emerges from our work is that both public and private institutions should continue investing in the financial education of children. On the other hand our results also suggest that education programmes should be improved to overcome the gender differences found in this study. Further research shall investigate what determines this gender difference, in order to promote programmes of financial literacy that obtain the same results on both male and female subjects.

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Table 1. Average variation in the interest rate (in percentage points) requested by the subjects

	Whole sample	Significance		Males	Significance		Females	Significance
Treated	-4.27	**		-16.28	***		+7.63	-
Non-treated	+9.17			+13.07			+3.90	
				Treated			Non treated	
Male	-7.17	**		-16.28	***		+13.07	
Female	+6.66			+7.63			+3.90	
Observations	171			87			77	

Significance: - non-significant, ** 95% *** 99%

Table 2. Effect of parents' tertiary education on the variation of the requested interest rate

	Mother			Father		
	No tertiary	Tertiary	Significance	No tertiary	Tertiary	Significance
Males	-9.59	-5.56	-	-7.70	-10.32	-
Females	-0.22	+16.87	**	+8.19	+3.59	-
		***			**	-
Treated males	-19.09	-12.85	-	-19.84	-10.41	-
Treated females	+4.10	+11.29	-	+10.53	+3.64	-
	**	**		***	-	
Non-treated males	+13.04	+34.50	-	+10.60	-	-
Non-treated females	-8.06	+69.00	***	+4.11	-	-
	*	-		-	-	

Significance: - non-significant, * 90%, ** 95%, *** 99%

Table 3. Average variation in the interest rate requested by the subjects: the effect of allowances

	Whole sample	Significance		Males	Significance		Females	Significance
Has allowance	-4.13			-22.00	***		+16.10	
Has no allowance	+1.93	-		+1.96			+2.70	-
Observations	171			87			77	

	Whole sample					
	Treated	Significance		Non treated	Significance	
Has allowance	-1.48			-25.00	***	
Has no allowance	-1.92	-		+30.00		
Observations	124			47		

	Males		Significance	Females		Significance
	Non treated	Treated		Non treated	Treated	
Has allowance	-50.00	-14.00	*	0.00	+24.83	-
Has no allowance	+45.86	-10.06	***	+9.82	+6.07	-
Significance	***	-		-	***	
Observations	27	60		20	57	

Significance: - non-significant, * 90%, ** 95%, *** 99%

Table 4. Average variation in the interest rate requested by the subjects: the effect of savings

	Whole sample	Significance		Males	Significance		Females	Significance
Has savings	-4.89	**		-12.05	**		+2.71	-
Has no savings	+10.81			+7.18			+18.00	
Observations	171			87			77	

	Whole sample			Males			Females		
	Treated	Non treated	Significance	Treated	Non treated	Significance	Treated	Non treated	Significance
Has savings	-5.30	-3.14		-16.23	+6.18		+6.50	-12.45	
Has no savings	-6.25	+23.81	***	-13.33	+20.36	***	+3.17	+30.71	**
Significance	-	**		-	-		-	**	
Observations	124	47		60	27		57	20	

Significance: - non-significant, * 90%, ** 95%, *** 99%

Table 5. Effect of the treatment on the variation of the interest rate required by the subjects: tobit estimates (standard errors between brackets).

	Model 1	Model 2	Model 3
Age	-10.52	-8.77	-10.19
	(6.13)*	(6.07)	(6.16)*
Male	-13.13	-13.27	-13.76
	(7.35)*	(7.29)*	(7.63)*
Treated	-25.95	-23.73	-24.40
	(11.21)**	(10.81)**	(11.69)**
Education of parents			
Father tertiary	-11.11		-9.75
	(13.17)		(13.63)
Father secondary	-3.89		-4.75
	(10.09)		(10.13)
Mother tertiary	18.00		16.14
	(13.79)		(14.12)
Mother secondary	-4.70		-4.34
	(11.52)		(11.68)
Won lottery	-12.40	-11.07	-11.86
	(8.65)	(8.78)	(8.73)
Number of desired candies (log)	0.20	-0.04	0.23
	(0.80)	(0.77)	(0.81)
Has weekly allowance	5.21	7.61	5.97
	(8.25)	(8.23)	(8.30)
Has savings	-9.20	-11.61	-10.26
	(9.52)	(9.25)	(9.59)
Grade in maths			-1.06
			(3.41)
Constant	126.23	110.23	131.50
	(61.89)**	(60.49)**	(68.37)*
Observations	137	141	135
Pseudo R-squared	0.018	0.014	0.017

Significance: * 90%, ** 95%, *** 99%

Table 6. Effect of the treatment on the variation of the interest rate required by the subjects divided for gender.
Tobit estimates (standard errors between brackets).

	Model 1		Model 2		Model 3	
	Males	Females	Males	Females	Males	Females
Age	-3.76	-27.68	-0.54	-25.20	-4.08	-27.61
	(8.55)	(8.89)***	(8.43)	(9.59)***	(8.57)	(8.89)***
Treated	-38.98	-27.84	-35.84	-31.70	-33.88	-27.23
	(14.76)***	(16.47)*	(14.33)***	(17.30)*	(16.39)**	(16.71)*
Education of parents						
Father tertiary	-15.17	-17.71			-11.88	-18.86
	(18.16)	(16.53)			(18.63)	(17.39)
Father secondary	-24.26	13.87			-26.66	13.95
	(14.62)*	(12.22)			(14.72)*	(12.22)
Mother tertiary	34.46	-1.21			27.94	-1.12
	(18.64)*	(17.31)			(20.06)	(17.31)
Mother secondary	25.88	-43.30			26.59	-43.82
	(15.76)*	(14.92)***			(15.95)*	(15.11)***
Won lottery	3.60	-27.51	-1.93	-20.59	4.41	-27.57
	(11.67)	(10.97)***	(11.97)	(12.05)*	(11.79)	(10.97)***
Number of desired candies (log)	-0.01	-0.06	-0.24	-0.69	-0.06	-0.06
	(0.88)	(1.91)	(0.89)	(1.58)	(0.89)	(1.91)
Has weekly allowance	-5.43	19.83	-0.49	28.13	-5.81	19.46
	(11.52)	(10.54)*	(11.40)	(11.60)**	(11.62)	(10.68)*
Has savings	-5.83	7.38	-7.20	-3.54	-7.76	7.59
	(11.42)	(12.30)	(12.94)	(13.10)	(13.54)	(12.34)
Grade in maths					0.18	0.72
					(6.89)	(3.36)
Constant	67.91	237.96	41.45	202.90	71.55	232.13
	(91.59)	(80.02)***	(89.21)	(84082)**	(108.01)	(84.52)***
Observations	74	63	77	64	72	63
Pseudo R-squared	0.02	0.05	0.02	0.03	0.02	0.05

Significance: * 90%, ** 95%, *** 99%