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Reconsidering the Labeling Effect for Child Benefits: Evidence from a Transition Economy

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Abstract: I consider expenditure on food, alcohol and tobacco, and clothing in households with children in Slovenia at the start of its transition to a market economy. I exploit the unique structure of its child benefit program in order to look for evidence that labeling a cash transfer a child benefit influences how that cash transfer is spent. Contrary to much of the recent literature on the non-fungibility of income, I do not find evidence supporting a labeling effect.

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1. Introduction

Child benefits compensate households for some of the cost of raising a child.[1] If recipient households treat child benefits as income for the child, it may benefit a child more than other types of income received by the household. This labeling effect is of considerable policy importance in the transition economies of Eastern and Central Europe where child benefits are used to mitigate the impact on children of the economic insecurity associated with the transition (Barr 1994). If

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[1] Child benefits are sometimes called child or family allowances. Child benefits were originally intended to be a pro-natalist policy, but they have recently taken on a social assistance role in most transition economies.

labeling income a child benefit helps children in ways that other types of income do not, then a case can be made for a universal child benefit. However, if income labeled a child benefit is treated like any other income, then a universal child benefit transfers income from poor households without children to rich households with children. A universal benefit may also imply a transfer from poor households with children to rich households with children if budget constraints force lower benefit levels. This study considers evidence of a labeling effect of a child benefit on household expenditures using data from early in the transition in Slovenia.

The Slovene case is the best available for examining evidence of a labeling effect in child benefits in a transition economy. Almost every Central and Eastern European country provides a universal child benefit that is fixed given the number and ages of children in a household. Thus, it is impossible, to disentangle the effect of a child benefit on household resource allocation from demographic effects. However, in the case under consideration in this paper (Edmonds 2001 describes the Slovene child benefit program, Otroski Dodatek, in greater detail), child benefits are means-tested based on the household's self-reported income in the previous calendar year. Thus, it is possible to examine the relationship between the child benefit and household expenditures conditional on both household demographics and the current year's income. I consider expenditures on food, alcohol and tobacco, and clothing. I am never able to reject the hypothesis that the child benefit is treated the same as any other source of income.

2. Existing Evidence on Labeling Effects

Under standard microeconomic demand theory a child benefit should be spent like any other source of income.[2] However, a large body of empirical evidence reports relationships between income sources and the resulting behavioral response (Thaler 1990, Fraker 1990, and Haveman

[2] One way to reconcile labeling effects with standard microeconomic theory is that income from government transfers might be more regular than other income so that additional transfer income is associated with greater expenditure relative to increases in more transitory income.

and Wolfe 1995 are surveys). There are a number of theories for why the source of income should influence the resulting household behavior. Thaler (1990) suggests that households maintain "mental accounts" with different marginal propensities to consume. For example, labeling an income transfer a child benefit might put that income in a "mental account" for expenditure on child related items. A second explanation for a labeling effect comes from the recent models of household resource allocation. In collective models of household decision-making (Bourguignon and Chiappori 1992), household resource allocation is the outcome of a household decision process that depends on who receives the income. Lundberg et al. (1997) show that transferring child benefits from fathers to mothers in England resulted in changes in household expenditure patterns.

While there is a great deal of empirical work arguing that the source of income affects a behavioral response, the evidence specific to child benefits is limited, because in general child benefits are fixed conditional on the number and ages of children in a household.[3] Thus, when an econometrician observes two households with different child benefits, it is impossible to tell whether differences in expenditure patterns owe to differences in the child benefit or differences in the age and number of children in a household. Sipos (1994) describes a literature that largely ignores this identification problem and argues that child benefits are spent disproportionately on children. Kooreman (2000) overcomes this identification problem by pooling several cross-sections and exploiting variation through time in the age structure of benefits for the child benefit program in the Netherlands. He finds that the marginal propensity to spend on children's clothing is much greater for child benefit income than other income. However, the applicability of results from the Netherlands in the mid 1980s to the instability of economies in transition is obviously a question. In addition, Kooreman is identified by ruling out child age*time variation in cohorts

[3] The ISSA (1994) describes the child benefit systems in place in most of Eastern and Central Europe.

impacted by changes in the child benefit program. In the Slovene program considered here, cross-sectional variation in the amount of child benefit received by a household depends on the number of age eligible children and the household's income in the year prior to the survey year. Therefore, I can condition on contemporaneous household income and household composition and identify the effect of the child benefit on household expenditure patterns by ruling out any effect of last year's income on this year's expenditure patterns given this year's income and household composition.[4]

3. New Evidence on Labeling Child Benefits in Slovenia

I consider evidence of a labeling effect in child benefit income using the 1993 Family Budget Survey (FBS) collected by the Statistical Office of the Republic of Slovenia (SORS 1993). The FBS contacts households in February of a calendar year asking participants to collect receipts and earnings statements throughout the year and collects the data in December. From the FBS, I observe income and expenditure in 1993, and the child benefit income I observe is means-tested based on 1992 earnings. My methodology is to regress consumption of food, alcohol and tobacco, or clothing against the child benefit and total household income excluding the child benefit.[5] I then test the hypothesis that the coefficients on the two sources of income are the same. If I fail to reject this hypothesis, I do not have evidence that the child benefit is treated differently than other income. If the coefficient on the child benefit is larger, then child benefit income is more likely to be spent on a given type of expenditure over other income. If the coefficient is smaller, then it is

[4] This identifying assumption would face problems if the household makes expenditure decisions based on the past year's income, if the household uses last year's income and this year's income to infer income patterns in transition, if the difference between last year's income and this year's income signals something about the household's permanent income and its variance, or if there is habit persistence in expenditure patterns. All of these theories would lead to a false rejection of the test described in section 3.

[5] I also include a set of regression controls described in the footnote to table 1. For the expenditure categories considered here, I have allowed for non-linearity in the relationship between consumption and total income using Robinson's (1988) partially linear model. I could not reject the linear specification. I have also reproduced tests similar to those reported here with variables in logs rather than levels, and I do not find any labeling effect.

less likely to be spent on a given type of expenditure relative to other types of income. Throughout this study, I restrict my sample to households that are eligible for the child benefit based on the age of children.

I begin with expenditure on food in table 1. Food constitutes 41% of total household expenditure. There are 3 columns in table 1. The first column contains the results of the OLS regression of the level of food expenditure on income without the benefit, income from the child benefit (both in levels), and the controls described in the table notes.[6] In the second column of table 1, I report two-stage least squares results, instrumenting for measurement error in total (non benefit) income with an indicator for whether or not the household is active in the informal sector, regular employment, entrepreneurial activities, receiving fixed incomes (non-means tested), and the number of persons eligible for the child benefit. The third column instruments for both total income without the benefit and the child benefit.[7] The rows in table 1 also require explanation. The top panel contains the results for the entire sample of households with children. The bottom panel restricts the sample to households that income qualify for the child benefit. In each panel, the first two rows are the coefficients on total non-benefit income and benefit income respectively. The third row reports the F-statistic (the associated p-value is in parenthesis) of the null that the coefficients on benefit and other income are the same.

The results in table 1 do not contradict the hypothesis that a unit of child benefit income is treated the same as any other income. Starting with the top panel, the estimated OLS coefficient in column 1 for the child benefit is less than the coefficient for other income, but not in a statistically significant way. When I instrument for total income in column two, the estimated coefficients on

[6] Throughout this paper, I condition on total income without the child benefit but including non-labor earnings. The results of this paper do not change if I were to compare only labor earnings to the child benefit.
[7] The instruments are described in the note to table 1. In the first stage regression of this instrument set on total non-benefit income, the F-statistic associated with the joint significance of the instrument set is 66.82. The F-statistic for the instrument set associated with the first stage regression on benefit income is 15.81.

both types of income are reduced.[8] I also perform a Hausman test and am unable to reject the OLS specification (the chi-square statistic is 0.047 with a p-value of 0.829). When I instrument for the child benefit and total income in column three, the two coefficients are still not statistically different. Again, I cannot reject the OLS specification with a Hausman test (the chi-square statistic is 2.21 with a p-value of 0.137). When I limit the data to the sub-sample that qualifies for the child benefit under the means test, the substantive results do not change. I never reject the hypothesis that the coefficients on child benefit income and other income are the same. Instrumenting for measurement error in both benefit and other income increases the coefficient on benefit, but I fail to reject the OLS specification with a Hausman test. The F-statistic associated with the restriction that other income and benefit income enter as total income is 1.51 with a p-value 0.22. Thus, even in the sub-sample of households that qualify for the child benefit, I still cannot reject that the child benefit is treated like any other income.

Following the same methodology as with food, I consider expenditure on alcohol and tobacco and clothing in table 2. As with food, I cannot reject the hypothesis that households treat child benefit income like all other types of income. There are two panels in table 2. The top panel considers expenditure on alcohol and tobacco. The bottom panel considers expenditure on clothing. For each panel, I report the regression coefficient on other income, the child benefit, and the F-statistic for the hypothesis that the two coefficients are the same. There are four columns in table 2. The first column includes the OLS regression described in column 1 of table 1. The second column contains the coefficients from instrumenting for both non-benefit and benefit income (as in column 3 of table 1). The last two columns correct for households reporting zero purchases. The third column estimates the Tobit model and the fourth column uses Powell's

[8] The overidentification test from regressing the residuals of the second stage regression on the instrument set has a chi-square statistic of 6.7 with an associated p-value of 0.15. This overidentification test is passed for every IV regression in this paper.

censored least absolute deviations estimator (1984) with bootstrapped standard errors. In general, the results from the last two columns appear similar to the OLS results. In addition, when I restrict the sample to the households that income qualify to receive the child benefit (not shown), the difference between the two sources of income is insignificant at the 10% level for both clothing and alcohol and tobacco.

4. Conclusion

I do not find evidence in support of a labeling effect for child benefits in Slovenia. I consider whether households spend child benefits as they do other income on food, alcohol and tobacco, and clothing. For each expenditure category, I never reject the hypothesis that child benefits are treated like non-benefit income. The results of this paper depend on last year's income not influencing consumption this year given this year's income and various regression controls. This assumption is far from perfect (footnote 4), but it seems weaker than that employed in most other studies of child benefits that rule out any effect of household demographics on household expenditure. The results of this study question the conventional wisdom that labeling a cash transfer a child benefit helps children in ways that regular income does not. Hence, it seems difficult to justify a universal child benefit on resource allocation grounds alone if universal extension causes lower benefits for poor households (as happened in Slovenia when it began phasing in a universal child benefit in 1994).

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Table 1: Food Expenditure and the Child Benefit

	OLS	IV-Other Income	IV-Both
Age-Eligible Sample - 1,797 Households			
Other Income	0.124	0.092	0.170
	(0.013)	(0.042)	(0.042)
Child Benefit	0.082	0.001	3.029
	(0.164)	(0.186)	(2.046)
F-Test, Equality	0.067	0.285	2.005
	(0.935)	(0.751)	(0.323)
Benefit Eligible Sample - 321 Households			
Other Income	0.319	0.219	0.261
	(0.025)	(0.093)	(0.120)
Child Benefit	0.502	0.382	0.912
	(0.155)	(0.196)	(0.750)
F-Test, Equality	1.535	1.129	0.961
	(0.217)	(0.325)	(0.388)

Standard errors are in parenthesis for regression coefficients. They are corrected for clustering and arbitrary heteroskedasticity. P-Values are in parenthesis for F-Tests. The reported f-statistics are for the null hypothesis that the coefficients on other income and benefit income are the same. All regressions in include a constant and controls for household size, the number of persons aged 0 to 5, 6 to 15, 16 to 25, and over 61, an indicator for the household head's gender, her age and age-squared, an indicator for her education, dummy variables for the household's location, region, and whether it is an agricultural household. The two stage least squares results instrument for measurement error in other income and/or the child benefit with an indicator for whether or not the household is active in the informal sector, regular employment, entrepreneurial activities, receiving fixed incomes (non-means tested), and number of persons eligible for the child benefit.

Table 2: Child Benefit Income, Alcohol, Tobacco, and Clothing

	OLS	IV	Tobit	CLAD
Alcohol and Tobacco				
Other Income	0.012	0.024	0.012	0.010
	(0.002)	(0.007)	(0.001)	(0.001)
Child Benefit	0.013	0.253	0.007	0.006
	(0.021)	(0.186)	(0.020)	(0.020)
F-Test, Equality	0.005	1.616	0.076	0.038
	(0.995)	(0.306)	(0.927)	(0.963)
Clothing				
Other Income	0.093	0.092	0.094	0.077
	(0.008)	(0.018)	(0.003)	(0.007)
Child Benefit	0.036	0.329	0.035	0.021
	(0.043)	(0.478)	(0.052)	(0.040)
F-Test, Equality	2.038	0.261	1.330	2.290
	(0.245)	(0.782)	(0.265)	(0.102)

Standard errors are in parenthesis for regression coefficients. They are corrected for clustering and arbitrary heteroskedasticity. P-Values are in parenthesis for F-Tests. The reported f-statistics test the null hypothesis that the coefficients on child benefit and other income are the same. All regressions include all controls listed in table 1. The two stage least squares results instrument for measurement error in other and child benefit income with the instrument set described in table 1. CLAD standard errors are bootstrapped with 50 replications. The regressions are on the 1,797 households that age-qualify for the child allowance.