

**Public Minimum Income Support Schemes and  
Processes of Asset Accumulation in Central and Eastern Europe**

Silvia Avram (European University Institute)

Paper Prepared for the IARIW-OECD Conference on Economic Insecurity

Paris, France, November 22-23, 2011

Session 6: Policies to Protect Against Insecurity

Wednesday, November 23, 2011, 2:45 - 4:15

# Public Minimum Income Support Schemes and Processes of Asset Accumulation in Central and Eastern Europe

Silvia Avram (European University Institute and ISER, University of Essex)

Paper prepared for the *2011 LARIW-OECD Conference on Economic Security*

Paris, November 22-23, 2011

Work in progress. Please do not cite without the author's permission

Income, labour market position and status attainment have long formed the core of inequality and stratification research. Likewise, redistributive policies have sought to equalize first and foremost income resources. Despite its potential for securing consumption and living standards, relatively little attention has been paid to wealth and asset accumulation (Keister 2000; Keister and Moller 2000; Spilerman 2000; Shapiro 2001; Kurz and Blossfeld 2004). Not only had asset accumulation not figured prominently in scholarly research, social policies traditionally associated with the welfare state have paid little attention to the distribution of assets and the lack of access to them among low-income households (Beverly and Sherraden 1999; Sherraden 2001)<sup>1</sup>.

Wealth distribution is heavily skewed not only in developing but also in developed countries. Given its allocation, large sections of the population possess either no or only a (fairly) small amount of wealth. As such, for a long time, assets as a resource were considered rather irrelevant for the well-being of the majority<sup>2</sup> (Keister and Moller 2000). Yet, assets and wealth may play a substantial role in shaping life chances and opportunities. As a result, policies that have an impact on the accumulation of assets among different groups, and thus influence stratification merit further investigation.

Traditionally, redistributive policies have focused on increasing or guaranteeing income (and indirectly, consumption) levels. Support for low-income households is usually structured in the form of cash transfers/ in-kind provision to boost consumption or in-kind provision of services in order to secure integration into the labour market. Policy proposals to foster asset accumulation (as an alternative to income based policies) among the poor have been put forward only recently and only on a limited basis (Beverly and Sherraden 1999; Carney and Gale 2001; Denton 2001; Sherraden 2001; Duflo, Gale et al. 2006). Yet, income support for the neediest is not neutral towards asset ownership. Far from promoting wealth accumulation, it might actually encourage dissaving, either through the transfers it provides or, more importantly, through an asset-test based eligibility. By supplying cash when other income is too low, the program effectively sets an income floor that may discourage saving for self-insurance purposes<sup>3</sup>. By making entitlement dependent on wealth possession, further disincentives to accumulate may be built in the program.

This chapter sets out to investigate the role of minimum income schemes in the patterns of asset accumulation among the poor in eight Central and West European countries. The chapter is

---

<sup>1</sup> However, a great deal of policies have fostered asset accumulation among the middle income classes, usually through tax incentives, but such fiscal welfare, in comparison with traditional spending measures has remained much more invisible.

<sup>2</sup> For a description of trends and levels of wealth inequality in the United States, see Keister, L. A. and S. Moller (2000). "Wealth Inequality in the United States." *Annual Review of Sociology* 26: 63-81, Carney, S. and W. G. Gale (2001). *Asset Accumulation Among Low-Income Households. Assets for the Poor: The Benefits of Spreading Asset Ownership*. T. M. Shapiro and E. N. Wolff. New York, Russell Sage Foundation: 165-205, Wolff, E. N., A. Zacharias, et al. (2005). "Household wealth, public consumption and economic well-being in the United States." *Cambridge Journal of Economics* 29(6): 1073-1090.; wealth inequality is, as a rule, much more severe than income inequality.

<sup>3</sup> The mechanism through which the presence income floor depresses precautionary saving is further explained in section V.

organized as follows. The following section discusses the role of assets in boosting life chances and opportunities, and thereby in shaping inequality and poverty. The third part outlines some of the specificities of Central Europe regarding savings and wealth accrual. The fourth part reviews the existing evidence, as well as its theoretical underpinnings concerning asset stocks and accumulation processes among low-income families. The fifth part examines potential links between the design of minimum income schemes and asset ownership patterns among recipients. The sixth part discusses data, research design as well as detailing hypotheses related to the income floor guarantee provided by minimum income programs, as well as asset tests contained by those programs and four asset variables present in the database. The seventh part presents the preliminary results for the income floor effect, followed by a discussion of asset test in section eight. Finally, the ninth section concludes

## **1.1 WHY ARE ASSETS IMPORTANT?**

Albeit ignored, especially in social policy research<sup>4</sup>, assets undoubtedly constitute an important part of economic, social and political resources. First of all, assets can be pictured as the present value of a capitalised income flow. Put differently, assets can be sold to generate an income stream. As such, wealth can be used to smoothen consumption<sup>5</sup> during periods of negative income shocks (Shapiro and Wolff 2001; Ziliak 2003; Wolff, Zacharias et al. 2005; Carter and Barrett 2006; Hurst and Ziliak 2006; Morillas 2007). Possessing wealth can also reduce the need for savings in order to insure against adverse risks, thereby freeing up more income to increase consumption levels (Spilerman 2000).

However, wealth cannot be reduced to an income stream. Its benefits encompass several advantages that are not available through income alone (Keister and Moller 2000; Edin 2001; Shapiro 2001; Stern 2001; Morillas 2007). First, wealth usually can be invested to generate more wealth, usually by making use of the capital markets. In addition, it can be used as collateral in order to secure access to credit needed to invest.

Second, productive assets are directly used in income/wealth generating activities, such as self-employment. Even less liquid assets such as housing can contribute positively to the development of entrepreneurial activities (especially among those in the lower part of the income distribution), by providing a base around which to organize a business.

---

<sup>4</sup> The American public benefits literature constitutes somewhat of an exception, although, studies looking into the impact of public programs on asset accumulation are far fewer than for example the ones investigating labour supply and earnings.

<sup>5</sup> For a discussion of the potential interdependencies between homeownership rates and national social insurance policies see Conley, D. and B. Gifford (2006). "Home Ownership, Social Insurance, and the Welfare State." Sociological Forum 21(1): 55-82.

Third, it offers its owner status, prestige and easier access to power. Campbell and Henretta envisage a status model in which status attainment is underlined by several status claims, all related directly or indirectly to consumption levels (Campbell and Henretta 1980). Since wealth represents a guarantee of the consumption level in the long-run, they conclude that asset accumulation constitutes another basis for claiming status, separate from income.

Fourth, wealth can enhance household stability and improve future orientation and planning, and promote risk-taking<sup>6</sup>. A review of the recently introduced Individual Development Accounts (IDA-s) shows that accumulated assets can offer a sense of security and can lessen the perceived economic strain among low-income families, even after income is controlled for (Shobe and Boyd 2005). Likewise, homeowners may be less likely to experience overwhelming emotional stress during times of economic hardship (Grinstein-Weiss, Williams Shanks et al. 2010).

Fifth, some forms of wealth can be enjoyed/used without consuming them (such as a house that is simultaneously being used for living and kept as an asset the value of which appreciated over time), are not exposed to labour market risks and often benefit from a more favourable tax regime compared to earnings.

Last but not least, wealth can be equated to improved opportunities. Wealth can be used to acquire other forms of desirable capital, such as human or social, thereby further boosting life chances. Morillas (2007) finds that wealth differentials are positively correlated to the inequality in the earnings potential, even when education is controlled for. Parental wealth has also been found to impact on the children's educational outcomes (Haurin, Parcel et al. 2000; Conley 2001; Boyle 2002; Huang, Guo et al. 2010). Huang, Guo et. al (2010) find that assets play a more important role than income in overcoming short-term borrowing constraints to finance an offspring's college education. Furthermore, their results suggest a long-term effect of wealth on the likelihood of entering college that parallels that of income. Especially early-childhood wealth is closely linked to higher academic ability<sup>7</sup>, as well as family expectations regarding educational attainment. In a similar vein, Conley's results (2001) suggest that wealth has an analytically distinct effect from income on both years of education, and on the transition to post-secondary education.

Homeownership has been linked with significantly improved quality of the home environment, both from a cognitive and an emotional perspective, and with raised achievement both in reading and mathematics (Haurin, Parcel et al. 2000). Additionally, children of home owners have been found to display fewer behavioural problems (Haurin, Parcel et al. 2000; Boyle 2002), to be

---

<sup>6</sup> Since wealth can be seen as a form of insurance against unsuccessful investment or entrepreneurial activities, it theoretically promotes higher risk activities, since higher risk is usually associated with higher return.

<sup>7</sup> The authors hypothesize that assets constitute a resource that can be invested in child development (creating a better home environment, attending a better school, financing extra-curricular activities etc.) Huang, J., B. Guo, et al. (2010). "Parental income, assets, borrowing constraints and children's post-secondary education." *Children and Youth Services Review* 32(4): 585-594.

more often engaged in extracurricular activities and to spend less time in front of the TV or playing video games (Grinstein-Weiss, Williams Shanks et al. 2010) compared to children of renters.

Thus, wealth brings about a series of advantages that cannot be subsumed to a labour market position, however exhaustively described. Ownership matters greatly for one's economic and social welfare and economic security, independently of the current flow of income. In fact, the desirable properties of wealth as a measure of well-being and resources have prompted suggestions to use it as an *alternative* to income. Income-based measures of well-being have strongly been criticised as arbitrary and not grounded in behavioural/ empirical facts (Birdsall and Londoño 1997; Keister 2000; Carter and Barrett 2006). Indeed, income is a flow measure and, as a result, is subjected to transitional and random fluctuations. Permanent or life-time income is virtually impossible to observe and thorny to estimate. In contrast, wealth represents a stock measure and accordingly captures the history of resource accumulation and previous income flows for a given individual or household. Given it is more stable over time, wealth could replace income as the basis for poverty measurements, as well as serve as a means to distinguishing transient from permanent or chronic poverty forms (Carter and Barrett 2006)<sup>8</sup>.

## 1.2 SAVING AND ASSET ACCUMULATION IN CENTRAL AND EASTERN EUROPE

Little work has been carried out to assess the size and distribution of assets in Central and Eastern Europe. Notwithstanding this dearth of data, a few facts are relatively uncontroversial, although sometimes they have been deduced on theoretical grounds rather than documented empirically.

First, national accounts data in the 1980's and 1990's indicates that former socialist countries experienced comparatively very high gross domestic saving rates (around 30% of GDP) during the 1980's, followed by a steep decline during the 1990s when the saving rates hovered around 10%. Many researchers have attributed part of this collapse to the elimination of involuntary or "forced" savings prevalent during the socialist era (Denizer and Wolf 1998; Denizer and Wolf 2000; Schrooten and Stephan 2001; Vadas 2009). Since consumers in a command economy are faced with pervasive shortages in a context of fixed prices, disequilibrium exists between demand and supply. Thus, consumers are not able to satisfy their entire demand at the official price and are left with a monetary overhang. If this excess money cannot find an outlet on the black market, it is transformed into "forced" or involuntary saving (Denizer and Wolf 2000). Price liberalization, one of the first macroeconomic measures taken during transition, would have eliminated the savings surplus by inflating prices to the point where demand and supply are in equilibrium. However, the

---

<sup>8</sup> The method proposed by the authors assumes that the function converting underlying assets into income streams is known.

existence of “forced” saving could not always be documented empirically<sup>9</sup>. For example, an analysis based on data generated by the World Bank’s “Savings across the World” project, while confirming the presence of involuntary saving in the three Baltic States, Poland, Bulgaria and Romania, could not find any evidence of this phenomenon in Hungary or in the Czech and the Slovak Republics (Denizer and Wolf 2000). It is important to remember though that the decline figures relate to aggregate and not to private or to household savings.

Second, although not directly addressing the issue of household savings and assets, studies of privatization policies in Central and Eastern Europe have assumed that the level of private wealth and accumulation during early transition was very low (Bolton, Roland et al. 1992; Walder 2003). The rationale underlying this assumption is based on the official socialist proscription of (excessive) private wealth and the relatively equalitarian distribution of income. However, private ownership has never completely disappeared in any country of the communist bloc. State seizures of property have focused mostly on business and land (i.e. production means), and have been less concerned with residential property (Hanley and Treiman 2004). Moreover, residential property continued to be bought and sold privately. Land has constituted another important form of private wealth, especially for rural residents. In Poland, collectivization has never really taken off so a large share of available agricultural land has remained in private hands. Even in countries where collectivization has been carried out successfully, households were allowed to keep small plots of land for private use (Szelenyi 1988). Private property accumulation has been further advanced by economic liberalization. In Hungary, reforms carried out in the 1970’s have further extended the limits of allowable private land, and instituted contracts between private individuals and the state for lease and purchase purposes (Szelenyi 1988). Thus, especially in more liberalized communist regimes, households were likely to privately possess their homes, to accumulate some consumer durables, or even to have a business in the secondary economy. Accumulated private property could be passed on to the next generation. In fact, inheritance laws, particularly after the Stalinist period, resembled to a large extent Romanic law<sup>10</sup>.

---

<sup>9</sup> The existence of “forced” savings during socialism is usually demonstrated by comparing the observed savings rate with the presumed rate under market economy conditions; the latter is computed by assuming that determinants of saving are the same in market and command economies at a certain level of development, determining savings elasticities based on a sample of market economies and substituting the socialist countries’ corresponding values of the savings’ determinants ; see Denizer, C. and H. C. Wolf (2000). "The Saving Collapse During the Transition." The World Bank Economic Review 14(3).

<sup>10</sup> Albeit Marxism proclaimed the abolishment of the inheritance of private property, the institution of inheritance has been firmly maintained both in the Soviet Union and in its satellites; with the exception of agricultural land in joint ownership, there were little restrictions on inheritance; furthermore, initially stricter dispositions have been gradually relaxed. For a description of Soviet and CEE inheritance law see Gsovski, V. (1947). "Soviet Law of Inheritance: I." Michigan Law Review 45(3): 291-320, Brown, L. N. (1963). "Inheritance and the Communist Legal Order." Soviet Studies 14(3): 295-313, Tay, E.-S. A. (1968). "The Law of Inheritance in the New Russian Civil Code of 1964." The International and Comparative Law Quarterly 17(2): 472-500, Foster-Simons, F. (1985). "The Development of Inheritance Law in the Soviet Union and the People's Republic of China." The American Journal of Comparative Law 33(1): 33-62, Malik, S. (1986). "Inheritance Law in the Soviet Union and the People's Republic of China: An Unfriendly

In addition to private property carried over directly from the socialist period, two other processes have additionally contributed to the formation of private assets stocks. On the one hand, restitution laws passed in the aftermath of the regime collapse have reconstituted partially or totally pre-communist property rights<sup>11</sup> (Hanley and Treiman 2004). On the other hand, some state property has been acquired, more or less onerously, by managers and insiders of state enterprises taking advantage of the de facto decentralization of economic decision-making in the early 1990s (Bolton, Roland et al. 1992; Hanley 1999). Yet, the absence of micro-data on household savings and possessions during the period makes it hard to gain a clear picture about patterns of asset accumulation and distribution in the years after the regime change.

Despite the data limitations, a few studies have looked into the determinants of private and household saving during transition (Denizer and Wolf 1998; Denizer, Holger et al. 2000; Denizer and Wolf 2000; Schrooten and Stephan 2001)<sup>12</sup>. Findings indicate that a higher saving rate is associated with having a higher relative income, being middle-aged and facing more uncertainty about the future (proxied by the level of liberalization<sup>13</sup>). The labour market position (sector of employment and type of employment) is found to have no impact on the propensity to save. One exception is unemployment significantly reducing the savings rate (Denizer and Wolf 1998). Lack of consumer durables is also positively correlated with increased saving rates, most probably a consequence of constrained consumer credit during the 1990's. No clear patterns emerged regarding the impact of either inflation or economic growth on the savings rate. While informative, these studies are far from providing a clear picture of Central and East European specificities in the area of savings and assets. Moreover, confusing patterns might have emerged due to the widespread use of proxies in the absence of adequate data. For example, economic growth has been found to have both a positive and a negative effect on the saving rate. In the first case, it has been interpreted as a proxy for income (Schrooten and Stephan 2001), whereas in the second it has been seen as a sign of consumption smoothening in the face of a J growth curve (Denizer and Wolf 2000). The quality of data represents a serious issue even when access to household level data is available. Because savings

---

Comment." *The American Journal of Comparative Law* 34(1): 137-144. However, there were limits on what could be held privately, as well as on the uses of private property (for example, the ban on profit seeking); it is not clear though to what extent these restrictions were actually enforced.

<sup>11</sup> Especially land and real estate property has been restituted to previous owners or their heirs; to a lesser extent, business property owners have also been compensated for their loss.

<sup>12</sup> Only Denizer, C. and H. C. Wolf (1998). "Household Savings in Transition Economies." *NBER Working Papers Series 6457*, Denizer, C., W. C. Holger, et al. (2000). *Household Savings in Transition Economies. Policy Research Working Paper No 2299*. Washington D.C., World Bank. use micro-data in their study.

<sup>13</sup> A higher liberalization index is used to stand for more certainty about the future institutional outlook; its negative impact on the saving rate is interpreted as more certainty about the future driving down the need for precautionary saving.



are generated residually based on income and expenditure, both of which are known to suffer from underreporting<sup>14</sup>, their level is probably underestimated.

Macroeconomic policies, as well as structural reforms have had an impact on wealth levels and distribution in Central East European countries during the first transition years. While no comprehensive study on the topic is known to the author, at least two facts are worth noting. First, the value of whatever savings households might have accumulated in liquid form (voluntarily or involuntarily) has been seriously reduced by bouts of inflation and, in some cases, hyperinflation during the first years after price liberalization. Inflation had a levelling effect by triggering greater losses for those with higher savings. Second, a rapid privatization of the publicly rented housing stock resulted in large home ownership rates across the region (Buckley and Tsenkova 2001; Pichler-Milanovich 2001). While each country adopted its own version of a privatization strategy, the housing stock has usually been sold at price levels well below market value, and often disregarding desirability features such as location (Pichler-Milanovich 2001). While the (very) low asking prices might have enabled some low-income households to become home-owners, they also reinforced existing inequalities in access to housing since tenants in more desirable housing units were comparatively advantaged. The low selling price of the publicly rented housing stock, together with the elimination of direct producer subsidies, is thought to have depressed supply and, as a result, increased housing prices, making home ownership much less likely for younger generations (Buckley and Tsenkova 2001; Pichler-Milanovich 2001). Some governments (such as the Hungarian one in 2001) have subsequently introduced indirect housing subsidies (directed at the consumer rather than at the producer), in an attempt to solve the housing issues. However, the subsidies seem to have further increased prices rather than eased demand (Vadas 2009).

### **1.3 ASSET ACCUMULATION PROCESSES AMONG LOW INCOME HOUSEHOLDS**

Although wealth and income are often found to be only weakly correlated (Keister 2000), those who possess few income resources are usually found to also lack wealth and assets. To some extent, this finding is not wholly surprising. By definition, the poor possess too little liquidities to ensure an adequate consumption level. As such, they are presumed to have virtually no leeway left to build up savings or to invest in asset accumulation (Keister and Moller 2000; Carney and Gale 2001; Sherraden 2001). Furthermore, low income families often have more irregular work histories, with more frequent unemployment spells, and less access to secure and stable jobs in the primary labour market. Both unemployment (Gruber 2001) and temporary employment (McGrath and Keister 2008) have been found to reduce asset levels, independently from income, education or occupation. However, the low income levels in themselves are not enough to account for the observed levels of

---

<sup>14</sup> See for example Denizer, C., W. C. Holger, et al. (2000). Household Savings in Transition Economies. Policy Research Working Paper No 2299. Washington D.C., World Bank..

asset ownerships, at least in developed countries such as the United States. In particular, the standard economic model used to explain saving patterns, i.e. the life-cycle accumulation model<sup>15</sup>, is reasonably accurate in accounting for observed wealth accumulation among middle and higher income households but seriously over-predicts asset-to-income ratios among low income families (Hubbard, Skinner et al. 1995; Browning and Lusardi 1996; Ziliak 2003; Fernández-Villaverde and Krueger 2004).

As a result, other reasons have been put forward to explain why the income poor might end up with little or no wealth (Beverly and Sherraden 1999; Carney and Gale 2001; Sherraden 2001). If income poverty is related to some unobserved psychological or behavioural characteristics (such as lack of motivation, lack of discipline and willpower, a preference for leisure and present rather than future utility etc), these features, in turn, might be responsible for wealth poverty as well. A shortage of both income and assets would in this case be a result of “deficient” choices stemming either from personal preferences or from socially shaped “deviant” behaviour. In fact, behavioural models of wealth accumulation (Browning and Lusardi 1996; Beverly, McBride et al. 2003) maintain that saving in itself requires active psychological or behavioural strategies to contain spending and to save. If such is the case, unobserved psychological traits that hamper “mental tricks” needed to restrain consumption (such as very high time discount rates), as well as lack of access to instruments facilitating savings (such as for example, transforming liquid wealth in less liquid forms like stocks or bonds) have the effect of lowering wealth accumulation relative to a given income level. Thus, the observed gap in wealth-to-income ratios between high and low income households could be accounted for if low income is correlated with an inability to implement psychological and/or behavioural saving strategies.

Finally, an often overlooked factor that can alter both the distribution of income and assets, as well as asset portfolios consists of existing economic and social institutions. These can facilitate, or on the contrary impede asset accumulation among the various income groups. Traditionally, policies supporting asset accumulation have relied on the tax system. The favourable tax treatment of mortgages has long been a well established means through which the state can encourage home ownership among the middle classes (Kurz and Blossfeld 2004; Shobe and Boyd 2005; Conley and Gifford 2006). In general, favourable tax treatment of capital gains and asset holdings has the potential to encourage asset building among the middle and upper income strata. Conversely, low and lower middle income households have usually not been able take full advantage of these tax incentives since their income was seldom high enough.

Other institutional barriers have hampered asset accumulation among the poor. Among them, lack of access to affordable credit has probably received the most attention, most often in

---

<sup>15</sup> For a comprehensive review of the various theoretical models used to explain patterns of saving, see Browning, M. and A. Lusardi (1996). "Household Saving: Micro Theories and Micro Facts." *Journal of Economic Literature* 34(4): 1797-1855.

connection to access to homeownership (Stern 2001; Karger 2004). Middle-income families have traditionally resorted to credit in order to purchase a home. Since homeownership is the single most important item in an average family's asset portfolio, and since buying a home has been a relatively safe and high-return investment, lack of access to affordable mortgage markets can be expected to directly limit wealth among poorer households. Moreover, a lack of access to credit may impede wealth build-up in more indirect but nonetheless important ways. Both entrepreneurial activities and human capital investment are credited with potentially very high rates of return, in terms of future income and ultimately asset accumulation (Sykes 2005). Credit is an important financing strategy both for launching one's own business and for investing in education. Finally, even short-term consumption credit may directly impact on asset accrual. Ethnographic studies (Karger 2004) have documented that, in the absence of a link to mainstream financial institutions, many poor families resort to fringe establishments such as pawnshops, rent-to-own stores, check cashers etc. that charge loan sharking fees and repossess collaterals, depleting the assets of the poor in the process.

Low-income groups have traditionally been targeted for state support not through the tax system<sup>16</sup>, but through direct provision of cash and services. More generally, the provision of cash transfers and of basic services forms the core of classic welfare state, whose effects on assets are much less known<sup>17</sup>. The next section is dedicated to reviewing the asset implications of one type of policy that is especially salient for the poor, means-tested social assistance.

#### **1.4 MEANS-TESTED PROGRAMS AND ASSET ACCUMULATION**

Welfare state variation among industrialized countries, both in quantitative and qualitative terms, is a well established fact (Esping-Andersen 1990). Although much less rich than their neighbours, Central and East European countries have established social insurance and assistance programs that largely resemble those established in the West (Collier, Roggeman et al. 1999; Barr 2002; Inglot 2008). Social assistance programs are no exception<sup>18</sup>. Albeit differing in a number of important respects, the policy designs of this type of program share several important characteristics. Firstly, although support for the poor has been made available under various forms, ranging from cash transfers, to subsidized housing, to in-kind provision of goods and especially services, the onus is generally put on two dimensions, i.e. enhancing consumption and the future labour market position. Nowhere does asset accumulation figure as an explicit policy goal. Secondly, programs are, at core, designed as a minimum income scheme, meaning that both eligibility and the amount of the disbursed benefit are tied to an income threshold. More specifically, the benefit tops up the current income of a recipient up to a certain threshold. As such, this type of program effectively establishes

---

<sup>16</sup> An important exception to this general pattern is the Earned Negative Income Tax in the US; another institutional barrier to asset accumulation among low-income households has been pinpointed in the lack of access to affordable credit.

<sup>17</sup> An exception is the relatively well-developed economic literature on the impact of public pension benefits on savings.

<sup>18</sup> By social assistance, I mean means-tested cash transfers and associated benefits that are made available based on need.

a consumption floor, thereby possibly reducing incentives for precautionary saving, especially for families with lifetime incomes close to the established floor. Thirdly, with few exceptions, means-tested programs take into account a claimant's assets when establishing eligibility. Asset-test can be justified on at least two accounts. On the one hand, as income is a flow measure, it is often very difficult to measure it precisely, especially when income sources are erratic as it is often the case with the poor. An asset-test can be presumably used to correct for any underestimation of the available income sources. On the other hand, since assets are a resource in themselves and as a rule, can be converted into an income stream, those possessing them cannot be considered "truly" in need.

These three features common to social assistance programs throughout Europe, albeit not necessarily intended to impact on ownership patterns, have the potential to depress asset accumulation among the low income population in general, and their clients in particular. By providing an income guarantee, the existence of a means-tested safety net can lower the motivation to save in order to insure against future risks (the income effect). Since the level of the benefit is set usually very low, most often below relative poverty lines, the strongest disincentives are experienced by those with low and very low incomes. In this case, the saving disincentive arises from the existence of the transfer itself. Moreover, a more generous income support would, in this view, worsen the saving disincentives.

A very low benefit can discourage asset accumulation in other ways. Often, the build-up of assets, especially that of home ownership, life insurance and pension plans, requires a long-term and steady ability to pay in (premiums, contributions, mortgage rates etc.), before any profit can be reaped. Yet, low income households are much more likely to experience variability in their income flows. A very low income guarantee would not allow the continuation of such payment while in receipt of the benefit and thus could, a priori, discourage any attempts to save through long-term (higher return) instruments (security effect). Note that according to this line of reasoning, the problem is not the existence of the benefit itself, but its level. Contrarily to the income effect, a higher income floor guarantee would be expected effectively enhance asset accumulation.

The effects described above are indirect, but means-tested programs for the poor can have a direct negative impact on asset accumulation among low-income households through their asset-test. Because entitlement is partly based on lack of access to wealth, the programs give rise to two adverse<sup>19</sup> effects. On the one hand, households that lack income could be forced to spend down their assets in order to become eligible for the benefit<sup>20</sup>. This outcome would artificially lower assets

---

<sup>19</sup> Note that the first effect is actually an intended one if the purpose is to force households to use up all their resources before public support kicks in and to thus conserve public resources. However, in light of the importance of assets for economic security, as well as their non-linear accumulation, drawing down on assets is potentially harmful for the household's long-term economic perspectives.

<sup>20</sup> Spending down assets may be particularly problematic in the case of the elderly who would like to bequest something to their heirs. Possessing assets may not only disqualify them from public aid but may hurt their children/ grandchildren if asset tests are used in conjunction with an extended family assessment unit.

among clients of the program. On the other hand, low-income households, knowing that their eligibility for the income safety net is conditional on not possessing any wealth, could be induced to forgo any asset accumulation so as to maintain entitlement in the case of adverse income shocks. Similarly to the income and security effects, this result would affect the entire low-income population, independently of whether it received any means-tested benefits or not.

To sum up, receipt or mere awareness of means-tested income support is possibly harmful for the prospects of asset ownership among the low-income strata. Not only is this effect undesirable, but it renders assistance to the needy self-defeating. As discussed in the first section, assets constitute an invaluable resource. Making them inaccessible to the poor seriously undermines their abilities to become self-sufficient and could increase dependence on benefit receipt. Studies in the field of development economics have found that the poor can weather successfully adverse shocks to their material situation if their (productive) assets have not dropped below a critical threshold (Barrett and Carter 2005; Barrett and Swallow 2006; Carter and Barrett 2006). In contrast, severe asset losses have been found to usually result in chronic poverty lock-ins.

Notwithstanding a few very brief theoretical discussions (Beverly and Sherraden 1999; Sherraden 2001), empirical explorations of the negative effects of social assistance programs on asset ownership among the poor have remained scarce. In addition, they are, by and large, confined to the American public assistance system, where quantitative evaluation of public policies is a well-entrenched tradition and where programs specifically targeting the poor have received more scholarly attention.

An early influential study (Hubbard, Skinner et al. 1995) attempted to reconcile the standard life-cycle accumulation model with the observed low wealth to income ratio among households with low lifetime earnings (proxied by education), by incorporating the impact of means-tested transfers on inter-temporal utility maximization. Two types of effects have been integrated in the model. First, since means-tested benefits provide a consumption floor in the case of negative income shocks, they reduce the need for precautionary saving. Second, since eligibility is asset-based, these programs usually entail an implicit 100% tax on wealth above certain thresholds. Both mechanisms should depress asset accrual among households that are current or potential clients of the programs. Using simulations of their proposed extended model, the authors have been able to reproduce the observed differences in the wealth to income ratios of high and low permanent income households. As a result, they conclude that public policies in the form of means-tested public assistance can account for the puzzle of very low wealth levels among lower-income households.

Albeit providing interesting insights, the study does not amount to a formal empirical test of either benefit levels or asset limits on wealth accrual among the economically vulnerable families. However, several changes in the eligibility rules governing the American public assistance system have allowed some authors to directly test for the presence of dissaving incentives in the design of means-tested benefits. Taking advantage of the changes introduced in AFDC in 1981 through the

Omnibus Budget Reconciliation Act (OBRA)<sup>21</sup>, Powers (1998) estimated a relatively large negative effect of asset tests. More specifically, her results indicate that a one dollar increase in the exempted assets limit induced a 25 cents increase in savings among poor female headed households with children.

Nevertheless, this finding remains controversial. More recent research centring on the transformation of asset eligibility rules brought about by the Personal Responsibility and Work Opportunity Act (PRWORA) in 1995<sup>22</sup> has failed to find conclusive evidence of a significant negative impact of asset tests on wealth accumulation among low income households eligible for public assistance. For example, Hurst and Ziliak (2006) find that both the target group (potentially eligible households) and the comparison group (low-income households without children) failed to increase their wealth stock in response to more generous asset limits. In addition, states implementing more generous asset limits did not experience greater wealth accrual among the target group compared to states making smaller adjustments. The authors conclude that asset limits present in means-tested public assistance programs are likely not binding<sup>23</sup>, and therefore of no consequence for wealth accrual among low-income households (vehicle ownership is an exception). Instead, means-tested transfers may reduce wealth levels among economically vulnerable households by providing a consumption floor and thus, reducing the need for precautionary saving. In another study, Ziliak (2003) uses a correlated random-effects generalized method of moments estimator to search for evidence of precautionary saving among the poor, the near-poor and the rich<sup>24</sup>. He finds that the poor show lower (especially financial) wealth to income ratios (compared to the near-poor and the rich) in states with higher AFDC/Food Stamps transfers. Apparently, the presence of a consumption floor depressed accumulation among the poor but not among the near-poor or the rich. Furthermore, his results indicate that asset tested benefits reduce wealth-to income ratios among the poor to a greater extent than non asset tested transfers. He attributes 42% of the gap in liquid holdings to income ratios to the presence of asset tested transfer income.

In a similar fashion, Nam (2008) analyzes the consequences of public assistance asset tests on financial savings. Using a somewhat larger target group (female headed households with children and less than 16 years of education), the author replicates previous findings of a statistically insignificant coefficient of the amount of asset limits on financial savings. However, replacing the amount of the asset limit with the length of time a relaxed asset limit has been in place does yield

---

<sup>21</sup> Overall, the law reduced the limit of allowable assets for AFDC recipients, with the exception of the primary home which became exempted; since previously the various states has different limits, sharper decreases in more generous states could be compared to smaller decreases in states with more stringent rules before the Act.

<sup>22</sup> The federal law allowed the states to implement their own asset limits in the new Temporary Assistance to Needy Families (TANF) program; the majority of the states took advantage to raise the limits of allowable assets for program clients; however, some states implemented more generous allowances than others.

<sup>23</sup> Low income households save too little anyway for the asset test to be relevant.

<sup>24</sup> The sample is split based on an average of predicted probabilities to be on welfare across several years, Ziliak, J. P. (2003). "Income Transfers and Assets of the Poor." *The Review of Economics and Statistics* 85(1): 63-76.

statistically significant results. More specifically, the longer a liberalized asset limit had been in effect, the greater the likelihood that the target group accumulated more financial assets relative to the comparison groups. Additionally, conditional on savings being larger than zero, both the value of the asset limit and the time length of implementation mattered in raising financial savings, suggesting that there may be a time lag before low-income families start saving in response to the higher asset limits. A similar time effect has been found in relation to the probability of owning a bank account.

Consumer durables have been shown to constitute a very important component of the wealth portfolio of low-income households (Fernández-Villaverde and Krueger 2004; Sullivan 2006). Since they may also constitute important consumption goods, their potential interaction with asset tests present in social assistance programs is of particular interest. Sullivan (2006) exploits interstate variation in asset limits related to TANF eligibility, but focuses on vehicle ownership and vehicle equity<sup>25</sup>. His findings indicate that vehicle ownership increased more in his target group (single mothers without a high school diploma), both in absolute terms and relative to a comparison group, when the state they resided in had higher vehicle limits for TANF participation. Vehicle exemptions and higher vehicle limits tended to increase both the likelihood of possessing a vehicle and vehicle equity. However, general asset limits had no influence on vehicle ownership. Despite the fact that implicit tax rates were lower on vehicles than on financial wealth, no evidence of asset reallocation was found.

Another US public program targeted at the poor is Medicaid. Similar to AFDC/TANF, eligibility for Medicaid involves restrictions on asset ownership. One study (Gruber and Yelowitz 1999) looked at potential effects of Medicaid coverage on the total net worth of low-income families, exploiting a differential change in eligibility rules across states to identify program effects. Results indicated that each \$1000 increase in “eligible Medicaid dollars”<sup>26</sup> reduced by 0.81 percent the odds of having positive assets. Correspondingly, each \$1000 increase in “eligible Medicaid dollars” depressed total net worth holdings by 2.51%, conditional on having positive assets. Nonetheless, the effects were relatively small in absolute terms, due to the very low levels of total net worth among the Medicaid eligible population.

Finally, several studies have investigated asset accumulation processes among the unemployed (Engen and Gruber 2001; Gruber 2001). Although unemployment insurance has different objectives and potentially addresses different needs than means-tested public assistance, the client populations of the two programs tend to share important similarities (such as lower education, lower life-time income and so on). Using state variation in unemployment insurance replacement rates as a proxy for future income uncertainty, Engen and Gruber (2001) test for the existence of

---

<sup>25</sup> Under TANF, most states implemented a more favourable treatment of vehicles than of financial assets when establishing eligibility.

<sup>26</sup> This is a measure computed by the authors to account for variation in eligibility depending on income, family size and composition and other household characteristics; see Gruber, J. and A. Yelowitz (1999). "Public Health Insurance and Private Savings." *Journal of Political Economy* **107**(6): 1249-1274.

precautionary saving. Their results indicate that higher replacement rates reduce wealth to income ratios, especially for younger workers. The magnitude of the effect they find is sizeable in percentage terms (2.8% drop in the financial wealth to income ratio for each 10% increase in the replacement rate), but small in absolute terms (around 241\$ at the median). In this case, the presence of a consumption floor implicit in the unemployment insurance benefits depresses saving. Nevertheless, findings in a different study (Gruber 2001) suggest that the unemployment insurance may play a positive role in wealth accumulation. In particular, individuals benefiting from more liberal replacement rates tend to draw down their assets at a slower rate. In this case, the presence of a more generous consumption floor mitigates dissaving during unemployment spells.

If studies of the effect of public transfers on asset accumulation are few and far between in developed countries, even less attention has been paid to processes taking place in the developing world. A study of the Chilean pension reform (Cerdeira 2008) concludes that the previous PAYG social security system had a negative impact on wealth among low educated workers, but not on the other categories of workers. The size of the effect was considerable: each peso in current future benefits in the PAYG system reduced the predicted wealth among low income workers by approximately 0.1 pesos<sup>27</sup>.

In the context of Central and Eastern Europe, several studies have addressed the issue of savings in connection with proposed reform of the pension systems<sup>28</sup> (Fultz and Ruck 2001; Hausner 2001). However, the primary interest of these studies has lied with approximating the extent of a rise in aggregate savings in the event of switching from a PAYG to a funded pension system. What is more, since implementation of pension reform has started only relatively recently<sup>29</sup>, results are estimated based on theoretical models rather than observed empirically<sup>30</sup>. As such, they shed little light either on mechanisms of wealth accumulation or on the actual impact of public transfers on observed asset levels specific to Central Europe. What is more, virtually no work has been carried out to examine the impact of an income floor guarantee and of asset based eligibility in minimum income schemes on patterns of asset accumulation among low-income households either in Western or in Central Eastern Europe.

## 1.5 HYPOTHESES, DATA AND METHODS

---

<sup>27</sup> However, it is not very clear why the author fails to find the same effect for the newer funded system; perhaps since the system had less time to establish itself, it is less trusted, and thus it depresses precautionary saving less.

<sup>28</sup> More exactly, the propositions of moving from a PAYG to a funded pension system, largely following the Chilean example; the World Bank has played an important part in promoting this transition with varying degrees of success.

<sup>29</sup> In some cases (for example Hungary), the transition has been temporarily “frozen” in the face of financial difficulties.

<sup>30</sup> A Hungarian study has carried out a similar exercise in connection to housing policies during the 2000's; Vadas, G. (2009). "The Housing Subsidy Scheme and Households' Wealth in Hungary: Urban Legends and Facts." *International Journal of Housing Policy* 9(1): 1-24.



### 1.5.1 HYPOTHESES

While the used dataset (the European Union-Survey of Income and Living Conditions) does not specifically collect detailed data on wealth levels (especially liquid forms of wealth), nonetheless, some information on some types of assets is available. More specifically, information exists on possession of consumer durables, accumulation of arrears, and capacity to face unexpected financial expenses. The last question is of special interest. In the absence of precise information on savings, it provides a first approximation of whether the household has some sort of short-term financial cushion<sup>31</sup>. Additionally, information exists on the income amounts that the household derives from its assets, i.e. income from interest, dividends, unincorporated business and income from rental of property. Asset generated income may be used as a proxy, albeit imperfect, of having positive net worth.

Thus, in the absence of any good measure of overall wealth, four separate asset related variables are used: consumer durables, arrears, asset generated income, and savings. It should be noted that despite being all related in some way to net worth, the four variables refer to types of assets that may be qualitatively different. As a result, they will be analysed separately.

All four asset proxies may be hypothesised to be affected by means-tested income support programs, yet the strength of the effects will probably differ. Consumer durables may represent an important form of asset accumulation for low-income households (Fernández-Villaverde and Krueger 2004; Sullivan 2006). As such, the presence of a state sanctioned income floor, by reducing the need for precautionary saving, depresses all asset holdings, including consumer durables. To the extent that program asset tests do count consumer durables as assets and deny eligibility to owners, they may further reduce the propensity to accumulate consumer durables. However, consumer durables are a special form of assets, in that they hold intrinsic consumption value. In effect, they are likely to be purchased primarily for their consumption value rather than as insurance for a rainy day<sup>32</sup>. Moreover, most social assistance programs will probably disregard basic household appliances when establishing eligibility (the possession of a car is probably the most notable exception). Both income floors and asset tests imply a negative effect on consumer durable accumulation. On the other hand, social assistance programs do provide their clients with additional income that may be used to purchase consumer durables (in some cases, programs may make special one-off benefits available precisely for this type of purchase). Thus, the programs' effect on the accumulation of consumer durables is ambiguous.

---

<sup>31</sup> Because of the way it is formulated (help from outside the household and medium and long-term loans are excluded), a positive response amounts to having some savings or being able to rely on short term (essentially credit card loans that must be paid off within a month). Thus, especially for low-income households which lack the extra income to cover an amount equal to the poverty threshold per household member from one month's income, a positive response is a good approximation of having some savings.

<sup>32</sup> Due to their rapid loss of value, consumer durables in effect make a poor saving device.

Arrears in existing payment schedules are not technically part of assets. Yet, debts do contribute to a household's net worth. It is not always clear how to interpret household debt. Often, debt is simply a sign of a household's access to the credit market, rather than a sign of financial vulnerability. What is more, debt in the form of credit is often used to build up assets, such as in the case of home mortgages or business loans. Arrears however paint a much clearer picture. Since they represent missed payments that often lead to penalties, stain credit histories and are directly endangering a household's existing possessions, they clearly indicate financial vulnerability. Means tested income support programs do not take into account negative wealth (i.e. debt) when determining entitlement. Consequently, asset tests are unlikely to be in any way related to the built-up of debt arrears. Conversely, the income floor guarantee present in a floor could add to arrear build-ups. The rationale is similar to precautionary saving. Households with lifetime low incomes might be more likely to resort to risky credit if they can count on an income source at all times. A higher income floor should therefore be associated with more arrears. Income provided by social assistance could also minimize arrears. Households that lose other income sources may still rely on this type of benefit to pay off existing debts, and thus avoid arrears. In this case, higher benefits should be associated with fewer arrears.

Financial assets are most likely to be negatively affected by the existence of means-tested programs. This form of savings lacks direct consumption value and is by its nature liquid and thus very easily convertible into income. It is thus perhaps best suited to insure against short and medium term income shocks. At the same time, financial assets are both easiest to detect and highly expected to be run down before public support kicks in. To sum up, both the income floor effect and the asset test effect are likely to depress financial assets. Theoretically, social assistance income could be saved and thus, it could (up to the asset limit) contribute to increased savings. However, this is a highly unlikely outcome given that in all countries social assistance is set so as to cover only minimum consumption needs.

Finally, means-tested income support programs are expected to also depress asset generated income. First, any type of assets underlying this type of income is both very likely to preclude participation in social assistance schemes and to be liable to depressed precautionary saving generated by the existence of a guaranteed income floor. Moreover, asset generated income is also part of the income test the household has to undergo in order to establish entitlement. Thus, it is subject to a marginal tax rate of 100%. Low-income households may be unwilling to invest in income generating assets under these conditions.

## 1.5.2 DATA AND METHODS

All the analyses are based on the 2007 European Union Survey of Income and Living Conditions longitudinal database (second version, released in March 2010<sup>33</sup>). Data regarding maximum benefits to which a family is entitled as well as the existence of asset test has been retrieved from the Mutual Information System on Social Protection Database (European Commission 2010).

Four separate sets of models have been constructed corresponding to the four types of asset variables. Both consumer durables and arrears are represented by an index constructed based on item response theory (ITR). An ITR model has been estimated using five indicators in the case of consumer durables (possession of a phone, a colour TV, a computer, a washing machine and a car) and three indicators in the case of arrears (existence of mortgage arrears, utility payment arrears and other purchase arrears). Indexes have been computed by predicting a single latent factor. A separate ITR model has been estimated for each country and each year in the dataset, thereby allowing the impact of the indicators on the latent factor to differ across countries and years.

Two program variables have been constructed, corresponding to the income floor and asset tests present in a country's social assistance program. Information on program rules<sup>34</sup> for eligibility has been used to compute the maximum benefit a family may have been awarded<sup>35</sup> during the income reference period, based on the age and number of its members. This is referred to as the income floor guaranteed by the program for the respective household. To maximize comparability, the maximum family benefit is expressed in consumption-based purchasing power parities<sup>36</sup>, as well as adjusted for inflation<sup>37</sup>. Both adjustments have been made using the EUROSTAT compiled indicators on consumer price indexes and purchasing power parities (see [http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database))

Regrettably, the information provided by the MISSOC database on asset tests is much vaguer than that on benefits. Only a few countries explicitly detail the contents of their asset test, a majority just stating its existence<sup>38</sup>. As a consequence, just a crude asset test indicator could be constructed. It contains information on the existence or absence of an asset test<sup>39</sup>, and in the case of its existence whether any significant (larger or equal to 1000 Euros) disregards are allowed<sup>40</sup>.

To account for the clustering of the data, three level hierarchical models have been used. Household observations are nested within households and, in turn, these are nested within

---

<sup>33</sup>Further information and accompanying documentation of EU-SILC can be found at [http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu\\_silc](http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc).

<sup>34</sup> Rules may differ both across countries and across years.

<sup>35</sup> Zero income is assumed.

<sup>36</sup> The EU 27 mean is taken as 1.

<sup>37</sup> The CPI for 2005 is taken to represent 100.

<sup>38</sup> To some extent, the lack of clarity is due to ambiguities in the national legislation itself. Furthermore, local or regional authorities may be given discretion in establishing entitlement, and therefore in the interpretation of asset limits provisions present in legislation.

<sup>39</sup> When an asset test is not mentioned anywhere among eligibility conditions, it is assumed to be absent.

<sup>40</sup> In the case the asset test is just mentioned, no disregards are assumed.

countries. This strategy not only adjusts standard errors due to non-independence of observations, but also implicitly introduces controls for household and country time-invariant characteristics.

All the hypotheses that have been discussed so far refer to the low long-term income population. Long term or lifetime income is, of course, unobservable. Current income is often too variable to be reliably used as a proxy for long-term income. As a result, two alternative definitions have been used to delimitate the low-income population. Firstly, because lack of education often acts as a barrier to upward mobility, the maximum level of education attained by a household member is used as a criterion. Low-income households are defined as households in which no member received post-secondary education. Secondly, use is made of the panel nature of the data. Since household income is observed in three and sometimes four consecutive years, low income households are defined as those households that are consistently found in the bottom two income<sup>41</sup> quintiles of the population. Applying the second criterion yields a much more reduced sample compared to the first one. For every dependent variable, two sets of models are presented. Each set corresponds to a different estimation sample defined using the education and the income criteria, respectively.

All sets of models contain several different specifications as the list of control variables is gradually expanded. Two types of control variables have been included: single parent family, no of children (<18); no of young children (<7), no of retired persons (>64), at the household level, and GDP per capita and the national unemployment rate during the previous year, at the country level. The selection of controls has been based on potential confounders of the relationship between the program characteristics faced by a given household and its assets. All are time-varying covariates that have the potential to influence both asset accumulation and benefits and eligibility in the event of participation in a social assistance program. Single parent households and households with children are more likely to both be asset poor (as they have not had the time or the resources to accumulate them), and more likely to be awarded social assistance benefits when claiming. Due to concerns regarding child poverty, often means-tested income support incorporates generous equivalence scales for children (in some cases counting them more than additional adults)<sup>42</sup>. Single parents are also, in some cases, awarded additional benefits under social assistance programs. Retired persons, on the other hand, are more likely to have accumulated assets and less likely to be social assistance clients due to minimum pension provisions. At the country level, benefits are likely to be cut in a recession and raised in times of economic boom especially in small Central European countries which have little leeway for anti-cyclical policies and are very vulnerable to high budget deficits. These same underlying economic trends however may also be responsible for asset depletion.

---

<sup>41</sup> Income refers to household equivalised income.

<sup>42</sup> See European Commission, D. E., Social Affairs and Equal Opportunities (2010). Mutual Information System on Social Protection Database, European Commission; [http://ec.europa.eu/employment\\_social/missoc/db/public/compareTables.do?lang=en](http://ec.europa.eu/employment_social/missoc/db/public/compareTables.do?lang=en).

One consistent finding of the savings literature is that saving behaviour is intimately linked to the life cycle (Browning and Lusardi 1996). Hence, the impact of disincentives from public assistance is also likely to vary with the life cycle. Since young families are disproportionately more likely to rely on social assistance (see Chapter 4) and since they also face significant barriers to saving, they might respond more rapidly to the income floor and asset test in a public income support program. In an attempt to capture potential differential effects of the income floor, interaction variables have been constructed for single parent, number of young children, and number of retired persons in the household. Additionally, the program impact is likely to become stronger as the household income decreases. Thus, average program effects in a larger sample, where a significant proportion of households have incomes that are substantially above the guaranteed income threshold, may be undetectable. As a result, an interaction term between household income floors and household net equivalised disposable income has been introduced in the model specifications relating to the education-based low-income household sample. Finally, since income floor effects may vary according to other context features such as the economic background or the larger institutional framework, random slope effects for income floor have been estimated.

It should be noted at this point that results pertaining to asset test effects should be regarded only as indicative, and not definitive. Unlike the income floor, asset tests vary only across countries, and are constant both across households and across time. As a result, there is too little variation to identify effects and too many confounding factors at the country level. Nevertheless, the analysis still allows for a *prima facie* test of asset based eligibility effects on asset accumulation among the low-income household population.

## **1.6 SOCIAL ASSISTANCE INCOME FLOOR EFFECTS**

### **1.6.1 SAMPLE DESCRIPTIVES**

Mean values for the four dependent variables, as well as all household explanatory variables included in the models are shown in Table 1 below, separately for the two estimation samples and for the entire sample of households. It clearly becomes apparent that the income based definition of the low-income household population produces a much more restricted sample, containing a higher share of single parents, a higher average number of children (but not of young children), and a lower average number of working age adults. The average number of retired persons is very similar in the two subsamples and close to the figure for the total sample. From a demographic point of view, the education based subsample resembles the total, whereas in the income based subsample households with fewer adults and more children are overrepresented.

As expected, the average disposable income is smaller in both samples compared to the average for all households, but substantially smaller in the second sub-sample. Education levels though are comparable in the two low income subsamples, but of course, well below the average educational level for the entire household population.

The disadvantaged nature of households in both samples is apparent from the asset variables as well. Both samples contain households that have, on average, fewer consumer durables compared to the total. Accumulation of arrears is also higher, whereas asset generated income and capacity to face unexpected financial expenses decrease. Lack of assets is more prevalent in the second estimation sample, as households register, on average, lower scores on the consumer durables index, on asset generated income (which is only about a sixth compared to that in the total sample) and on the capacity to handle unexpected expenses. The arrears index, on the other hand, is higher.

Table .1 Descriptive statistics (means) of included variables in the two estimation samples

	Education based definition	Income based definition	Total
Durables index	-0.355	-0.959	0.0014
Arrears Index	0.282	0.613	0.1634
Asset Income	56.37	13.73	88.80
Capacity to face financial expenses (%)	40.83	25.70	48.84
Max entitlement (Euros)	340	297.50	335.76
Single parents (%)	10.74	14.22	10.95
Average no of children	0.55	0.66	0.56
Average no of young children(<7)	0.16	0.18	0.17
Number of retired	0.48	0.49	0.43
Number of adults	1.68	1.46	1.81
HH annual disposable income	4228.46	2596.05	4875
Maximum education of a household member (ISCED)	3.67	3.69	4.32
N	84375	20403	122525

Source: Own calculations based on the 2007 EU-SILC longitudinal database

Last but not least, maximum family entitlements are relatively similar in the total sample and the one constructed using the education criterion. Maximum family entitlement is somewhat lower though in the sample constructed using the disposable income criterion. This finding suggests that

these households are likely to be smaller or contain members awarded proportionally smaller benefits (such as children).

### 1.6.2 INCOME FLOOR EFFECTS ON CONSUMER DURABLES

Estimates of the effect of the household specific income floor on the possession of consumer durables are presented in Table 2. The left-hand side of the table shown results derived based on the education based subsample, whereas the right-hand side presents estimates constructed using the income based subsample. Generally, estimates are consistent both across different model specifications and across estimation samples. In all cases the effect of the maximum benefit entitlement on the household's consumer durables is positive and statistically significant at the 99% level. When the full set of household and country controls is introduced (Models 1-3 and 2-3), each 100 PPP (in 2005 Euros) in the monthly income floor raises the household consumer durables index, on average, by 0.06 and 0.08 points, respectively. These effects are both statistically significant and relatively large in substantive terms, amounting to 6 and 8% of a standard deviation<sup>43</sup>.

The introduction of the three interaction terms (Models 1-4 and 2-4) raises the magnitude of the main effect to 0.09 and 0.13 points increase per 100 PPP respectively. In addition, both models suggest that the impact of the public assistance income floor diminishes for households containing single parents, young children and retired persons. The last model of the left-hand side panel also indicates that, as expected, the positive impact of the income floor is gradually attenuated as the household income rises. Finally, the last two models specifications (1-6 & 2-5) allow the effect of the income floor to vary across countries. It immediately becomes apparent that the country mean for the effect is much larger than the population average in the first estimation sample, but not in the second. However, both random slope models indicate that the random variation in county income floor effects is statistically different from zero. Unsurprisingly, the variation is much lower when a smaller sample is used. However, the average effect across countries is also smaller indicating that un-modelled cross country heterogeneity in the larger sample may be, to some extent, driving the findings.

To gain a clearer picture of how the income floor effects vary across countries, Table 3 below displays the best unbiased linear predictors (BLUP) estimators for all country random effects. The results should be interpreted with caution as there is a very small number of units at the country level, and the model may not be very well identified. That caveat aside, the most notable finding is that country random effects are relatively small in comparison to the country average. Indeed, in the overwhelming majority of the cases they are statistically equal to zero, irrespective of which model specification is used to derive them. In fact, when computing them from Model 2-5, country effects

---

<sup>43</sup> Keep in mind that the index has (by design) a variance of 1 and mean of 0.

are statistically indistinguishable from zero everywhere but in Slovenia, possibly due to the smaller sample size. In Slovenia, the effect of the maximum family benefit is slightly higher than the country average. When computations are based on Model1-6, the impact of a higher social assistance income floor is lower in the Czech Republic, Hungary and the Slovak Republic, while being larger in Latvia and Lithuania. The magnitude of the country effects are large enough to cancel the positive main effect in the Czech Republic, Hungary and the Slovak Republic and to almost double the main effect



Table 2 Social assistance income floor effects on possession of durables

	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Model1-6	Model2-1	Model2-2	Model2-3	Model2-4	Model2-5
<b>Fixed effects</b>											
Maximum Family Benefit	0.003 (0.000)	5.6E-04 (0.000)	6.0E-04 (0.000)	9.0E-04 (0.000)	0.0012 (0.000)	0.0011 (0.000)	0.003 (0.000)	6E-04 (0.000)	8.4E-04 (0.000)	0.0013 (0.000)	0.0006 (0.000)
Single parent		-0.0441 (0.002)	-0.0430 (0.002)	0.0172 (0.484)	0.0236 (0.336)	-0.0499 (0.068)		0.0354 (0.171)	0.0393 (0.127)	0.1156 (0.009)	0.0357 (0.165)
Number of children		0.3870 (0.000)	0.3820 (0.000)	0.3722 (0.000)	0.3874 (0.000)	0.3892 (0.000)		0.3604 (0.000)	0.3315 (0.000)	0.3161 (0.000)	0.3482 (0.000)
Number of children under 7		-0.2960 (0.000)	-0.2953 (0.000)	-0.0739 (0.001)	-0.0740 (0.001)	-0.2924 (0.000)		-0.2288 (0.000)	-0.2281 (0.000)	-0.0482 (0.235)	-0.2160 (0.000)
Number of working-age adults		0.4776 (0.000)	0.4763 (0.000)	0.4616 (0.000)	0.4521 (0.000)	0.4541 (0.000)		0.4341 (0.000)	0.4263 (0.000)	0.4111 (0.000)	0.4100 (0.000)
Number of retired persons (>64)		-0.0024 (0.830)	-0.0010 (0.925)	0.0191 (0.261)	0.0088 (0.596)	-0.0199 (0.077)		0.0752 (0.003)	0.0841 (0.001)	0.1827 (0.000)	0.0276 (0.276)
Unemployment rate - Previous year			0.0314 (0.000)	0.0313 (0.000)	0.0408 (0.000)	0.0368 (0.000)			0.0252 (0.001)	0.0241 (0.001)	0.0349 (0.000)
GDP/capita Previous year			-4.0E-06 (0.389)	-5.5E-06 (0.243)	-4.1E-05 (0.000)	-2.5E-05 (0.000)			-6.8E-05 (0.000)	-7.1E-05 (0.000)	-1E-04 (0.000)
Max Family Benefit* Single parent				-1.4E-04 (0.002)	-1.2E-04 (0.000)					-2E-04 (0.029)	

	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Mode1-6	Model2-1	Model2-2	Model2-3	Model2-4	Model2-5
<b>Fixed effects</b>											
Max Family Benefit* No children<7				-4.6E-04 (0.000)	-4.5E-04 (0.000)					-4.1E-04 (0.001)	
Max Family Benefit* No persons>64				-8.4E-05 (0.029)	-5.5E-05 (0.141)					-3.6E-04 (0.000)	
Household disposable income					0.001 (0.000)	4.8E-05					1.4E-04 (0.000)
Max Family Benefit* Household income					-6.9E-08 (0.000)						
Random Intercept (SD)-Country Level	0.4514 (0.000)	0.2085 (0.000)	0.2463 (0.000)	0.24743 (0.000)	0.3041 (0.000)	0.3884 (0.000)	0.4447 (0.000)	0.1612 (0.000)	0.2580 (0.000)	0.2439 (0.000)	0.3959 (0.000)
Random Slope-Max Family Benefit- Country level							0.0007 (0.000)				0.0005 (0.000)
Random Intercept -(SD) HH level	1.3624 (0.000)	1.2208 (0.000)	1.2210 (0.000)	1.2172 (0.000)	1.166 (0.000)	1.185 (0.000)	1.3688 (0.000)	1.2511 (0.000)	1.2522 (0.000)	1.2458 (0.000)	1.219 (0.000)
Residual Variance	0.6822	0.6805	0.6797	0.6799	0.6862	0.6840	0.7194	0.7141	0.7101	0.7103	0.7122
N	84373	83994	83994	83994	83994	83965	20403	20319	20319	20319	20319

Note: p values in parentheses

Source: Own calculations based on the EU-SILC longitudinal database.

in the two Baltic countries.

Table .3 Income floor impact on consumer durables-country random effects

Country	Model 1-6			Model2-5		
	Estimate	95% CI		Estimate	95%CI	
CZ	-8.5E-04	-0.0014	-0.003	-3.4E-04	-9E-04	2.1E-04
EE	4.4E-04	-0.002	0.0011	7.4E-04	-3.7E-04	9.3E-04
HU	-7.5E-04	-0.0013	-0.0002	-5.0E-04	-0.001	3E-05
LV	7.1E-04	1.5E-05	0.0014	3.5E-04	-0.0011	4.4E-04
LT	9.3E-04	0.0002	0.0016	3E-04	-4E-04	0.001
PL	5E-04	-3.6E-04	0.0013	-8.3E-05	-9.5E-04	7.8E-04
SI	-2.5E-04	-8.1E-04	0.0003	9E-04	3.8E-04	0.014
SK	-7.2E-04	-0.0013	-1.4E-04	-2.1E-04	-8E-04	3.8E-04

Source: Own calculations based on the EU-SILC 2007 longitudinal database

The control variables largely behave as expected. Furthermore, the estimated effects are invariant to model specification. Households with more income are more likely to possess more consumer durables. Conversely, households with young children are less likely to own consumer durables. On the contrary, having more older children is associated with having, on average, more consumer durables. This is not entirely surprising if the child variables are seen as a marker of a household's "age". Households that have been started earlier are more likely to contain more old children and fewer young children. They are also more likely to have had the time to accumulate durables. Single parenthood is detrimental to asset accumulation, albeit the effect is not statistically significant in the second estimation sample. However, note that no dependency ratio effects, i.e. having fewer adults in the household, are captured by the coefficient for single parenthood. Due to the way the variable has been defined<sup>44</sup>, single parents may live in households that contain more than one adult (for example, in an extended family household). Not surprisingly, the number of working-age adults has a very large positive effect on owning durables (the index is raised about half a standard deviation for each extra adult). Possibly reflecting life cycle effects, households containing more retired persons are more likely to have a higher consumer durables index in the income based sample.

Lastly, country level features display some puzzling patterns. Contrary to expectation, a higher unemployment rate during the previous year raises the expected consumer durables index<sup>45</sup>. The effect is stable and statistically highly significant. On the other hand, an increase in the GDP per

<sup>44</sup> The dummy takes on the value of one if having minor children in the household and not cohabiting, either legally (included marriage) or informally; indeed, the term parent is used loosely to encompass both parents and other guardians.

<sup>45</sup> Similar results are obtained when the current unemployment rate is used instead of the lagged rate.

capita seems to have a negative effect on durables possessions, but only at the bottom of the income distribution.

### 1.6.3 INCOME FLOOR EFFECTS ON THE ACCUMULATION OF ARREARS

Income floor effects on the accumulation of arrears are shown in Table 4. Initially, as predicted, a higher income floor raises the score on accumulated arrears. On average, an increase of 100 PPPs (in 2005 terms) increases the expected arrears index by 10% of a standard deviation in the education based sample and by 30% in the income based one. These are large effects indeed. The introduction of household and country level covariates reduces the estimated effect in the first sample, but not in the second. When the full set of household and country level variables is present (Models 1-3 and 2-3), the index of accumulated arrears is predicted to increase with approximately 1% in the larger sample and 20% in the second, smaller sample for each 100 PPPs of the income floor.

The effects are heterogeneous across the income distribution. Notably, a higher income floor is associated with an increased likelihood of cumulating arrears only at the bottom of the income distribution<sup>46</sup>. Other household characteristics, such as single parenthood, number of young children or number of retired, do not seem to affect the magnitude of the income floor effect. Interaction terms are statistically insignificant both in all three models where they are included (i.e. Model 1-4, 1-5 and 2-4).

Finally, the last two models (1-6 & 2-5) allow for the effect of the income floor to vary across countries<sup>47</sup>. In both models, standard errors for the random slope suggest there is statistically significant cross-national differentiation in the main effect of the public assistance income floor. To gain a clearer picture of the cross-national patterns, Table 5 displays predicted country random effects using posterior Bayesian probabilities. Despite being relatively large in magnitude, country random slope effects are imprecisely estimated. As a result, only in Estonia do they remain statistically significant in both models, while in Lithuania they are statistically different from zero only in Model 1-6. Nonetheless, results are consistent across estimation samples for all countries suggesting a lower impact of the income floor on the accumulation of arrears in the Czech Republic, Hungary, Latvia, Lithuania and Slovenia, while and a larger one in Estonia, Poland and the Slovak Republic. Combined with the main effect, results suggest a positive impact of the income floor on the arrears index everywhere but in Lithuania, Slovenia and possibly Latvia.

---

<sup>46</sup> Notice that the coefficient becomes larger when low income is more accurately modeled, i.e. in Model 1-5 and in the Models based on the second, more restricted, sample.

<sup>47</sup> Note that to keep only one random slope, the interaction variables are removed.

Table 4 Social assistance income floor effects on accumulation of debts (arrears)

	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Model1-6	Model2-1	Model2-2	Model2-3	Model2-4	Model2-5
<b>Fixed effects</b>											
Maximum Family Benefit	0.001 (0.000)	1.2E-04 (0.000)	8.3E-04 (0.000)	6.7E-04 (0.000)	4.3E-04 (0.002)	0.0014 (0.013)	0.003 (0.000)	0.002 (0.000)	0.002 (0.000)	0.001 (0.000)	0.0032 (0.015)
Single parent		0.3773 (0.000)	0.3761 (0.000)	0.3277 (0.000)	0.3119 (0.000)	0.3665 (0.000)		0.3767 (0.000)	0.3673 (0.000)	0.2454 (0.082)	0.3406 (0.000)
Number of children		0.1416 (0.000)	0.1462 (0.000)	0.1504 (0.000)	0.1247 (0.000)	0.0942 (0.000)		0.0596 (0.149)	0.0825 (0.048)	0.0924 (0.029)	0.0139 (0.745)
Number of children under 7		0.1022 (0.002)	0.1061 (0.003)	0.0328 (0.558)	0.0420 (0.440)	0.1027 (0.002)		-0.0462 (0.527)	-0.0489 (0.502)	-0.1117 (0.307)	-0.0367 (0.612)
Number of working-age adults		-0.0464 (0.005)	-0.0436 (0.010)	-0.0391 (0.022)	-0.0174 (0.306)	-0.0322 (0.069)		0.0379 (0.302)	0.0414 (0.266)	0.0494 (0.194)	0.0194 (0.618)
Number of retired persons (>64)		-0.3986 (0.000)	-0.3988 (0.000)	-0.4439 (0.000)	-0.4340 (0.000)	-0.4011 (0.000)		-0.6379 (0.000)	-0.6473 (0.000)	-0.68744 (0.000)	-0.5634 (0.000)
Unemployment rate Previous year			-0.0109 (0.414)	-0.0111 (0.408)	-0.0193 (0.147)	-0.0145 (0.219)			-0.0073 (0.799)	-0.007 (0.806)	-0.0168 (0.472)
GDP/capita Previous year			4.9E-05 (0.002)	5E-05 (0.001)	9.7E-05 (0.000)	6.7E-05 (0.000)			0.0002 (0.000)	0.0002 (0.000)	0.0002 (0.000)
Max Family Benefit* Single parent				1.12E-04 (0.394)	8.1E-05 (0.537)					3E-04 (0.281)	
Max Family Benefit* No children<7				1.45E-04 (0.103)	1.2E-04 (0.182)					1.4E-04 (0.443)	

	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Model1-6	Model2-1	Model2-2	Model2-3	Model2-4	Model2-5
<b>Fixed effects</b>											
Max Family Benefit* No persons>64				1.4E-04 (0.103)	1.0E-04 (0.238)					1.4E-04 (0.523)	
Household disposable income					-1.2E-04 (0.000)	-7.5E-05 (0.000)					-0.0003 (0.000)
Max Family Benefit* Household income					7.17E-08 (0.000)						
<b>Random Intercept (SD) -Country Level</b>	0.3314 (0.000)	0.2557 (0.000)	0.3459 (0.000)	0.3442 (0.000)	0.3370 (0.000)	0.163 (0.000)	0.5023 (0.000)	0.3683 (0.000)	0.8034 (0.038)	0.5396 (0.050)	0.4031 (0.017)
<b>Random Slope- Max Family Benefit- Country level</b>							0.0015 (0.000)				0.0033 (0.000)
<b>Random Intercept (SD) -HH level</b>	1.945 (0.000)	1.9041 (0.000)	1.904 (0.000)	1.903 (0.000)	1.880 (0.000)	1.883 (0.000)	2.085 (0.000)	2.022 (0.000)	2.023 (0.000)	2.024 (0.000)	1.984 (0.000)
<b>Residual Variance</b>	2.444	2.450	2.449	2.450	2.452	2.451	2.806	2.808	2.802	2.805	2.798
N	83301	82930	82930	82930	82901	82901	20076	19992	19992	19992	19991

Note: p-values in parentheses

Source: Own calculations based on the 2007 EU-SILC longitudinal database.

It is not clear what program characteristics drive the cross-national heterogeneity in impact, if any. Examples of strong income floor effects on debt accumulation can be found both among countries with relatively more generous social assistance programs (for example, the Slovak Republic) and among countries with more restrictive assistance benefits (for example, Estonia). Overall, there is some indication that social assistance might be playing a negative effect on indebtedness, possibly by encouraging households to take on debt<sup>48</sup>.

Table 5 Income floor effects on arrears accumulation-country random effect

Country	Model 1-6			Model 2-5		
	Estimate	95% CI		Estimate	95%CI	
CZ	-0.0001	-0.0012	0.001	-6.7E-04	-0.0031	0.0018
EE	0.003	0.002	0.004	0.0065	0.0037	0.0093
HU	-6.2E-04	-0.0017	5.1E-04	-0.0016	-0.0041	0.0009
LV	-0.0012	-0.0026	1.5E-04	-0.0017	-0.0051	0.0015
LT	-0.0010	-0.0023	4.0E-04	-0.0030	-0.0059	-0.0002
PL	4.72E-04	-0.0012	0.0021	0.0011	-0.0030	0.0052
SI	-9.7E-04	-0.0021	0.0015	-0.0023	-0.0048	0.0001
SK	1.3E-04	-0.001	0.0013	0.0018	-0.0007	0.0043

Source: Own calculations based on the EU-SILC 2007 longitudinal database

Coefficients of control variables for the most part have the expected signs. Households containing single parents are more likely to accumulate debt arrears. The effect is particularly large, at around a third of a standard deviation. A larger number of children present in the household is also linked to increased arrears. Having more children also raises the expected arrears index, particularly in the first estimation sample. Partly reflecting much lower debt levels, households composed of retired persons are much less likely to have amassed arrears. On the other hand, the arrears index drops as the number of working age adults in the household rises, albeit the effect is detectable only in the education based subsample.

Finally, the lagged unemployment rate seems to play no role in the arrears accumulation process<sup>49</sup>, while the GDP/capita indicator is positive and significant. Thus, a higher GDP/capita in the previous year is likely to raise the index of accumulated arrears. This impact is particularly large

<sup>48</sup> A selection effect may also be responsible for this result if social assistance administrators are more likely to grant benefits to indebted households and low-income households are aware of this fact; in this case, it is not the income floor itself but the screening process embedded in social assistance that is driving the negative effects.

<sup>49</sup> It should be kept in mind though that the analyzed period (2003-2006) is a period of economic growth and falling unemployment in all the countries under review.

at the bottom of the income distribution<sup>50</sup>, suggesting the low income families may be more likely to take on excessive debt in times economic boom.

#### 1.6.4 INCOME FLOOR EFFECTS ON THE POSSESSION OF INCOME GENERATING ASSETS

Ideally, social assistance income floor effects would be tested directly against the size of income generating assets a household possesses. Since the EU-SILC does not contain information on assets themselves, asset generated income is used as a proxy. The analysis is carried out in two steps. First, a three-level logistic regression estimates income floor effects on the likelihood of having positive asset income. Admittedly, this is only a rough proxy that underestimates the percentage of the population holding assets, if no income has been derived from them during the income reference period. In a second step, the amount of the income generated from assets is used as a proxy of the size of the assets themselves. Whereas in principle the amount of the income stream and the value of the assets behind it should closely correlate, there are two caveats to be mentioned. Saving and investment behaviour are known to be dependent on the stage of the life course (see the discussion in section IV). As a consequence, the relationship between asset income and the underlying assets will differ across households. For example, younger households may be willing to rely on riskier asset investment strategies that usually yield a higher rate of return. Relying on asset income to impute their assets will lead to overestimation. Conversely, the assets of older households that are usually prone to pursue safer asset investment strategies will be underestimated. Other household characteristics might similarly influence the relationship between asset income and assets. Similarly, if broader economic, social or cultural factors at the national level affect the propensity to invest in different types of assets, the relationship between asset income and assets will vary not only across households but across countries<sup>51</sup>. Despite these limitations, asset income is the best available proxy for the amount of assets themselves. Therefore, the analysis proceeds by estimating social assistance income floor effects on asset income (in logarithmic form), conditional on having such assets (i.e. asset income is positive).

Table 6 below shows results of program effects on the presence or absence of asset generated income. In the simplest models in which only household and country random intercepts are controlled for (Models 1-1 and 2-1), a higher income floor actually increases the likelihood of owning income generating assets. The effect is highly statistically significant but very limited in magnitude: an increase of 1000 PPP (in 2005 Euros) triggers an increase in the odds ratio of owning

---

<sup>50</sup> Notice the difference in magnitude between Models 1-3/1-5 and Models 1-6 & 2-3/2-5.

<sup>51</sup> This is partly solved by using a three level hierarchical model that implicitly controls for time-invariant country characteristics.



Table .6 Social assistance income floor effects on the likelihood of having positive asset generated income

	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Model2-1	Model2-2	Model2-3	Model2-4
<b>Fixed effects</b>									
Maximum Family Benefit	1,000006 (0,000)	1,000001 (0,327)	1,000001 (0,333)	1,000003 (0,000)		1,000007 (0,002)	1,000003 (0,232)	1,000003 (0,274)	1,000005 (0,092)
Single parent		1,1333 (0,136)	1,1191 (0,191)	1,1249 (0,225)			1,1401 (0,450)	1,1415 (0,463)	1,1099 (0,629)
Number of children		0,9236 (0,073)	0,9420 (0,251)	0,9202 (0,023)			0,8930 (0,222)	0,9565 (0,646)	0,9620 (0,700)
Number of children under 7		0,8543 (0,044)	0,8371 (0,027)	0,9580 (0,576)			0,8798 (0,464)	0,8685 (0,439)	0,9911 (0,964)
Number of working-age adults		1,3900 (0,000)	1,3911 (0,000)	1,1860 (0,000)			1,3318 (0,000)	1,2854 (0,002)	1,2729 (0,002)
Number of retired persons (>64)		1,3711 (0,000)	1,3364 (0,000)	1,0174 (0,734)			1,8547 (0,000)	1,7490 (0,000)	1,8087 (0,000)
Unemployment rate Previous year			0,6391 (0,000)	0,5760 (0,000)				0,6134 (0,000)	0,6601 (0,000)
GDP/capita Previous year			1,0002 (0,000)	1,0004 (0,000)				1,0002 (0,000)	1,0003 (0,000)
Max Family Benefit* Single parent				1,0000 (0,741)					1,0000 (0,791)

Max Family Benefit*				0,9999					0,9999
No children<7				(0,031)					(0,152)

Max Family Benefit*				1,000001					0,9999
No persons>64				(0,012)					(0,875)

Household disposable  
income

---

<b>Random Intercept</b>									
<b>(SD) -Country Level</b>	4,264	4,901	7,462	3.1168	3,795	4,139	4,955	2,4901	
	(0,050)	(0,050)	(0,000)	(0.000)	(0,052)	(0,052)	(0,066)	(0,000)	

---

<b>Random Intercept</b>									
<b>(SD) -HH level</b>	10,768	10,762	11,499	44.5342	9,537	9,671	10,695	10,361	
	(0,000)	(0,000)	(0,000)	(0.000)	(0,000)	(0,000)	(0,000)	(0,000)	

---

N	84375	83996	83996	83996	20403	20319	20319	20319	
---	-------	-------	-------	-------	-------	-------	-------	-------	--

Note: coefficients represent odds ratios; p-values in parentheses  
Source: Own calculations based on the 2007 EU-SILC longitudinal database

versus not owning of 1,006 times. Moreover, the effect seems to be due to differences at the household level. When additional controls are introduced in the form of household and country characteristics, the coefficient of the income floor drops further and become statistically indistinguishable from zero. Results are consistent across both estimation samples.

Household and country level variables generally have the expected effects. Families having more children, and especially more young children are less likely to have income from assets. This is to be expected since households with young children are themselves “young” so they have had fewer opportunities to amass income generating assets. On the contrary, families where there are more working age adults or more retired persons are more likely to report some asset generated income. The coefficient for single parenthood has the wrong sign but is statistically insignificant. As expected, a higher unemployment rate in the previous year depressed the likelihood of having positive asset income, while a higher GDP/capita increases it. Generally, both estimation samples yield coefficients that are very similar in magnitude, although due to its lower size, coefficients for the second sample are less often statistically significant. Adding in country level controls does not change the impact of the household features.

All six specifications point to substantial and significant variance to be explained at the household level, i.e. by household “fixed” characteristics, but very little or virtually no variance at the country level. Models containing income floor interaction effects or random slope effects could not be estimated due to lack of convergence<sup>52</sup>. Accordingly, no results are presented.

Social assistance income floor effects on asset income<sup>53</sup>, conditional on having positive asset income are described in Table 7. Note that both sample sizes shrink considerably due to the discarding of all household-years for which asset income is zero. Not surprisingly, given the low power of the models, the maximum family social assistance benefit is statistically non-significant in all specification. More importantly, except for the last three models (2-2 to 2-5) the coefficient is positive, contrary to expectations. In addition, in substantive terms, the size of the impact is minute, regardless of the presence or absence of other controls. Models 1-6 and 2-5 contain, on top of household and country features, a random slope for the effect of the social assistance income floor. Despite the country average being somewhat larger than the population average, variation in the country coefficients for the income floor is statistically (and one might add also substantively) zero.

Household characteristics have coefficients that conform to the predicted pattern. Single parenthood tends to lower asset income, albeit in the second sample the coefficient is insignificant and wrongly signed. Analyses undertaken using the first larger sample point towards single

---

<sup>52</sup> Several specification alternatives and methods of estimation have been attempted; successful convergence was not achieved under any of them.

<sup>53</sup> For all countries, asset income is expressed in Euros and then it is transformed in logarithmic form. Using the logarithmic form necessitates the exclusion of cases with zero asset income.



	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Model1-6	Model2-1	Model2-2	Model2-3	Model2-4	Model2-5
<b>Fixed effects</b>											
Max Family Benefit* No persons>64											
Household disposable income											
Max Family Benefit* Household income											
<b>Random Intercept (SD) -Country Level</b>	1,642 (0,046)	1,625 (0,046)	1,162 (0,013)			1,603 (0,000)	1,502 (0,051)	1,476 (0,051)	1,593 (0,000)		1,472 (0,038)
<b>Random Slope- Max Family Benefit- Country level</b>						5,11E-11 (0,307)					5,07E-11 (0,327)
<b>Random Intercept (SD) -HH level</b>	2,122 (0,000)	2,107 (0,000)	2,114 (0,000)			2,113 (0,000)	1,412 (0,000)	1,404 (0,000)	1,414 (0,000)		1,418 (0,000)
<b>Residual Variance</b>	1,1521	1,1531	1,1489			1,1489	0,9135	0,9108	0,9009		0,9009
N	9374	9367	9367			9367	1581	1581	1581		1581

Note: dependent variable is asset income in logarithmic form; p-values in parentheses;  
Source: Own calculations based on the EU-SILC 2007 longitudinal database.

parenthood diminishing log income by 13 eurocents, a relatively minor effect. Having more young children also reduces the expected asset income, on average, by 17 eurocents for each child (the effect is not significant in the second sample). Conversely, the presence of more working-age adults or retired persons is associated with higher asset income, although the magnitude of the impact is small (again the effect is not statistically significant in the second sample). Both country level covariates have the expected signs, but are statistically indistinguishable from zero except for GDP/capital in the second sample. The finding is somewhat puzzling given the much lower N of the utilized income-based sample. One possible explanation consists of economic growth being particularly beneficial for asset accumulation among the poorest.

A significant portion of the variation in asset income (between 37 and 47% depending on the chosen sample) is explained by unmeasured “fixed” household characteristics, as shown by the large random intercept variation at the household level. Time-invariant country features also account for an important part of the overall asset income variable (between 26 and 39% of total variance). Both country and household level random intercept variances were found to be statistically different from zero, regardless of what specification was used.

#### 1.6.5 INCOME FLOOR EFFECTS ON THE LIKELIHOOD OF HAVING SAVINGS

Finally, Table 8 presents the results of six regressions modelling the effect of social assistance income floors on the capacity to face unexpected expenses. As mentioned, this variable is taken as a proxy for the existence of savings in low-income households. Following the template of previous analyses, two sets of regression coefficients are shown, one for each estimation sample discussed in section VII.1. In the simplest models (1-1 and 2-1), only the maximum benefit a family may be entitled to in the absence of income is included together with random intercepts at the household and country levels. A higher social assistance income floor increases the odds of having savings in these models, by around 0.5% for every 1000 PPP 2005 Euros, a statistically significant effect in both samples. However, the introduction of additional controls reduces the size of the effect to statistically insignificant and changes the direction of it in the estimations carried out on the education based sample.

Household and country characteristics behave as expected. Thus, being a single parent is associated with a strong negative effect on the probability of having savings. Other things equal, single parent households are 40-55% less likely to have savings. Likewise, the presence of each child under seven in a household decreases the likelihood of having savings by 5-15%, albeit the effect is not statistically significant in the second sample. Contradictory results are obtained regarding the impact of older children. In the set of regressions carried out on the education-based sample, having

Table .8Social Assistance Income Floor Effects on Having Savings (proxied by the capacity to face unexpected expenses)

	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Model2-1	Model2-2	Model2-3	Model2-4
<b>Fixed effects</b>									
Maximum Family Benefit	1,000005 (0,000)	0,9999 (0,224)	0,9999 (0,142)	0,9999 (0,080)		1,000005 (0,002)	1,000001 (0,662)	1,000001 (0,741)	1,000002 (0,401)
Single parent		0,5536 (0,000)	0,5499 (0,000)	0,5169 (0,000)			0,6048 (0,000)	0,6042 (0,000)	0,5958 (0,000)
Number of children		0,9605 (0,113)	0,9699 (0,233)	1,0050 (0,814)			1,1742 (0,001)	1,1756 (0,001)	1,1843 (0,000)
Number of children under 7		0,8763 (0,004)	0,8712 (0,002)	0,8401 (0,000)			0,9466 (0,530)	0,9445 (0,516)	0,9487 (0,574)
Number of working-age adults		1,5137 (0,000)	1,5208 (0,000)	1,5165 (0,000)			1,3196 (0,000)	1,3254 (0,000)	1,3582 (0,000)
Number of retired persons (>64)		1,7540 (0,000)	1,8859 (0,000)	1,6625 (0,000)			2,3838 (0,000)	2,4101 (0,000)	2,7160 (0,000)
Unemployment rate Previous year			0,8859 (0,000)	0,9628 (0,000)				0,8414 (0,000)	0,9393 (0,000)
GDP/capita Previous year			1,000027 (0,142)	1,0002 (0,000)				0,9998 (0,000)	0,9998 (0,000)
Max Family Benefit* Single parent				1,000001 (0,012)					1,000001 (0,664)
Max Family Benefit* No children<7				1,0000 (0,092)					0,9999 (0,729)

	Model1-1	Model1-2	Model1-3	Model1-4	Model1-5	Model2-1	Model2-2	Model2-3	Model2-4
<b>Fixed effects</b>									
Max Family Benefit*				0,9999					0,9999
No persons>64				(0,401)					(0,001)
Household disposable income									
Max Family Benefit* Household income									
<b>Random Intercept (SD) -Country Level</b>	1,065 (0,000)	1,528 (0,012)	1,813 (0,000)	0,8055 (0,000)		1,921 (0,049)	1,991 (0,049)	2,550 (0,024)	0,6655 (0,000)
<b>Random Slope- Max Family Benefit- Country level</b>									
<b>Random Intercept (SD) -HH level</b>	7,268 (0,000)	6,909 (0,000)	7,044 (0,000)	45,104 (0,000)		5,819 (0,000)	5,416 (0,000)	5,474 (0,000)	5,445 (0,000)
N	84269	83890	83890	83990		20384	20300	20300	20300

Note: coefficients represent odds ratios; p-values in parentheses

Source: Own calculations based on the 2007 EU-SILC longitudinal database



more older children is not consequential for the likelihood of having savings. On the contrary, in the income based sample, having more older children is associated with a statistically significant higher probability of having savings. On average, each older child raises the odds of having savings by around 17%. Presumably, the discrepancy is due to the much more disadvantaged nature of the second sample. Among the poor, households with older children are somewhat better positioned. Both the number of working-age adults and the number of retired persons is positively related to the odds of having savings. The magnitude of the coefficients is large and above the significance threshold in both samples. Each additional working-age adults boosts the likelihood of having savings by between 30 and 50% depending on specification. The effect of retired adults is even higher, i.e. an increase by between 75 and 140% depending on the model.

The coefficients of the two country level covariates have the predicted sign in the first set of estimations. A 1 percentage point increase in the lagged unemployment rate depresses the odds of having savings by 12%, while a 1 percentage point increase in the GDP/capital increases it by 0,002%, a much smaller and statistically insignificant effect. Using the second sample yields essentially the same result for the effect of the lagged unemployment rate<sup>54</sup>. However, a divergent one is obtained for the effect of GDP/capita. The effect of GDP per capita among the very poor turns negative and statistically significant. Other things equal, a 1 percentage point increase in the GDP/capita reduces the likelihood of having savings by, on average, 0.02%.<sup>55</sup> Lastly, substantial variation is located both at the household and, albeit to a lesser extent, at the country level. More complex models containing interaction effect or random slopes could not be estimated due to lack of convergence.

#### 1.6.6 DISCUSSION

The impact of the income floor implicit in social assistance programs has been estimated for four types of assets, namely consumer durables, arrears, income generating assets and savings. In the latter two cases, lack of adequate data has compelled the use of proxies. Where the dependent variable has taken a binary rather than continuous form, computational complexities have prevented the estimation of more intricate models. Findings have generally been consistent across samples and model specifications.

An overview of the results points to both similarities and discrepancies in the impact of income floors across the four types of assets. Generally, contrary to previous findings based on the American public assistance program, evidence of a negative income floor effect on asset-accumulation in the present in means-tested social assistance is very limited. Only the accumulation

---

<sup>54</sup> The effect is slightly larger-see Table 7.

<sup>55</sup> It is not clear what is causing this effect. It is possible that very poor families are more likely to switch to consumption instead of savings in countries/ periods where/when the economic development level is higher.

of arrears could be shown to be adversely impacted by the presence of an income floor in means-tested social assistance. It is possible that the insurance mechanism implicit in an income floor promotes riskier behaviour among the very poor, thus ultimately increasing the chance of accumulating arrears. In the case of consumer durables, evidence points towards a small positive impact of higher guaranteed benefits, with a somewhat weaker effect for households containing young children and/or retired persons. The result is consistent with treating consumer durables as consumption items rather than assets. Finally, no effects of the social assistance income floor on income generating assets or savings could be detected.

Several explanations are possible. First, the level of the income floor in the region may be too low to depress asset accumulation. Indeed, many countries make only paltry support available well below what would be needed to overcome poverty (see Chapters 3 and 4). Second, specificities of the region may be partially responsible for the findings. Indeed, CEE countries have only recently built the capital and insurance markets that are typically used in asset accumulation processes in developed countries. Additionally, the period considered in the analysis has been one of rapid economic growth across the region, possibly facilitating asset accumulation and investment. Third, given the relative novelty of means-tested assistance in the region, as well as possible lack of trust in state institutions (Mishler and Rose 2001; Sissenich 2007), it is possible that social assistance programs are not trusted to provide an income floor when needed. Low-income households may either fear program cutbacks/elimination in the future or not trust the program administration to provide them with a benefit when they become eligible. Fourth, general non-monetary costs of program participation, such as stigma, may deter from relying on social assistance for insurance purposes. Finally, results may be partly explained by shortcomings of the data. Measures of wealth possessions are crude and cross-temporal variation in the income floor minimal. As such, policy effects may not be well identified, due to measurement issues, low power and possible confounding factors, especially at the country level.

## **1.7 ASSET TESTS AND THE ACCUMULATION OF ASSETS**

The previous section has focused on whether and how asset accumulation processes among low-income households are affected by cash benefits made available by the existence of a guaranteed minimum income. Another modality through which means-tested programs may discourage asset ownership and saving among the poor and the near-poor is by directly prohibiting program participation when a claimant's assets surpass a given threshold<sup>56</sup>. The presence of asset tests would both force future recipients to run down their assets in case of adverse economic circumstances, and

---

<sup>56</sup> The threshold may be effectively set to zero. In this case, no assets may be allowed for program clients.

more importantly, would discourage accumulation of assets in the first place among all low-income households.

The following subsections discuss the association between asset test and three types of assets, namely consumer durables, income generating assets and savings<sup>57</sup>. Before presenting any results, it should be noted that serious data limitations prevent the drawing of any firm conclusions. First, the data on asset tests is sparse and relative. To some extent, this is due to the program design itself. National legislation is either very vague about how an asset test should be implemented (i.e. which assets should be included and which disregarded, how are assets to be valued if disregards are permitted etc.), or leaves asset test implementation to the discretion of local authorities and/or street-level social workers. The situation is unsurprising given the complexities that an asset test may entail. Second, there is precious little differentiation in asset tests due to the fact that they only vary across countries. As such, there is very little variation from which to identify asset test effects. Third, there is little information about how asset tests are being implemented. Even if national legislation prohibits the possession of assets for program participants or allows for certain disregards, local discretion may override or modify those provisions.

Notwithstanding these shortcomings, an initial assessment of the relationship between asset tests and assets is possible. Two asset test variables have been used, namely the existence of an asset test and when such an asset exists whether any disregards larger than 1000 Euros are allowed. Both are coded 0/1. The two variables are however highly correlated since most countries that do have an asset test, also allow for a disregard. In the case of Hungary, local authorities have ample leeway to decide whether and what types of disregards they allow. Initially, Hungary has been coded 1 on the asset disregard variable. Subsequently, the coding has been change to zero and the analyses repeated. As findings did not change substantially, only the initial results are presented. The estimation strategy follows a sequence of steps. Initially, simple correlations adjusted for clustering in the data are presented (Model 1-1 and 2-1). Subsequently, additional variables are added using a simple regression framework (but always adjusting for clustering in the data). In principle, asset tests apply in the same manner for all households, and are therefore invariant to household characteristics. However, as the national demographic composition might affect program design and the level and distribution of asset holdings, three household characteristics are also added as controls (single parenthood, number of children, and number of retired persons). The approach has the advantage that it implicitly controls for variations in street-level implementation of the asset test eligibility that depends on whether the household is perceived to be needier or more 'deserving'. On top, the maximum family entitlement, the lagged unemployment rate and the lagged GDP/capita have been added as covariates. Finally, results pertaining to a three level hierarchical model similar to the ones introduced in the previous section are presented (Models 1-6 and 2-6). As previously, estimations

---

<sup>57</sup> Arrears have not been modeled since asset test do not take into account debt.

have been carried out on two separate samples of low-income households, defined based on education and income respectively.

#### 1.7.1 ASSET TESTS AND THE POSSESSION OF CONSUMER DURABLES

Results of the analysis of asset tests' influence on the possession of consumer durables are detailed in Table 9 below. All specifications show a negative effect that is relatively large (around a third of a standard deviation) but that fails to achieve statistical significance. Contrary to expectations, the existence of an asset disregard would appear to further lower consumer durable accumulation. However, the coefficient is statistically indistinguishable from zero. Comparing the results across samples, the size of the effect is somewhat lower in the poorer sample. The finding is consistent with the idea of asset tests being less binding for the very poor. However, in all four models, both asset test variables show up as statistically not different from zero. Consistent with the results presented in the previous section, the coefficient of the maximum family benefit variable is positive and statistically different from zero.

#### 1.7.2 ASSET TESTS AND THE POSSESSION OF INCOME GENERATING ASSETS

The relationship between the existence of an asset test and having non-zero asset income is spelled out in Table 10. The unconditional correlation between the two is negative but statistically indistinguishable from zero in both samples. Nonetheless, as the specification gradually becomes more complex, incorporating additional controls and better modelling, the association becomes more negative and passes the significance threshold. Thus, when the full set of control variables is present, both the simple logit and the multilevel models (Models 1-4, 2-4, 1-5 & 2-5) show a large and significant negative coefficient. The presence of an asset test reduces the odds of having asset generated income by between 40 and 75%, depending on sample and specification. Admittedly, the magnitude of the effect is surprisingly large, suggesting potential bias.

Table .9 Asset test and the accumulation of consumer durables

	Model 1-1	Model 1-2	Model1-3	Model 1-4	Model 1-5	Model 2-1	Model 2-2	Model 2-3	Model 2-4	Model 2-5
Asset test (0/1)	-0.1086 (0.329)	-0.0382 (0.647)	-0.1156 (0.310)	-0.3009 (0.205)	-0.4659 (0.304)	0.1354 (0.343)	0.3783 (0.000)	0.0025 (0.979)	-0.2253 (0.371)	-0.3814 (0.358)
Asset disregard (0/1)		-0.1161 (0.302)					-0.407 (0.000)			
Single parent			0.0060 (0.941)	-0.0286 (0.603)	-0.0423 (0.002)			0.2073 (0.018)	0.1775 (0.002)	0.0373 (0.152)
No children			0.4137 (0.000)	0.4001 (0.000)	0.3185 (0.000)			0.4525 (0.000)	0.4277 (0.000)	0.2900 (0.000)
No retired			-0.5630 (0.000)	-0.5604 (0.000)	-0.4415 (0.000)			-0.4068 (0.004)	-0.4162 (0.005)	-0.3131 (0.000)
Max Family Benefit				5.79E-06 (0.165)	1.2E-05 (0.000)				8.06E-06 (0.099)	1.46E-05 (0.000)
Unemployment rate				-0.0095 (0.648)	0.0303 (0.000)				0.0008 (0.970)	0.0300 (0.000)
GDP/capita				-8.5E-05 (0.406)	1 E-05 (0.023)				-9.8E-05 (0.334)	-4.23E-05 (0.000)
Random Intercept					0.6198					
Country level					(0.000)					
Random Intercept					1.323					
HH level					(0.000)					
N	84373	84373	83994	83994	83994	20403	20403	20319	20319	20319

Note: p-values in parentheses.

Source: Own calculations based on the EU-SILC 2007 longitudinal database.

Table .10 Asset tests and possession of income generating assets

	Model 1-1	Model 1-2	Model1-3	Model 1-4	Model 1-5	Model 2-1	Model 2-2	Model 2-3	Model 2-4	Model 2-5
Asset test (0/1)	0.6181 (0.571)	0.0956 (0.000)	0.6244 (0.578)	0.2494 (0.000)	0.3132 (0.000)	0.5826 (0.521)	12.2252 (0.001)	0.6028 (0.541)	0.2535 (0.001)	0.3196 (0.000)
Asset disregard (0/1)		10.555 (0.002)					0.0784 (0.000)			
Single parent			1.0293 (0.624)	0.9757 (0.625)	1.0734 (0.384)			1.1109 (0.229)	1.0510 (0.490)	1.1537 (0.433)
No children			0.9615 (0.304)	0.9457 (0.130)	0.7658 (0.000)			0.9839 (0.785)	0.9835 (0.743)	0.7849 (0.005)
No retired			0.9560 (0.476)	0.9965 (0.967)	0.9912 (0.002)			1.3387 (0.024)	1.1825 (0.133)	1.5239 (0.000)
Max Family Benefit				1.000006 (0.019)	1.0022 (0.000)				1.000005 (0.022)	1.002 (0.000)
Unemployment rate				0.9624 (0.244)	0.7434 (0.000)				0.9503 (0.160)	0.6986 (0.000)
GDP/capita				1.0002 (0.002)	1.0003 (0.000)				1.0002 (0.002)	1.0003 (0.000)
Random Intercept					0.3564					0.7575
Country level					(0.000)					(0.000)
Random Intercept					11.7199					11.3833
HH level					(0.000)					(0.000)
N	84375	84375	83996	83996	83996	20403	20403	20319	20319	20319

Note: coefficients are odds ratios; p-values in parentheses

Source: Own calculations based on the EU-SILC 2007 longitudinal database.

Introducing both asset test dummies yields contradictory and counterintuitive results. In the first sample, the signs of the two dummies are correct but the magnitudes are unrealistically large. In the second sample, the size of both coefficients remains very large and, in addition, the signs are reversed. The asset test itself has a large positive effect and the asset test disregard a large negative one. Strong collinearity between the two asset test variables probably explains the instability of the results. Confirming findings in section VII.4, the program income floor exerts a significant positive influence, raising the likelihood of possessing income generating assets.

### 1.7.3 ASSET TESTS AND SAVINGS

The last set of models investigates the links between asset test and the likelihood of having savings (proxied by the capacity to face unexpected expenses). Findings are shown in Table 11. Simple correlations, logit regressions and three-level logit analyses add up to a consistent picture. The presence of an asset test is negatively associated with the likelihood of having liquid assets. The asset test coefficient is always large and statistically significant. On average, living in a country with a social assistance program that implements an asset test reduces the likelihood of having savings by around 40-70%. The two samples produce very similar sets of coefficients.

Models 1-2 & 2-2 that contain both the asset test and the asset disregard dummies show the predicted pattern. The negative effect of asset tests is much stronger- around 60% in the first sample and 70% in the second sample- when no asset disregards are permitted. Conversely, the effect drops to approximately 50% in the first sample and 46% in the second sample when disregards larger than 1000 Euros are permitted. However, the asset test disregard coefficient, albeit large, is statistically zero. Finally, while significant only in the multilevel specification, the program income floor has a positive impact on the likelihood of having savings.

### 1.7.4 DISCUSSION

While lack of variation prevents a proper identification of asset tests effects, a *prima facie* inspection of the relationship between asset tests and asset accumulation yields some interesting results. Generally, both samples yield similar results despite being of very different sizes<sup>58</sup>. The

---

<sup>58</sup> However, the magnitude of the coefficients differs somewhat across samples.

Table.11 Asset tests and the likelihood of having savings

	Model 1-1	Model 1-2	Model1-3	Model 1-4	Model 1-5	Model 2-1	Model 2-2	Model 2-3	Model 2-4	Model 2-5
Asset test (0/1)	0.4707 (0.003)	0.4107 (0.000)	0.4684 (0.003)	0.4263 (0.000)	0.3299 (0.000)	0.3909 (0.015)	0.2900 (0.000)	0.3900 (0.018)	0.3307 (0.001)	0.3546 (0.000)
Asset disregard (0/1)		1.2487 (0.409)					1.6060 (0.177)			
Single parent			0.6566 (0.000)	0.6455 (0.000)	0.5513 (0.000)			0.7186 (0.000)	0.6854 (0.000)	0.6184 (0.000)
No children			1.0045 (0.873)	1.0072 (0.816)	0.8518 (0.000)			1.1365 (0.001)	1.1450 (0.006)	1.1588 (0.001)
No retired			1.0746 (0.166)	1.0904 (0.062)	1.1793 (0.000)			1.4718 (0.000)	1.4139 (0.000)	1.8122 (0.000)
Max Family Benefit				1.000002 (0.298)	1.0017 (0.000)				1.000005 (0.113)	1.0004 (0.057)
Unemployment rate				0.9966 (0.898)	0.8181 (0.000)				0.9710 (0.408)	0.9740 (0.013)
GDP/capita				1.00006 (0.360)	0.9999 (0.016)				1.00001 (0.854)	0.9998 (0.000)
Random Intercept					0.2017					0.3933
Country level					(0.000)					(0.000)
Random Intercept					7.0805					5.2857
HH level					(0.000)					(0.000)
N	84269	84269	83890	83890	83890	20384	20384	20300	20300	20300

Note: Coefficients represent odds ratios; p-values in parentheses.

The model corresponding to 2-5 using the first sample could not be estimated due to lack of convergence.

Source: Own calculations based on the EU-SILC 2007 longitudinal database.



presence of asset tests is negatively related with two asset variables, namely the probability of having asset generated income, and the probability of having financial savings. The asset test coefficients are statistically insignificant in all specifications modelling possession of consumer durables. An insignificant effect is to be expected given that consumer durables usually lie outside the scope of social assistance asset tests.

Summing up, findings are overall consistent with the hypothesis that asset tests tend to depress asset accumulation among low-income households. In particular, there is strong preliminary evidence that asset tests may discourage the build-up of savings and the build-up of income generating assets among potentially eligible households. This is exactly what standard welfare economics predicts. Due to their liquid and visible nature, savings should be most affected by the presence of asset tests in the eligibility conditions of social assistance transfers. Obviously, a proper test relying on enough variation to reliably identify policy effects is needed before any firm conclusions can be drawn.

## 1.8 CONCLUSIONS

This chapter has set out to examine the possible interrelations between the design of social assistance programs and asset accumulation among low income households. To carry out the analyses, use has been made of the EU-SILC 2007 longitudinal dataset. To separate the low-income population from the rest, two criteria have been used, i.e. education and income across a three year period. Mirroring the structure of the data, three level modes have been constructed. The relatively complex estimation strategy has allowed for some advantages but has also led to lack of convergence for some specifications (chiefly models containing a binary dependent variable, as well as more complex features such as interactions or random slopes). As a result, not all models could be estimated.

Two distinct but interrelated features of social assistance programs have been analyzed, the generosity of the income floor implicit in the program on the one hand, and the presence of asset-tested entitlement on the other hand. Since a good measure of net worth was not available in the data, several types of assets have been analyzed separately, namely consumer durables, accumulated arrears, income generating assets and savings (proxied by the capacity to face unexpected expenses).

With the exception of debt accumulation, the hypothesised negative effect of a higher income floor on asset accumulation could not be corroborated by the analysis. On the contrary, the availability of a more generous guaranteed minimum income is likely to facilitate the accumulation of consumer durables. As for income generating assets and savings, no statistically significant effect could be detected.

Albeit data deficiencies allowed only for very tentative results, the hypotheses regarding the effect of asset tests have largely been confirmed. Especially in the case of savings and income generating assets, there are clear indications that an asset test may have a depressing effect.

Unfortunately, only a very raw indicator of asset testing could be constructed. Ideally, a more refined measure of asset testing (incorporating asset disregards) should be used to gain insights into the process through which asset tested eligibility affects asset accumulation among low-income households.

To the author's knowledge no other study has attempted to measure the effects of social assistance design on asset accumulation among the poor and near poor in Central and Eastern Europe. As such, no previous results to serve as a point of reference exist. However, a comparison is possible with findings related to the American federal public assistance program (AFDC, and later TANF). This study's findings are partly convergent and partly divergent with the evidence on AFDC/TANF. On the one hand, the negative effect of asset tests on asset accumulation in general and savings in particular is consistent with the negative effect of asset limits found in both AFDC and TANF (Powers 1998; Sullivan 2006; Nam 2008). On the other hand, contrary to findings relating to the American program, no evidence could be found that a more generous income floor depresses asset accumulation. On the contrary, a higher income floor was found to be beneficial, at least for some types of assets. Differences in data (the asset measure) and identification methods may be responsible for the contradiction. However, the discrepancy may also be attributable to substantive differences between the CEE region and the US. First of all, the overall design of the two social assistance programs is very different<sup>59</sup>, and other program features may interact with the benefit level to determine the impact on asset accumulation processes. Second, there may be nonlinearities in the relationship between the level of the income floor and asset accumulation. More specifically, the lack of any negative effects may be due to the generally very low level of guaranteed income provided by social assistance in Central and Eastern Europe. It may be argued that any harmful effects on precautionary saving kick-in only after a certain standard of living is assured by the program. Third, the population served by the CEE and the US programs is only partially overlapping<sup>60</sup>. Differences in the characteristics of potential clients are likely to play a role in determining the impact of the program. Fourth, the fact that Central East European countries are both less affluent and more likely to experience steeper economic growth may counteract saving disincentives stemming from the social assistance program.

To conclude, social assistance programs in Central and Eastern Europe are less detrimental to asset accumulation among the poor and the near-poor than their counterpart in the US. Rather than depress precautionary saving, higher transfers may help recipient households to amass consumer durables, albeit it may also encourage them to take on unsustainable levels of debt. The inclusion of asset tests in program eligibility conditions may adversely affect saving behaviour in low income households.

---

<sup>59</sup> For example, TANF is not a guaranteed entitlement.

<sup>60</sup> For example the US program is largely restricted to single mothers.

## REFERENCES:

- Barr, N. (2002). Welfare States in Central and Eastern Europe. When Markets Fail. Social Policy and Economic Reform. E. B. Kapstein and B. Milanovic. New York, Russell Sage Foundation: 27-57.
- Barrett, C. B. and M. R. Carter (2005). Risk and Asset Management in the Presence of Poverty Traps: Implications for Growth and Social Protection. Linking Social Protection and Growth: Concepts, Assessing Empirical Evidence, Developing the Future Agenda. Leuven, SSRN.
- Barrett, C. B. and B. M. Swallow (2006). "Fractal Poverty Traps." World Development **34**(1): 1-15.
- Beverly, S. G., A. M. McBride, et al. (2003). "A Framework of Asset-Accumulation Stages and Strategies." Journal of Family and Economic Issues **24**(2): 143-156.
- Beverly, S. G. and M. Sherraden (1999). "Institutional determinants of saving: implications for low-income households and public policy." Journal of Socio-Economics **28**(4): 457-473.
- Birdsall, N. and J. L. Londoño (1997). Asset Inequality Does Matter: Lessons from Latin America. OCE Working Papers. Washington, D.C., Inter American Development Bank.
- Bolton, P., G. Roland, et al. (1992). "Privatization Policies in Central and Eastern Europe." Economic Policy **7**(15): 275-309.
- Boyle, M. H. (2002). "Home Ownership and the Emotional and Behavioral Problems of Children and Youth." Child Development **73**(3): 883-892.
- Brown, L. N. (1963). "Inheritance and the Communist Legal Order." Soviet Studies **14**(3): 295-313.
- Browning, M. and A. Lusardi (1996). "Household Saving: Micro Theories and Micro Facts." Journal of Economic Literature **34**(4): 1797-1855.
- Buckleyand, R. M. and S. Tsenkova (2001). "Housing Market Systems in Reforming Socialist Economies: Comparative Indicators of Performance and Policy." International Journal of Housing Policy **1**(2): 257-289.
- Campbell, R. T. and J. C. Henretta (1980). "Status Claims and Status Attainment: The Determinants of Financial Well-Being." American Journal of Sociology **86**(3): 618-629.
- Carney, S. and W. G. Gale (2001). Asset Accumulation Among Low-Income Households. Assets for the Poor: The Benefits of Spreading Asset Ownership. T. M. Shapiro and E. N. Wolff. New York, Russell Sage Foundation: 165-205.
- Carter, M. R. and C. B. Barrett (2006). "The Economics of Poverty Traps and Persistent Poverty: An Asset-Based Approach." Journal of Development Studies **42**(2): 178-199.
- Cerda, R. A. (2008). "Social Security and Wealth Accumulation in Developing Economies: Evidence from the 1981 Chilean Reform." World Development **36**(10): 2029-2044.
- Collier, I., H. Roggeman, et al., Eds. (1999). Welfare States in Transition. East and West. Studies in Economic Transition. London, Macmillan Press Ltd.
- Conley, D. (2001). "Capital for College: Parental Assets and Postsecondary Schooling." Sociology of Education **74**(1): 59-72.
- Conley, D. and B. Gifford (2006). "Home Ownership, Social Insurance, and the Welfare State." Sociological Forum **21**(1): 55-82.
- Denizer, C., W. C. Holger, et al. (2000). Household Savings in Transition Economies. Policy Research Working Paper No 2299. Washington D.C., World Bank.
- Denizer, C. and H. C. Wolf (1998). Aggregate Savings in the Transition. Washington D.C., The World Bank.
- Denizer, C. and H. C. Wolf (1998). "Household Savings in Transition Economies." NBER Working Papers Series **6457**.

- Denizer, C. and H. C. Wolf (2000). "The Saving Collapse During the Transition." The World Bank Economic Review **14**(3).
- Denton, N. A. (2001). Housing as a Means of Asset Accumulation: A Good Strategy for the Poor? Assets for the Poor: The Benefits of Spreading Asset Ownership. T. M. Shapiro and E. N. Wolff. New York, Russel Sage Foundation: 232-266.
- Duflo, E., W. Gale, et al. (2006). "Saving Incentives for Low- and Middle-Income Families: Evidence from a Field Experiment with H&R Block." The Quarterly Journal of Economics **121**(4): 1311-1346.
- Edin, K. (2001). More than Money: The Role of Assets in the Survival Strategies and Material Well-Being of the Poor. Assets for the Poor: The Benefits of Spreading Asset Ownership. T. M. Shapiro and E. N. Wolff. New York, Russel Sage Foundation: 206-231.
- Engen, E. M. and J. Gruber (2001). "Unemployment insurance and precautionary saving." Journal of Monetary Economics **47**(3): 545-579.
- Esping-Andersen, G. (1990). The Three Worlds of Welfare Capitalism. Princeton, Princeton University Press.
- European Commission, D. E., Social Affaires and Equal Opportunities (2010). Mutual Information System on Social Protection Database, European Commission; [http://ec.europa.eu/employment\\_social/missoc/db/public/compareTables.do?lang=en](http://ec.europa.eu/employment_social/missoc/db/public/compareTables.do?lang=en)
- Fernández-Villaverde, J. and D. Krueger (2004). Consumption and Saving over the Life Cycle: How Important are Consumer Durables. Society for Economic Dynamics 2004 Meeting Papers.
- Foster-Simons, F. (1985). "The Development of Inheritance Law in the Soviet Union and the People's Republic of China." The American Journal of Comparative Law **33**(1): 33-62.
- Fultz, E. and M. Ruck (2001). Pension Reform in Central and Eastern Europe: An Update on Restructuring Pension Schemes in Selected Countries. Budapest, ILO.
- Grinstein-Weiss, M., T. R. Williams Shanks, et al. (2010). "Homeownership and parenting practices: Evidence from the community advantage panel." Children and Youth Services Review **32**(5): 774-782.
- Gruber, J. (2001). "The Wealth of the Unemployed." Industrial and Labor Relations Review **55**(1): 79-94.
- Gruber, J. and A. Yelowitz (1999). "Public Health Insurance and Private Savings." Journal of Political Economy **107**(6): 1249-1274.
- Gsovski, V. (1947). "Soviet Law of Inheritance: I." Michigan Law Review **45**(3): 291-320.
- Hanley, E. (1999). "Cadre Capitalism in Hungary and Poland: Property Accumulation among Communist-era Elites." Eastern European Politics and Society **14**(1): 143-178.
- Hanley, E. and D. J. Treiman (2004). "Did the Transformation to Post-Communism in Eastern Europe Restore Pre-Communist Property Relations?" European Sociological Review **20**(3): 237-252.
- Haurin, D., T. Parcel, et al. (2000). The Impact of Home Ownership on Child Outcomes. Social Science Research Network Electronic Paper Collection.
- Hausner, J. (2001). Security through Diversity. Conditions for Successful Reform of the Pension System in Poland. Reforming the State. Fiscal and Welfare Reform in Post-Socialist Countries. J. Kornai, S. Haggard and R. R. Kaufman. Cambridge, Cambridge University Press: 210-234.
- Huang, J., B. Guo, et al. (2010). "Parental income, assets, borrowing constraints and children's post-secondary education." Children and Youth Services Review **32**(4): 585-594.
- Hubbard, G., J. Skinner, et al. (1995). "Precautionary Saving and Social Insurance." Journal of Political Economy **103**(2): 360-399.

- Hurst, E. and J. P. Ziliak (2006). "Do Welfare Asset Limits Affect Household Saving? Evidence from Welfare Reform." Journal of Human Resources **41**(1): 46-71.
- Inglot, T. (2008). Welfare States in East Central Europe 1919-2004. New York, Cambridge University Press.
- Karger, H. J. (2004). "Scamming the Poor." The Social Policy Journal **3**(1): 39-54.
- Keister, L. A. (2000). "Race and Wealth Inequality: The Impact of Racial Differences in Asset Ownership on the Distribution of Household Wealth." Social Science Research **29**(4): 477-502.
- Keister, L. A. and S. Moller (2000). "Wealth Inequality in the United States." Annual Review of Sociology **26**: 63-81.
- Kurz, K. and H.-P. Blossfeld, Eds. (2004). Home Ownership and Social Inequality in Comparative Perspective. Stanford, Stanford University Press.
- Kurz, K. and H.-P. Blossfeld (2004). Introduction: Social Stratification, Welfare Regimes, and Access to Home Ownership. Home Ownership and Social Inequality in Comparative Perspective. K. Kurz and H.-P. Blossfeld. Stanford, Stanford University Press: 1-20.
- Malik, S. (1986). "Inheritance Law in the Soviet Union and the People's Republic of China: An Unfriendly Comment." The American Journal of Comparative Law **34**(1): 137-144.
- McGrath, D. M. and L. A. Keister (2008). "The Effect of Temporary Employment on Asset Accumulation Processes." Work and Occupations **35**(2): 196-222.
- Mishler, W. and R. Rose (2001). "What Are the Origins of Political Trust? Testing Institutional and Cultural Theories in Post-communist Societies." Comparative Political Studies **34**(1): 30-62.
- Morillas, J. R. (2007). "Assets, earnings mobility and the black/white gap." Social Science Research **36**(2): 808-833.
- Nam, Y. (2008). "Welfare Reform and Asset Accumulation: Asset Limit Changes, Financial Assets, and Vehicle Ownership." Social Science Quarterly **89**(1): 133-154.
- Pichler-Milanovich, N. (2001). "Urban Housing Markets in Central and Eastern Europe: Convergence, Divergence or Policy 'Collapse'." International Journal of Housing Policy **1**(2): 145-187.
- Powers, E. T. (1998). "Does means-testing welfare discourage saving? evidence from a change in AFDC policy in the United States." Journal of Public Economics **68**(1): 33-53.
- Schrooten, M. and S. Stephan (2001). "Savings in Central and Eastern Europe." DIW Discussion Papers **250**.
- Shapiro, T. M. (2001). The Importance of Assets. Assets for the Poor: The Benefits of Spreading Asset Ownership. T. M. Shapiro and E. N. Wolff. New York, Russell Sage Foundation: 11-33.
- Shapiro, T. M. and E. N. Wolff, Eds. (2001). Assets for the Poor: The Benefits of Spreading Asset Ownership. New York, Russell Sage Foundation.
- Sherraden, M. (2001). Asset-Building Policy and Programs for the Poor. Assets for the Poor: The Benefits of Spreading Asset Ownership. T. M. Shapiro and E. N. Wolff. New York, Russell Sage Foundation: 302-333.
- Shobe, M. A. and S. A. Boyd (2005). "Relationships Between Assets and Perceived Economic Strain." Journal of Community Practice **13**(2): 21-44.
- Sissenich, B. (2007). Building States Without Society. European Union Enlargement and the Transfer of EU Social Policy to Poland and Hungary. Plymouth, Lexington Books.
- Spilerman, S. (2000). "Wealth and Stratification Processes." Annual Review of Sociology **26**: 497-524.
- Stern, M. J. (2001). The Un(credit)worthy Poor: Historical Perspectives on Policies to Expand Assets and Credit. Assets for the Poor: The Benefits of Spreading Asset Ownership. T. M. Shapiro and E. N. Wolff. New York, Russell Sage Foundation: 269-301.

- Sullivan, J. X. (2006). "Welfare Reform, Saving, and Vehicle Ownership: Do Asset Limits and Vehicle Exemptions Matter?" Journal of Human Resources **41**(1): 72-105.
- Sykes, L. L. (2005). "A home of her own: an analysis of asset ownership for non-married black and white women." The Social Science Journal **42**(2): 273-284.
- Szelenyi, I. (1988). Socialist Entrepreneurs. Embourgeoisement in Rural Hungary. Cambridge, Polity Press.
- Tay, E.-S. A. (1968). "The Law of Inheritance in the New Russian Civil Code of 1964." The International and Comparative Law Quarterly **17**(2): 472-500.
- Vadas, G. (2009). "The Housing Subsidy Scheme and Households' Wealth in Hungary: Urban Legends and Facts." International Journal of Housing Policy **9**(1): 1-24.
- Walder, A. G. (2003). "Elite Opportunity in Transitional Economies." American Sociological Review **68**(6): 899-916.
- Wolff, E. N., A. Zacharias, et al. (2005). "Household wealth, public consumption and economic well-being in the United States." Cambridge Journal of Economics **29**(6): 1073-1090.
- Ziliak, J. P. (2003). "Income Transfers and Assets of the Poor." The Review of Economics and Statistics **85**(1): 63-76.