HOUSEHOLD DEBT AND CREDIT CONSTRAINTS: COMPARATIVE MICRO EVIDENCE FROM FOUR OECD COUNTRIES

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Comments in this discussion do not necessarily reflect the opinion of the Bank of Spain.

Extremely ambitious, comprehensive work.

    Little known about wealth comparisons, let alone debt.

    What empirical regularities do we observe in the demand of debt?

1. Calibrate life-cycle model of consumption and debt

    Discussion of institutional features and comparative statics.

2. Estimate using comparable micro data:

a) Conditional distribution loan application

    Gap between current and permanent income does not affect applications.

    Life-cycle effects (less likely among the elderly).

b) Conditional distribution loan rejection.

    Highest incidence in US.

    Negatively related to income (US) and age, positively to permanent income.

c) Conditional distribution debt amount

    Positively related to permanent income (NL and US)

    Life-cycle pattern (hump-shaped)

COMMENT 1: CALIBRATION EXERCISE.

Calibration: life-cycle model with and without income risk.

Households smooth *nondurable* consumption over life-cycle.

Demand of debt depends on gap bw. current and permanent income

BUT most debt holdings are <u>mortgage debt</u> (Table 4c)

56% in Italy, 80% in US and Spain, 91% in Netherlands.

1. Durable consumption and debt differ from standard LCH

Infrequent purchases of durables, affected by interest rate.

2. Confounding factors in link bw. mortgage debt and current income.

1. "Credit-scoring" rules (selection on current income)
2. Low -income groups rent, rather than own

3. In some instances, real estate may act as buffer stock

RECOMMEND EXPLORING COMPARATIVE STATICS USING A MODEL OF <u>DURABLE</u> CONSUMPTION.

COMMENT 2: COMPARING COMPARABLES?

1. Sampling frames:

– SCF (US) and EFF (Spain): oversample the rich.

– DNB (Netherlands) SHIW (Italy) do not oversample.

a) Debt fat left tail, averages sensitive to how the top is dealt with.

b) Use medians and centiles of debt distribution to make cross-country comparisons. ?

c) Hard to understand differences in mean absolute debt.

Income, age structure, household size vary across countries.

Debt-income ratios or financial burden ratios?

SUGGEST: Bover (2005) compares debt / debt-income ratios US, NL, SP

2. Differences in handling missing data

– SCF (US) and EFF (Spain): imputation of missing values.

– DNB (Netherlands) and SHIW: no imputation.

Barceló (2007) marginal distribution of income and wealth substantially affected by imputation (method).

COMMENT 3: INTEREST RATES (R)?
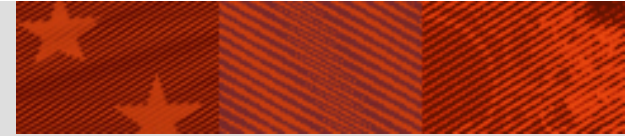
Interest rates /maturity in error term in ALL specifications.

BUT substantial cross-sectional heterogeneity in interest rates.

Table 1: Interest rates correlates (SPAIN)

Interest rates of loans financing real estate correlate …

Negatively with income and wealth (small impact)

With demogr: 80 bp lower R if child between 1-6 years

With Perm inc: 40 bp lower R among college grads.

Interest rates of loans financing other purchases correlate …

With demogr: 150 bp larger R if child between 1-6 years

50 bp larger R for not married

Interpretation of Tables 8-10 complicated if debt moves with R.

Alessie, Hochguertel & Weber (2005)/Gross & Souleles (2002) elasticity of consumption debt to R of -1 (intensive margin).

Martins and Villanueva (2006) elasticity of mortgage debt to R of -2.4 (extensive margin)
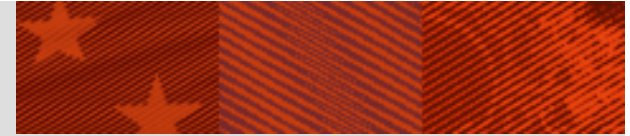
Table 1: OLS correlates of loan interest rates

Debt finances:	Home purchase	Other
Dependent variable:	R (bp)	R (bp)
Current income	-.167	**-.413**
(1000s euros)	(.123)	**(.180)****
Wealth (1000s euros)	-.0086	-.0018
	(.005)**	(.008)
Number children 1-6	**-78.43**	**153.69**
	(17.51)***	**(66.36)****
Number children 14-19	23.769	**93.57**
	(18.903)	**(45.24)****
Not married	13.66	**56.34**
	(15.32)	**(24.51)****
College	**-37.07**	-16.3
	(14.67)**	(26.39)
Constant	592.64	608.3
	(30.90)	(36.07)
Sample size:	720	760

Source: Spanish EFF

Other covariates, not shown: age dummies, time dummies (year borrowed)

Complementary information could be exploited (interest rates, maturity).

Very good work on selection on unobservables/ measuring variables like P. inc.

Perhaps useful to look at observables wealth surveys are very good at collecting

(1) Among credit-constrained households, debt responds *less* to <u>interest rates</u> than among unconstrained households.

**(2) Among credit-constrained households, debt responds *more* to <u>loan maturity</u>.**

Attanasio, Kyriadizou and Goldberg (2005)

SUGGEST examining international differences response of debt to interest rates and maturity

Countries with higher fraction of liquidity constrained households should exhibit less sensitivity to R and more to loan maturity.

Instruments (income taxes, quality of housing and car stock)
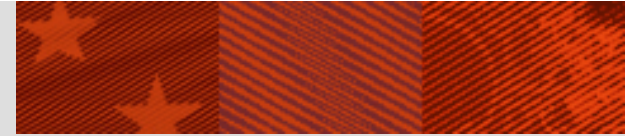
1. Permanent income estimates:

Ideally: (discounted) individual specific average of future income.

Paper: X-section averages within education cells? More detail useful.

Measurement error?

1) NL: Permanent income in NL explains loan application (good measure).

US, Spain, Italy: Permanent income does not (no or short panel data).

2) NL permanent income does not explain loan rejection.

US, Italy permanent income decreases loan rejection (bad measure).

2. Cohort effects complicate interpretation of age profiles.

US, Spain and Netherlands: development credit markets (age entry matters)

US, Spain: substantial changes in educational attainment.

3. Splines demand too much from the data:

Coefficients on income (age) do not look THAT different (standard errors)

3. SUMMARY

1. **Little known about marginal and conditional distribution of debt across countries.**

Paper provides a framework to compare comparable data.

SUGGESTIONS

1. **What is the relevant calibration exercise and what are credit constraints?**

Consumption or mortgage credit?

Summary Table of predictions useful?

2. **Are we comparing comparable data? (sampling issues)**

Think harder on moments to report (Bover, 2005).

3. **What are we <u>really</u> capturing?**

Role of interest rates? Loan maturity?.

In addition to worrying about <u>unobservables</u>, exploit <u>observables</u>

4. Model specification

Splines, cohort effects, permanent income.