

Compilation and measurement of household wealth and its distribution

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Overview

This paper studies household wealth in Denmark using:

- ▶ macro data from the National Accounts
- ▶ a newly developed micro dataset.

The new micro-data are the basis of Statistic's Denmark's Family Distributed Wealth and Debt Statistics (FDWS).

The macro data shows that the household sector in Denmark has come through the financial crisis fairly well.

The FDWS shows that wealth inequality in Denmark is comparable to other European countries.

- ▶ contrast to income, where Denmark has less inequality than most.

Motivation

Household net wealth captures:

- ▶ opportunities for future consumption
- ▶ ability to smooth consumption.

Wealth (and wealth inequality), alongside income, are key indicators for the household sector.

Newly developed micro data set allows for analysis of the distribution of wealth within the sector in 2014.

Housing is the largest component of household net wealth

- ▶ this paper has a focus on home ownership.

Data

Macro data is from the Financial Accounts (FA) for the household sector (S.14) of the National Accounts

- ▶ net wealth
- ▶ ESA 2010
- ▶ real wealth a recent edition.

Micro data (FDWS) is constructed from administrative tax data

- ▶ no imputations(!)
- ▶ real wealth a recent addition.
- ▶ real estate valuations updated with price index based on sales
- ▶ household concept different from NA.
- ▶ for this analysis, wealth concepts adjusted to ESA 2010
- ▶ link to other register data

FSDW and FA align well

Relationship between components in FA on household wealth and FDWS, 2014

FDWS Family distributed wealth statistics		FA ESA 2010 Financial accounts for households	
Non-financial assets, total	3 932 484 Notes		3 813 684
Principal residence	2 660 830	Real assets (b), (c)	3 476 569
Cooperative dwellings	246 609 (a)		
Holiday cottages	248 158 (b)		
Other real estate	585 263 (c)		
Vehicles	191 604	Vehicles, boats and planes	192 835
		Other fixed capital	144 280
Financial assets, total	5 242 626		5 438 513
Deposits	694 017	F.2 Currency and deposits (f)	908 440
Bonds and other debt securities (incl. mortgage deeds)	53 188	F.3 Debt securities	66 328
		F.5 Equity and investment fund shares (a), (b), (e)	1 552 473
Equity shares	423 565 (d)		
Shares in investment funds	237 375 (e)	F.7 Financial derivatives and employee stock options	1 008
		F.8 Other accounts receivable	33 213
Pensions, total	3 834 482		2 877 052
		F.61 Non-life insurance technical reserves	79 039
Pensions in insurance funds	1 477 287	F.62 Life insurance and annuity entitlements	1 585 045
		F.63-F.64-F.65 Pension entitlements, claims of pension funds on pension managers and entitlements to non-pension benefits	1 212 967
Pensions in pension funds (incl. ATP)	1 219 572		
Pension in banks (incl. LD)	536 798 (f)		
Civil servant pension	600 826 (g)		
Liabilities, total	2 485 157 (h)		2 633 441
Mortgage deed loans	8 250	F.3 Debt securities	9 025
Mortgage loans	1 763 280	F.4 Loans	2 552 250
Other real estate loans	70 251		
Other loans in banks	549 013		
Credit card debt, student loans, etc.	94 362	Other accounts payable	72 166
Net wealth	6 689 954	Net wealth	6 618 786
Net financial assets	2 757 470	Net financial assets	2 805 102

Methods (microdata)

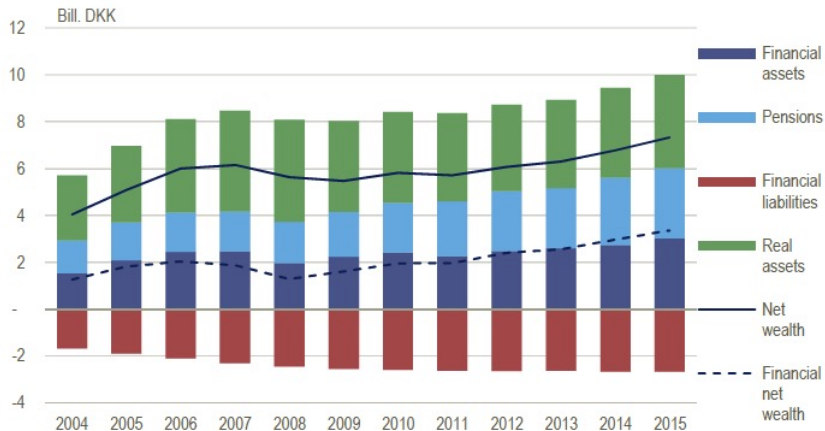
Wealth differences by tenure status decomposed by Blinder-Oaxaca method.

Gini decomposed by wealth component using Pyatt et al, (1980), Lerman and Yitzhaki (1985).

Gini decomposed by group using Pyatt (1976), Aliaga and Montoyas (1999) and Jenkins (2006).

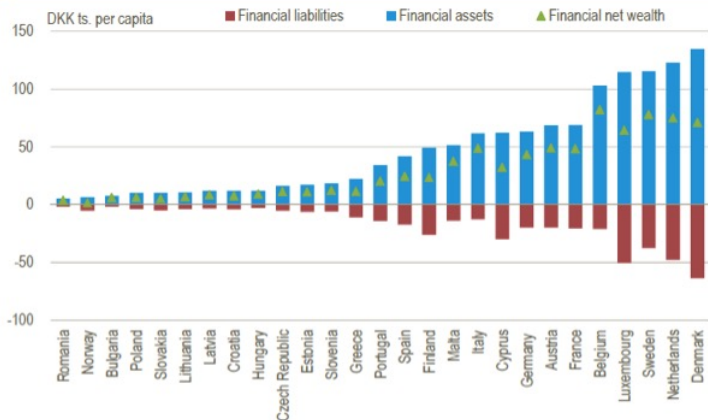
Household net wealth over time

Development in household net wealth. 2004-2015



Danes have a lot of financial assets and debt

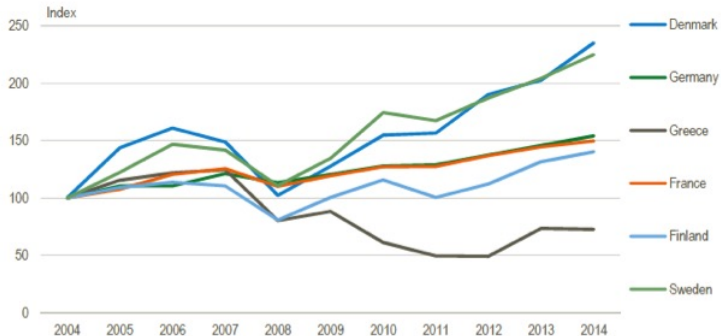
Figure 5 Household financial net wealth. 2014



Source: Eurostat database

Danish HH sector came through the Financial Crisis well

Figure 4 Development in household financial net wealth. 2004-2014



Source: Eurostat database

Microdata descriptive statistics

Table 2 Mean and median household wealth, by component. 2014

	Net wealth	Real wealth	Financial Wealth ex. pensions	Pension wealth	Loans
	Thousand DKK				
Mean	2,113	1,279	760	936	862
Median	942	228	150	471	202
Mean-median ratio	2.2	5.6	5.1	2.0	4.3
Percentage share of lowest net wealth decile	-1.8	4.2	0.9	1.7	13.2
Percentage share of highest net wealth decile	50.3	39.2	56.0	36.0	23.2
Percent of households with negative or zero value	8.6	33.0	1.3	4.2	24.2

Source: Own calculations based on FDWS data

Homeowners versus renters

Table 3 Blinder-Oaxaca decomposition results

	Explained "Endowment effect"	Unexplained
Total gap in mean net wealth (1000 DKK)	2 999	
Share of gap explained/unexplained	0.48	0.52
Log(income)	0.29	14.54
Metro area	-0.02	0.10
Age<30	-0.27	-14.94
30<Age<65	0.35	1.07
65<Age	0.00	0.01
Immigrant from advanced economies	-0.00	0.01
Immigrant from other countries	-0.00	0.01
Married	0.04	-0.11
Divorced	0.01	-0.02
Widowed	0.00	-0.01
Log(# of children)	-0.02	-0.03
Post-secondary education	0.00	-0.03
Upper-secondary education	0.02	-0.01
Third level education	0.06	0.02
Unemployed	-0.00	0.02
Self-employed	-0.00	-0.03
pensioner	0.01	-0.08
student	-0.00	0.02

Source: Own calculations based on FDWS data

Contribution of wealth components to inequality

Table 4 Gini decomposition by wealth components

	Component Gini	Wealth share	Rank correlation	Share of overall Gini	Marginal effect	Contribution to overall Gini
	G_k	S_k	R_k			
Housing wealth	0.73	0.57	0.74	0.44	-0.13	0.31
Vehicles	0.67	0.03	0.52	0.02	-0.02	0.01
F.2 Currency and deposits	0.76	0.20	0.86	0.19	-0.01	0.13
F.3 Debt securities, assets	1.00	0.01	0.92	0.01	0.00	0.01
F.5 Equity and inv. fund shares	0.92	0.15	0.78	0.15	0.00	0.11
F.6 Insurance and pension schemes	0.63	0.44	0.84	0.33	-0.11	0.23
F.3 Debt securities, liabilities	-1.00	0.00	0.10	0.00	0.00	0.00
F.4 Loans	-0.73	-0.41	-0.34	-0.14	0.26	-0.10
Total net wealth (Overall Gini)	0.70	1.00	1.00	1.00		0.70

Source: Own calculations based on FDWS data

Subgroup analysis of inequality

Table 5 Inequality decomposition by population subgroups, in shares

Inequality component	Net wealth			Disposable income		
	Homeownership	Age	Education	Homeownership	Age	Education
Between: G_B	0.54	0.54	0.39	0.47	0.45	0.47
Within: G_W	0.46	0.33	0.40	0.45	0.42	0.37
Overlap: R	0.00	0.13	0.21	0.08	0.14	0.15
Overall Gini: G	0.70			0.38		

Note: The estimates of the overall Gini coefficients refer to the entire wealth distribution while the estimation of inequality component's shares refers to non-negative wealth levels only.

Source: Own calculations based on FDWS data

Conclusions

Household net wealth recovered well post-crisis

Homeownership, age and income are main "drivers" of wealth inequality

- ▶ homeowners much richer (mean 8 x renters)
- ▶ half of this is "explained"

Wealth more unequal than income

- ▶ and more so than usual(?)

Housing is key

Comments and Questions

Great micro data

Is housing net wealth?

Pension valuation

How is Denmark (relatively) equal wrt to income, but not wealth?

income \rightarrow accumulation \rightarrow wealth \rightarrow capital income

► imputed rent

Any issue with wealth regressions in levels (BO decomposition)?

Do NA use same tax data as FDWS?

Another reason for integrated macro and micro data: understanding macro developments