I Z A Institute
of Labor Economics
Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

IZA DP No. 11069

The Truly Vulnerable: Integrating Wealth into the Measurement of Poverty and Social Policy Effectiveness

Sarah Kuypers
Ive Marx

OCTOBER 2017

I Z A Institute
of Labor Economics

Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

IZA DP No. 11069

The Truly Vulnerable: Integrating Wealth into the Measurement of Poverty and Social Policy Effectiveness

Sarah Kuypers
University of Antwerp

Ive Marx
University of Antwerp and IZA

OCTOBER 2017

IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

The Truly Vulnerable: Integrating Wealth into the Measurement of Poverty and Social Policy Effectiveness

There is a burgeoning literature on the significance and distribution of wealth in the rich world. It mainly focuses on the top. Wealth remains remarkably absent from the analysis of poverty and the redistributive effectiveness of welfare systems. This paper shows that real and financial assets can matter greatly when making assessments of who is poor and financially vulnerable. We introduce the concept of triple precariousness, afflicting households that not only have low income but also very low or non-existent assets to draw on for consumption needs, especially liquid assets. We analyse whether these households – whom we might call the truly vulnerable – have different characteristics from those that we identify as poor or needy on the basis of pure income based metrics. In an analysis for Belgium drawing on HFCS data, we show that households with a reference person that is young, unemployed, low educated, migrant, parent of dependent children, and above all a tenant are especially vulnerable in terms of their financial situation. By contrast, our assessment of the extent and depth of financial need among the elderly – a segment of society that is at a relatively high risk of income poverty – also changes. A substantial share of income poor elderly households own significant assets. We draw out some tentative consequences of these findings for anti-poverty and redistributive policies.

JEL Classification: D31, G11

Keywords: low income, low wealth, asset portfolio, social policy

Corresponding author:
Sarah Kuypers
Centre for Social Policy
University of Antwerp
St Jacobstraat 2
2000 Antwerpen
Belgium

E-mail: sarah.kuypers@uantwerpen.be

1 Introduction

Who is most in need of support?[1] That question has occupied generations of scholars, spawning an extensive literature on ways to identify and target the poor.

Poverty research is dominated by income based measures, in part on theoretical grounds but perhaps even more so on pragmatic grounds. Income as a one-dimensional measure of resources has its shortcomings but it is practical to implement because there is a relative abundance of data on people's incomes (Atkinson et al., 2002; Marx et al., 2014). Yet, several streams of literature show that low income is an imperfect proxy for actual need. Since the way problems are defined typically provides the framework within which policy responses are developed, the definition of poverty in terms of incomes has inevitably led to policies that focus on income maintenance (Cramer, Sherraden & McKernan, 2008).

In addition to a rich literature on income based measures of poverty and need there is an extensive and for the most part more recent research tradition that looks at people's standard of living using more direct measures of living conditions and what is called "material deprivation" (Atkinson et al., 2002; Nolan and Whelan, 2011). From that literature we know that low income people are not equally deprived, and therefore not in equal need for support. While there is often a substantial overlap between income poverty and material deprivation measures there are also important systematic differences. That is to say: there are some segments of the population that face significant income poverty risks but that are found to be systematically less deprived (Kus et al., 2016). That may be because they can draw on earlier accumulated financial resources that help them bridge shorter or longer periods of low income.

There is, however, a critical problem with using material deprivation measures for allocating public resources. Lacking certain goods may not be a result of lacking resources, it may just be a matter of preferences or spending patterns (Kus et al., 2016). From the perspective of effective and just redistribution this matters. If people lack certain things that are deemed to be necessities yet they have the resources available to acquire them that is important. If people do not spend their money on essential things like food and housing, for themselves and their children, this is still a significant public policy issue. But it probably requires different actions than giving those households more resources.

Lately, increasing attention is given to how wealth contributes to people's living standards, i.e. taking into account the effect of assets and liabilities such as real estate, deposits, stocks, mortgages, etc. Such joint income-wealth measures allow to look at all resources available to households to achieve a standard of living, and hence can be considered to represent their true financial situation. Yet, up until now the focus is largely on the top (e.g. Kontbay-Busun & Peichl, 2014; Alvaredo et al., 2013) or the middle of the wealth distribution (e.g. Jäntti et al., 2013), while wealth remains remarkably absent in the analysis of poverty and social policy. Although there exist strong links between income and wealth, they are found to be imperfectly correlated (Jäntti et al., 2008; Skopek et al., 2012) such that income

[1] The authors gratefully acknowledge financial support from the Belgian Science Policy Office (BELSPO) under contract BR/121/A5/CRESUS.

poverty is not a perfect predictor of low wealth accumulations. Those on low income might actually have a much lower need for support when substantial wealth is owned that can be used to ensure continuous consumption. In contrast, when low income is combined with low wealth or when those not considered poor according to the income dimension are paying off large amounts of debt, the depth of financial vulnerability is considerably larger.

The purpose of this paper is therefore to show that including the notions of wealth and liquidity into the framework of poverty and distributive research leads to new insights into financial vulnerability, which in turn opens up new perspectives on redistributive policies. To this end the paper uses data from the Eurosystem Household Finance and Consumption Survey (HFCS). The focus is on Belgium because it is an especially interesting case for a number of reasons. First, Belgium is known to have a moderately high and stable income poverty rate compared to other Western countries (e.g. OECD, 2008; Eurostat). Yet at the same time, median wealth holdings are among the highest in Europe and wealth appears to be less unequally spread than in other countries, in part thanks to traditionally high home-ownership rates. Furthermore, income and wealth appear to be relatively weakly correlated (Kuypers et al., 2015; Arrondel et al., 2014; HFCN, 2013b). In other words, a joint income-wealth perspective on the distribution of financial resources might have a much stronger impact on social policy in Belgium than in some other European countries.

The paper proceeds as follows. The second part discusses in more detail how the inclusion of wealth information could contribute to the inequality and poverty framework and hence the design of social policy in European countries. The data and methodology that are used are described in the third part. The following part focusses on the correlation between income and wealth using the Belgian case. Part five studies the differences in portfolio composition of poorer and richer households, particularly along the liquidity dimension, after which it is shown how the population eligible for welfare support might be affected by the inclusion of wealth and liquidity information. The last part concludes and contemplates some potential future policy courses.

2 A joint income-wealth perspective on European social policy

In the European Union, living standards are traditionally defined in terms of equivalised household disposable income. Monetary poverty measures, relative or anchored, also build on this metric. Since this income concept entails not only income from labour and social transfers but also income from financial investments and renting out real estate property, one may wonder why it would still be necessary to include information on assets and debt. There are several compelling reasons.

First, certain asset types generate little or no income flow, such as owner-occupied housing. Although this may be fixed by adding a measure of imputed rent to the income definition, this is not sufficient. Indeed, savings and assets also contribute to living standards above and beyond their income flow. They assure financial security because they can be used to face unexpected events (Cowell & Van Kerm, 2015). In other words, when income is lost or decreased, due for example to unemployment, sickness, divorce, etc., accumulated wealth can be reduced in order to smooth out consumption (Brandolini et al., 2010). Moreover, assets can be used as collateral against which can be borrowed (this often relates to mortgage debt) (Azpitarte, 2012). In contrast, when repayments of loans are large, living standards

may be considerably worse than mere incomes suggest (this often relates to consumer loans and credit card debt). Hence, although there exist evident links between income and wealth, mainly through savings and borrowing constraints, the correlation between income and wealth is far from perfect (Jäntti et al., 2013; 2008; Skopek et al., 2012; Brzozowski et al., 2010). In other words, there are households with low income but high wealth and vice versa. From a different perspective assets and savings also largely affect long-term consumption and living standards, for the current as future generations. Indeed, assets allow to make purchases to move up the social ladder (Cowell & Van Kerm, 2015; Nam et al., 2008). Yet, in this paper we mainly focus on current well-being.

An important aspect of the wealth dimension is the composition of the asset portfolio. When analysing joint income-wealth measures of financial vulnerability, we need to better understand how the poor make investment decisions; i.e. in which types of assets do they invest? For instance, it is important to own sufficient liquid assets to overcome low income periods. It is often found that poor households invest proportionally more in safe, real assets than in more risky, liquid assets. Since 1 euro means much more to a poor household than to a rich one, they are less inclined to undertake a risky investment because of the high potential losses (Friedman & Savage, 1948). Campbell (2006) claims that poorer and low educated households are more likely to make investment mistakes than wealthier and higher educated households. These mistakes relate for instance to "nonparticipation in risky asset markets, underdiversification of risky portfolios and failure to exercise options to refinance consumption" (p.1590). Cunha et al. (2011) find that the liquidity of poor households is often very low. Since illiquid assets cannot be easily converted to cash money in times of need, vulnerable households "rely too much and too frequently on the most costly forms of financing (such as overdrafts) […]" (p.1046). Moreover, in many European countries existing policies that encourage wealth accumulation often favour illiquid over liquid assets. Examples are income tax deductions or credits for instance for mortgage repayment or private pension savings.

This paper thus asks how our view of financial need and vulnerability changes when in addition to income we take assets into account, their level and their composition, especially their liquidity.

3 Data and methods

Evidence on the joint distribution of income and wealth remains scarce, mainly as a consequence of a lack of data with regard to household wealth holdings. The Eurosystem Household Finance and Consumption Survey (HFCS) is a prime new source of data to study exactly this. In this paper we use data for Belgium from the first wave which covers 2,327 households surveyed in 2010 (income refers to 2009). In the HFCS the concept of net worth is used as wealth measure, which is defined as the sum of financial and real assets less liabilities[2]. It is worth noting that entitlements to public and occupational pension plans and social security funds are excluded from the HFCS wealth concept.

Throughout the paper we compare low income households with intermediate and higher income households. This differentiation is made based on the deciles of equivalised income and not a poverty line as such because the HFCS only contains gross income. We define low income as those households who have an income in the bottom two deciles, the intermediate income group covers households in

[2] Wealth and net worth are used interchangeably throughout this paper.

the middle six deciles and the high income group are those in the top two deciles. However, taking the bottom two deciles as a proxy of low income seems intuitive because the official EU At-risk-of-poverty (AROP) measure for Belgium falls in the second decile. Moreover, since households at the bottom pay little or no taxes the effect of using disposable instead of gross incomes should not be very large at the bottom, which is our main focus.

In part 5 we analyse asset portfolios by liquidity. For this analysis we have grouped the assets surveyed in the HFCS into 4 categories according to their degree of liquidity, which is shown in Table 1. Liquidity refers to the degree of difficulty of converting an asset into cash in terms of time and effort. It thus signals how quickly a certain asset can be bought or sold on the market, therefore also called 'marketability'. The HFCN (2013b, p.66) regards deposits, bonds, shares, mutual funds, managed accounts and non-self-employment private business wealth as liquid assets because they can be very easily sold on a regulated market. We make a further distinction between assets that can be sold quickly without the risk of important losses (i.e. deposits and bonds) and assets which can be quickly sold but have strongly fluctuating prices. Real estate, self-employment business wealth, private pensions and life insurances are considered to be much less tradable in the short term without incurring substantial costs, which is why we classify them as non-liquid. Vehicles and valuables are assets that can be relatively easy sold on a second-hand market, but it typically takes more effort and time to sell them than the previously mentioned liquid assets, so that we classify those separately as intermediate liquid assets.

Table 1: Classification of HFCS assets by degree of liquidity

Very liquid assets	Liquid assets	Intermediate liquid assets	Non-liquid assets
- Deposits - Bonds	- Publicly traded shares - Mutual funds - Managed accounts - Non-self-employment private business wealth	- Vehicles - Valuables	- Household main residence - Other real estate property - Voluntary pension/ whole life insurance - Self-employment business wealth

We use the household as the unit of analysis, also the main unit of measurement in the HFCS. Studies analysing the distribution of income typically use equivalence scales to control for household size and composition in order to capture the impact of economies of scale. However, there is no general agreement on whether and how equivalence scales should be applied to wealth. In the literature the choice depends on which perspective of wealth is adopted. In this paper wealth is seen as a resource smoothing out current consumption of households (in contrast to supporting future consumption as suggested in the life cycle hypothesis). In this perspective it seems appropriate to equivalise household wealth (OECD, 2013b; Jäntti et al., 2013; Brandolini et al., 2010). We use the same equivalence scale for wealth and income, although it is not clear whether the equivalence scales used for income are appropriate for the study of wealth (OECD, 2013a). We opted to equivalize by the square root of household size because it is the most widely used in analyses on OECD countries, but our results remain highly robust when other (or no) equivalence scales are assumed[3]. Since our analyses are at the

[3] Results of this validation exercise are not included in this paper, but are available upon request.

household level, demographic and economic characteristics mentioned in this paper always refer to the household's reference person. We use the UN/Canberra definition of the reference person[4].

4 Income and wealth in Belgium

In cross-country comparison Belgium combines high median wealth with relatively low wealth inequality. Only 4 percent of households have negative or nil net wealth. However, taking a within country perspective there is a non-negligible share of households with very low wealth holdings. Households in the first decile have accumulated wealth only equal to €2,800 or less, for instance (Kuypers et al., 2015). There is little known about how these wealth trends relate to those of income. In this part we look at how wealth is distributed over the income distribution. We specifically focus on whether low income families own enough wealth to serve as a financial buffer of any real significance in times of need.

In Table 2 some key indicators of the wealth distribution are compared between households with a low (bottom 2 deciles), intermediate (middle 6 deciles) or high income (top 2 deciles). The results clearly show that in general rates of positive net worth are very high, even among low income households (89 per cent). However, among those with positive wealth, median net worth is more than nine times lower among low income households than among households that have an intermediate income, and even 17 times compared to those with high income. The differences in median asset ownership are slightly lower, but are mediated by the inclusion of debt. The Gini coefficients show that inequality in wealth accumulations among those with a low income is higher than among those with an intermediate or high income. Finally, results for the rank correlation coefficient indicate that low income is often accompanied by low wealth, while the correlation between income and wealth further up the distribution is slightly weaker.

Comparing medians between households with different income, however, is not enough. We should look at the full distribution of wealth by different income positions, which is depicted in Figure 1. Again we find that wealth accumulations in the bottom income deciles are generally lower than in the top deciles. Mainly 10^{th} percentile and median values of net worth are substantially higher when one moves up the income distribution. However, even within the first income decile there are some households that have a net worth equal to €350,000 or more.

[4] According to this definition the reference person is determined based on the following sequential steps:
- one of the partners in a registered or de facto marriage, with dependent children
- one of the partners in a registered or de facto marriage, without dependent children
- a lone parent with dependent children
- the person with the highest income
- the eldest person

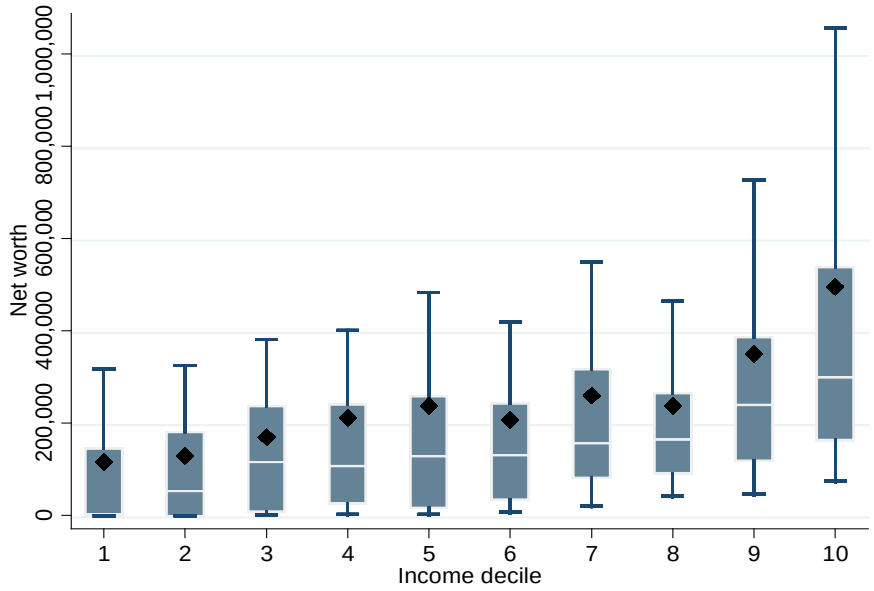
(HFCN, 2013a, p.16-17)

Table 2: Summary statistics of net wealth by income groups

	Net worth	Assets	Debt
Participation (%)			
Low income	89.1	96.3	30.6
Intermediate income	98.0	99.8	46.1
High income	98.7	100.0	55.1
Median wealth (x1000 euros)			
Low income	15.1	19.2	3.8
Intermediate income	139.3	164.2	26.2
High income	259.2	292.6	35.2
Gini coefficient			
Low income	0.74	0.72	0.74
Intermediate income	0.58	0.54	0.55
High income	0.53	0.50	0.54
Spearman correlation coefficient			
Low income	0.21	0.21	0.02
Intermediate income	0.17	0.22	0.23
High income	0.19	0.20	0.01

Notes: low=bottom two deciles, intermediate=middle 6 deciles, high income=top 2 deciles; participation in wealth refers to having a positive net worth
Source: own calculations based on HFCS

Figure 1: Distribution of net worth along income deciles

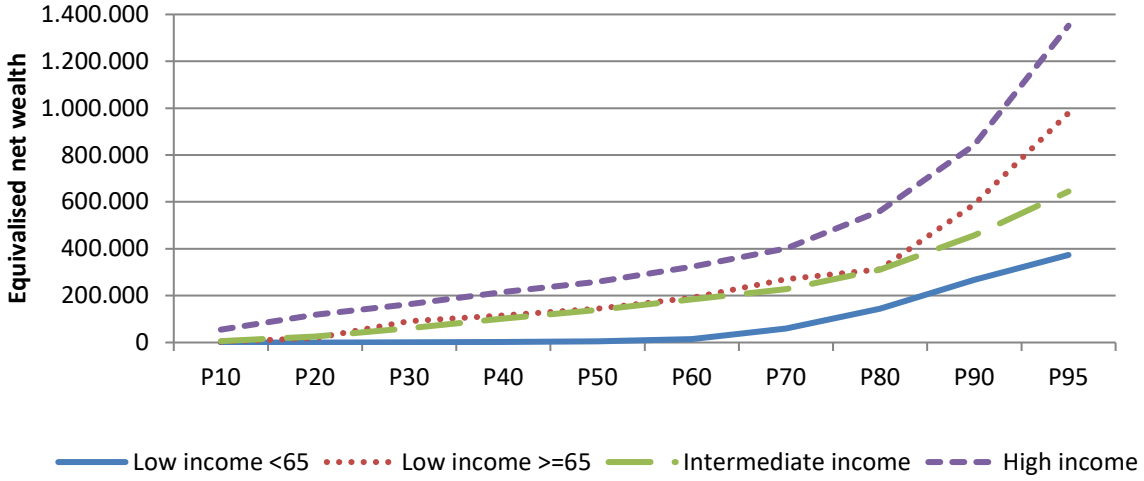


Notes: the white line refers to the median, the black diamond to the mean, the thick bars show the range between the 25th and 75th percentile and the tin bars show the range between the 10th and 90th percentile
Source: own calculations based on HFCS

One could wonder what the driving factor is for the large inequality in net worth among households with low income. Figure 2 provides percentile values for the different income groups, where the low income group is subdivided between households with an elderly and non-elderly reference person. It is clear that these two groups are very different: low income households with an elderly reference person are about as wealthy as households that have an intermediate income, while their non-elderly counterparts own much lower levels of net worth. It is only from P70 onwards that the wealth holdings

of those with a low income younger than 65 years become worth mentioning. This implies that the inequality found in wealth holdings among low income households is largely due to age effects. This is not surprising because the life cycle model (Ando & Modigliani, 1963) implies that people borrow during the early years of adult life to fund investments and then gradually accumulate wealth until retirement.

Figure 2: Percentile values of equivalised net worth for low income households by age and intermediate and higher income households



Note: low=bottom two deciles, intermediate=middle 6 deciles, high income=top 2 deciles
Source: own calculations based on HFCS

In short, we should acknowledge the fact that when low income is accompanied by the ownership of substantial assets living standards are much higher than when this is not the case or when financial liabilities are disproportional to income. Hence, for our further analyses in this paper we add to our three categories of income also the wealth dimension, such that we end up with nine different groups. Again, we have chosen to define the categories in terms of weighted deciles. In other words, those who have low income and low wealth are households who belong to the bottom two deciles of both the income and the wealth distribution, etc. Table 3 presents the Belgian sample sizes and weighted populations shares for each of these nine joint income-wealth groups. The largest group consists of households with intermediate income and wealth, while there is a non-negligible share of households that combine high income and low wealth and vice versa.

Table 3: Sample size and weighted population share of joint income-wealth groups in Belgium

	Low wealth	Intermediate wealth	High wealth
Low income	9.8% *(176)*	8.1% *(167)*	2.0% *(42)*
Intermediate income	9.2% *(180)*	40.6% *(886)*	10.4% *(307)*
High income	0.9% *(16)*	11.4% *(288)*	7.6% *(264)*

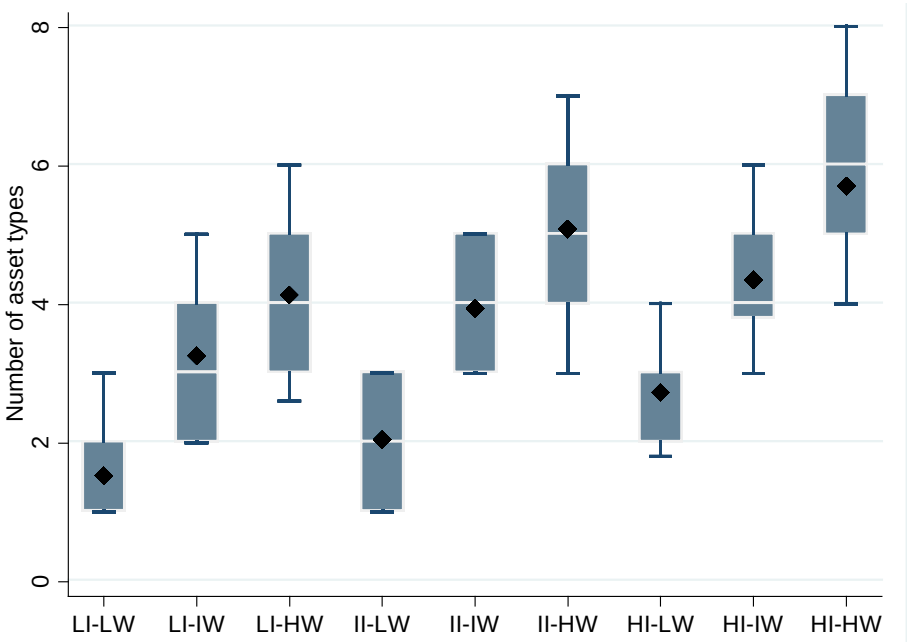
Note: low=bottom two deciles, intermediate=middle 6 deciles, high income=top 2 deciles
Source: own calculations based on HFCS

5 Asset portfolio composition

In the previous part we have shown that there exist strong links between the income and wealth distributions, especially at the low end. This can be mainly attributed to borrowing and savings constraints. However, several factors can mediate the relationship between income and wealth, such as asset portfolio choices, life-cycle effects and intergenerational transfers (Jäntti et al., 2012). In this paper we focus on the first aspect. With regard to the household portfolio one can study two aspects: the number of asset types that are held, called 'portfolio span' by Gouskova, Juster and Stafford (2006) and the portfolio composition. As mentioned before, related to the latter we focus on the composition of asset portfolios along their degree of liquidity.

Figure 3 first shows the distribution of the number of asset types held across the different joint income-wealth groups, which provides us with a measure of the heterogeneity in portfolios. We find that households having both a low income and low wealth own on average only one and a half asset types (median=1), which refer in most cases to deposits. Households in other joint income-wealth groups are found to own much more differentiated asset portfolios than their poor counterparts.

Figure 3: Distribution of portfolio span by joint income-wealth groups



Notes: maximum number of asset types is 12; the white line refers to the median, the black diamond to the mean, the thick bars show the range between the 25th and 75th percentile and the tin bars the range between the 10th and 90th percentile; LI-LW= low income – low wealth, etc.; low=bottom two deciles, intermediate=middle 6 deciles, high income=top 2 deciles
Source: own calculations based on HFCS

We now move on to the analysis of the portfolio composition. First, the top rows of Table 4 present how households, on average, distribute their wealth over assets differing by degree of liquidity. It appears that households with low income and low wealth own a fairly large and similar share of very liquid assets (about 19 per cent of total assets) compared to the other joint income-wealth groups.[5]

[5] It is worth noting that the largest share in total assets highly depends on where the household's main residence and other real estate property are classified because they typically constitute the largest shares of net worth. Indeed, we find for all

Yet, from the perspective of precautionary savings we would prefer households with low income and low wealth to own a much higher share of liquid assets. Indeed, it should be clear that the same percentage of a low or high asset value results in very different liquidity figures. Indeed, an equal liquidity share will be much more problematic for low income – low wealth households than for households which are richer in at least one of the two dimensions. As the discussion of the portfolio span indicated, liquidity of the poor often also only emanates from deposits, while their richer counterparts tend to have investments in several liquid asset sources. Hence, in order to obtain a more accurate view on liquidity patterns we also look at the share of households having an adequate level of liquidity. In line with the literature (see Bi & Montalto, 2004 and references therein), we define adequate liquidity as being higher or equal to three months of household expenditure. The rationale for this is when confronted with a loss of income, liquid assets should make it possible to smooth consumption during three months. Since the HFCS only covers information on food expenditure, we used the average share of food in total expenditure per income quartile from the Household Budget Survey (HBS) (FPS Economy, 2012) to estimate a proxy for total household expenditure. The results of this analysis are shown in Table 4 and indicate that only 9.7 per cent of households in the low income – low wealth group have an adequate level of inequality (8.0 per cent if only taking account of the very liquid assets), while this is considerably higher among the other joint income-wealth groups.

Table 4: Household portfolio composition by liquidity and debt-to-asset ratio

	LI-LW	LI-IW	LI-HW	II-LW	II-IW	II-HW	HI-LW	HI-IW	HI-HW
Share in total assets									
Very liquid assets	18.9	7.8	24.5	23.4	10.6	23.4	21.8	10.1	16.1
Liquid assets	2.2	1.2	6.9	0.6	2.1	10.8	0.0	2.3	13.9
Intermediate liquid assets	16.0	3.7	1.7	19.5	3.8	2.5	15.3	4.2	2.4
Non-liquid assets	62.8	87.4	66.8	56.5	83.5	63.3	62.9	83.4	67.6
Share of households with adequate liquidity									
Very liquid assets	8.0	44.3	66.5	18.8	50.4	82.7	34.1	54.2	82.7
Very liquid & liquid assets	9.7	45.4	68.0	18.8	54.8	89.1	34.1	59.5	88.3
Debt-to-asset ratio									
Total debt	72.8	8.5	0.3	63.5	15.7	1.4	156.1	16.1	3.3
Mortgage debt	56.6	8.1	0.3	47.7	14.4	1.4	0.0	14.8	3.0
Non-mortgage debt	16.3	0.4	0.1	15.8	1.3	0.1	156.1	1.3	0.4

Note: LI-LW= low income – low wealth, etc.; low=bottom two deciles, intermediate=middle 6 deciles, high income=top 2 deciles

Source: own calculations based on HFCS

Finally, the bottom rows of Table 4 present results for the debt-to-asset ratio among the different joint income-wealth groups. As expected the debt-to-asset ratio is much higher among households with low wealth, irrespective of their income position, than those with higher wealth. Particularly interesting to note is the fact that low wealth when combined with high income is the consequence of high (non-mortgage) indebtedness. Moreover, for all joint income-wealth groups the debt-to-asset ratio is higher for mortgage debt than for the non-mortgage kind. The ratio between mortgage debt and total assets

households that non-liquid, fairly safe and low-volatile assets have the dominant share in total assets. However, our results remain robust even when real estate is not included.

is in fact the highest among the low income – low wealth households. In short, the largest part of the asset portfolio is held in non-liquid assets and at the same time most of debt is incurred to obtain these types of assets.

6 Characteristics of households in triple precariousness

As mentioned in Table 3, 9.8 per cent of Belgian households are considered to have low income and low wealth because they belong to the bottom two deciles in both distributions. Now we can add a third characteristic of having inadequate liquid assets to finance three months of consumption. This situation, which we label as 'triple precariousness', is found to affect about 8.9 per cent of Belgian households. These households reflect about 45 per cent of low income households and 91 per cent of households having both low income and low wealth. In other words, an important share of low income households can rely on some wealth holdings or at least an adequate level of liquid assets, and thus are less financially deprived than their incomes suggest.

Next, we look at the profile of these households in triple precariousness. This can inform policy makers about which types of households are genuinely most in need of help and hence towards which current and possibly new social policies should be targeted. Table 5 shows the composition of households in triple precariousness compared to those with low incomes by several characteristics of the household's reference person. The results show that households which are at high risk of being in triple precariousness are mainly those who have a reference person that is young, unemployed or not working for other reasons, low educated, migrant, parent of dependent children, and above all a tenant. Indeed, the most striking composition is found with regard to tenure status. Owning your main residence clearly is the most important requirement of not being in triple precariousness. Moreover, the results also show some marked discrepancies between the low income population – those conventionally labelled as poor or near-poor – and the population in triple precariousness. Compared to the demographic characteristics that are highly correlated with low income we mainly find an overrepresentation in triple precariousness of young and tenant households and households with dependent children, while older households are clearly underrepresented.

The results of this descriptive analysis are confirmed when controlling simultaneously for different household characteristics in a logistic regression (see Table 6). Again, particularly interesting is the impact of tenure status; tenants and free users have 166.6 times more chance on belonging to the triple precariousness group, while this figure is only 1.8 in case of low income. The pseudo R square statistic suggests that these socio-demographic and economic characteristics explain the incidence of triple precariousness much more than of low income.

Table 5: Composition of triple precariousness versus low income by characteristics

		Triple precariousness	Low income	Population share
Age	16-34 years	44.4	25.4	17.1
	35-54 years	36.4	34.3	39.7
	55-74 years	12.5	26.2	29.0
	75+ years	6.7	14.2	14.2
Gender	Male	52.8	51.3	63.3
	Female	47.2	48.7	36.7
Educational attainment	No or primary	15.6	17.7	9.1
	Secondary	59.8	58.0	52.4
	Tertiary	24.6	24.3	38.5
Labour market status	Employee	21.9	22.6	47.7
	Self-employed	0.9	2.6	5.2
	Unemployed	37.6	25.5	7.8
	Retired	10.6	30.5	33.0
	Other not working	28.9	18.9	6.4
Household type	Couple	6.3	18.6	29.2
	Couple with children	23.1	15.5	23.7
	Single	54.3	52.4	33.8
	Single with children	12.6	8.6	4.7
	Other	3.7	5.0	8.7
Tenure status	Outright owner	0.5	31.6	41.1
	Owner with a mortgage	1.9	11.3	28.5
	Tennant/free user	97.5	57.1	30.4
Origin	Native	67.0	79.1	90.0
	Immigrant	33.0	20.9	10.0

Note: characteristics refer to the household reference person; triple precariousness=belonging to bottom two deciles of the gross income distribution, bottom two deciles of the wealth distribution and inadequate liquid assets to finance three months of consumption (N=164); low income=belonging to bottom two deciles of gross income distribution (N=385), total population (N=2327)

Source: own calculations based on HFCS

Table 6: Logistic regression of demographics on risk of being in triple precariousness versus low income

	Triple precariousness		Low income	
	Odds ratio	**Significance**	**Odds ratio**	**Significance**
Age (ref: 55-74 years)				
16-34 years	4.6380	***	2.4110	**
35-54 years	1.3584	n.s.	1.4925	n.s.
75+ years	1.6629	n.s.	0.9050	n.s.
Gender (ref: male)	1.3682	n.s.	1.5614	**
Educational attainment (ref: tertiary)				
No or primary	3.1275	**	3.5343	***
Secondary	1.6397	n.s.	1.7549	**
Labour market status (ref: employee)				
Self-employed	0.9335	n.s.	1.5314	n.s.
Unemployed	13.6366	***	11.2660	***
Retired	2.5563	n.s.	2.9276	***
Other not working	11.7267	***	8.2315	***
Household type (ref: couple)				
Couple with children	7.2132	***	1.1741	n.s.
Single	3.3080	**	1.7626	**
Single with children	7.3747	**	2.2472	n.s.
Other	2.7979	n.s.	0.9282	n.s.
Tenure status (ref: outright owner)				
Owner with a mortgage	2.0315	n.s.	0.6287	n.s.
Tennant/free user	166.5958	***	2.0410	***
Origin (ref: native)	2.8921	***	2.2836	***
Constant	0.0001	***	0.0211	***
Pseudo R^2:	*0.5754*		*0.2514*	

Notes: *** significant at 1%, ** significant at 5%, n.s. not significant; characteristics refer to the household reference person; triple precariousness=belonging to bottom two deciles of the gross income distribution, bottom two deciles of the wealth distribution and inadequate liquid assets to finance three months of consumption (N=164); low income=belonging to bottom two deciles of gross income distribution (N=385), total population (N=2327)
Source: own calculations based on HFCS

7 Conclusion and policy discussion

There is a burgeoning literature on the significance and distribution of wealth in the rich world. That is entirely justified because assets and wealth play a very large role in people's living standards, mainly exacerbating differences between the richest and the rest. This paper shows that assets also matter greatly when making assessments of who is poor and financially vulnerable.

We introduce the concept of triple precariousness, afflicting households that not only have low income but also very low or non-existent assets to draw on for consumption needs, especially liquid assets. We analyse whether these households - which we might call the truly vulnerable - have different characteristics from those that we identify as poor or needy on the basis of pure income based metrics.

In an analysis for Belgium, we show that the profile of those that we identify as the truly vulnerable - households with low income, few assets, especially few liquid assets - is different from those that we identify as poor purely on the basis of income, as is conventionally done. Households with a reference person that is young, unemployed, low educated, migrant, parent of dependent children, and above all a tenant, are especially vulnerable in terms of their overall financial situation. By contrast, our assessment of the extent and depth of financial need among the elderly - a segment of society that is at a relatively high risk of income poverty - also changes drastically. A substantial share of income poor elderly households own significant assets.

Such results probably hold social policy consequences. First, with respect to existing policies, which are typically focused on income, a distinction between those who can provide in their own income maintenance during difficult periods by drawing on assets and those who cannot surely seems relevant. Yet it is not entirely straightforward in what way. Obviously, state resources could be spent more effectively and possibly more efficiently if social benefits were to be primarily targeted at those who are the most vulnerable, i.e. households with low income, low wealth and inadequate liquidity. Another potential implication is that less is spent on income poor households that have substantial resource. Yet certain assets may not be immediately or fully fungible, or only at a significant cost. It also seems unreasonable to expect people to sell certain types of assets, such as the family home, to meet income needs that are a fraction of the total value of that asset. On the other hand, it does not appear entirely fair either that non-contributory income support is provided to people with very significant wealth holdings. How assets should affect eligibility calculations and how aspects like liquidity, divisibility etc. are to matter in this respect clearly requires further analysis.

Second, looking at issues of inequality and poverty within a joint income-wealth framework may lead us to think further about introducing new types of policies. In particular, European welfare states now often focus on the redistribution of market incomes, while this paper has shown that there is also an important (and increasing) need for distributing wealth resources more evenly. Such wealth-related redistributive policies could complement current income-oriented policies and might target both ends of the spectrum. At the top of the wealth distribution there is ample room for an increase in wealth taxation, but it is just as important to support asset accumulation among the poor. Recently, several authors have made proposals in this direction. For instance, Atkinson (2015) argues that there should be a capital endowment for all paid at adulthood, Ackerman & Alstott (1999, 2004) made similar arguments striving for a 'stakeholder society', and Sherraden (1991, 2001) has been advocating pro-poor asset-building policies for three decades already. Although currently several European countries fiscally encourage the ownership of real estate and financial assets, these policies are typically unavailable to poor households (McKernan & Sherraden, 2008). It certainly appears that such policies have not been used to their fullest potential to address financial vulnerability and poverty, although the benefits of doing so may be large and numerous (see Sherraden, 1991). Furthermore, these policies have traditionally favoured the ownership of illiquid assets such as real estate over more liquid asset types. Looking at how we can include the poor into these types of policies is an interesting direction for future research.

However, there are some risks involved in finding a correct balance between these two policy options. When eligibility for social benefits are means-tested against private wealth, it could result in so-called

'saving traps', i.e. households could be discouraged to save so as to remain below the asset threshold (Alcock & Pearson, 1999; Fehr & Uhde, 2013; Jäntti et al., 2008; Sefton et al., 2008). Hence, while the aim of new asset policies would be to encourage the poor to accumulate assets, proper means-testing punishes them for owning such assets. The trade-off between the two will be an interesting aspect to consider for future research.

References

Ackermann, B., & Alstott, A. (1999). *The stakeholder society.* Yale University Press.

Ackermann, B., & Alstott, A. (2004). Why stakeholding? *Politics & Society, 32*(1), 41-60.

Alcock, P., & Pearson, S. (1999). Raising the poverty plateau: The impact of means-tested rebates from local authority charges on low income households. *Journal of Social Policy, 28*(3), 497-516.

Alvaredo, F., Atkinson, A. B., Piketty, T., & Saez, E. (2013). The top 1 percent in international and historical perspective. *Journal of Economic Perspectives, 27*(3), 3-20.

Ando, A., & Modigliani, F. (1963). The 'life cycle' hypothesis of saving: Aggregate implications and tests. *American Economic Review, 53*(1), 55-84.

Arrondel, L., Bartiloro, L., Fessler, P., Linder, P., Mathä, T. Y., Rampazzi, C., . . . Vermeulen, P. (2014). *How do households allocate their assets? Stylised facts from the Eurosystem Household Finance and Consumption Survey .* ECB Working Paper No 1722.

Atkinson, A. B. (2015). *Inequality. What can be done?* Cambridge, Massachusetts: Harvard University Press.

Azpitarte, F. (2012). Measuring poverty using both income and wealth: A cross-country comparison between the U.S. and Spain. *Review of Income and Wealth, 58*(1), 24-50.

Brandolini, A., Magri, S., & Smeeding, T. (2010). Asset-based measurement of poverty. *Journal of Policy Analysis and Management, 29*(2), 267-284.

Brzozowski, M., Gervais, M., Klein, P., & Suzuki, M. (2010). Consumption, income and wealth inequality in Canada. *Review of Economic Dynamics, 13*(1), 52-75.

Campbell, J. Y. (2006). Household finance. *Journal of Finance, 61*(4), 1553-1604.

Cowell, F., & Van Kerm, P. (2015). Wealth inequality: A survey. *Journal of Economic Surveys, 29*(4), 671-710.

Cramer, R., M, S., & McKernan, S.-M. (2008). Policy implications. In S.-M. McKernan, & M. Sherraden, *Asset building and low income families* (pp. 221-237). Washington D.C.: The Urban Institute Press.

Cunha, M. R., Lambrecht, B. M., & Pawlina, G. (2011). Household liquidity and incremental financing decisions: Theory and evidence. *Journal of Business Finance & Accounting, 38*(7&8), 1016-1052.

Eurosystem Household Finance and Consumption Network. (2013a). *The Eurosystem Household Finance and Consumption Survey - Methodological report for the first wave.* ECB Statistics Paper No1, 112p.

Eurosystem Household Finance and Consumption Network. (2013b). *The Eurosystem Household Finance and Consumption Survey - Results from the first wave.* ECB Statistics Paper No2, 112p.

Federal Public Service (FPS) Economy, Statistics Belgium. (2012). *Household Budget Survey 2010.* Retrieved April 14, 2014, from http://statbel.fgov.be/nl/modules/publications/statistiques/arbeidsmarkt_levensomstandigheden/huishoudbudget_1999-2010.jsp

Fehr, H., & Uhde, J. (2013). Means-testing retirement benefits in the UK: Is it effcient? *Working Paper, University of Wuerzburg.*

Friedman, M., & Savage, L. J. (1948). The utility analysis of choices involving risk. *Journal of Political Economy, 56*(4), 279-304.

Gouskova, E., Juster, F. T., & Stafford, F. P. (2006). Trends and turbulence: allocations and dynamics of American family portfolios, 1984-2001. In E. N. Wolff, *International Perspectives on Household Wealth* (pp. 295-326). Cheltenham: Edward Elgar.

Jäntti, M., Sierminska, E., & Smeeding, T. (2008). The joint distribution of household income and wealth. Evidence from the Luxembourg Wealth Study. *OECD Social, Employment and Migration Working Papers No.65.* Paris: OECD Publishing.

Jäntti, M., Sierminska, E., & Van Kerm, P. (2012). Modelling the joint distribution of income and wealth. *Paper prepared for the 32nd General Conference of The International Association for Research in Income and Wealth.* Boston USA August 5-11.

Jäntti, M., Sierminska, E., & Van Kerm, P. (2013). The joint distribution of income and wealth. In J. C. Gornick, & M. Jäntti, *Income inequality. Economic disparities and the middle class in affluent countries* (pp. 312-333). Stanford: Stanford University Press.

Kontbay-Busun, S., & Peichl, A. (2014). *Multidimensional affluence in income and wealth - A cross-country comparison using the HFCS.* ZEW Discussion Paper 14-124.

Kuypers, S., Marx, I., & Verbist, G. (2015). *Joint patterns of income and wealth inequality in Belgium.* Report prepared for the National Bank of Belgium.

McKernan, S.-M., & Sherraden, M. (2008). *Asset building and low income families.* Washington D.C.: The Urban Institute Press.

McKernan, S.-M., Ratcliffe, C., & Williams Shanks, T. (2012). Is poverty incompatible with asset accumulation? In P. N. Jefferson, *The Oxford Handbook of the Economics of Poverty* (pp. 463-493). Oxford: Oxford University Press.

Nam, Y., Huang, J., & Sherraden, M. (2008). *Assets, poverty, and public policy: Challenges in definition and measurement.* St. Louis, MO: Washington University in St. Louis, Center for Social Development.

OECD. (2008). *Growing Unequal? Income distribution and poverty in OECD countries.* Paris: OECD Publishing.

OECD. (2013a). *OECD Guidelines for Micro Statistics on Household Wealth.* Paris: OECD Publishing.

OECD. (2013b). *OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth.* Paris: OECD Publishing.

Sefton, J., van de Ven, J., & Weale, M. (2008). Means-testing retirement benefits: Fostering equity or discouraging savings? *The Economic Journal, 118*(528), 556-590.

Sherraden, M. (2001). Asset-building policy and programs for the poor. In T. Shapiro, & E. Wolff, *Assets for the poor. The benefits of spreading asset ownership* (pp. 302-323). New York: Russel Sage Foundation.

Sherraden, M. W. (1991). *Assets and the Poor: A new American Welfare Policy.* New York: M.E. Sharpe, Inc.

Skopek, N., Kolb, K., Buchholz, S., & Blossfeld, H. P. (2012). Income rich - asset poor? The composition of wealth and the meaning of different wealth components in a European comparison. *Berliner Journal für Soziologie, 22*(2), 163-187.