The Response of Household Wealth to the Risk of Losing the Job: Evidence from Differences in Firing Costs

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The response of household wealth to job loss risk

- Do households more exposed to risk keep precautionary balances?

  – If yes, how large and who holds them?

  – Why wealth?

- What do we know?

  – Consumption: Gourinchas and Parker (02), Browning and Lusardi (96), Benito (02), Guiso, Jappelli and Terlizzese (92).

  – Wealth: Fuchs-Schündeln & Schündeln (05) -Germany, Engen & Gruber (01): UI, Lusardi (97), Carroll, Dynan & Krane (03) [CDK (03)].

- THIS PAPER: Use large differences in firing costs within Spanish labor market to estimate the response of wealth to job loss risk.

  – Severance payments: easily identifiable workers face different job loss risk.

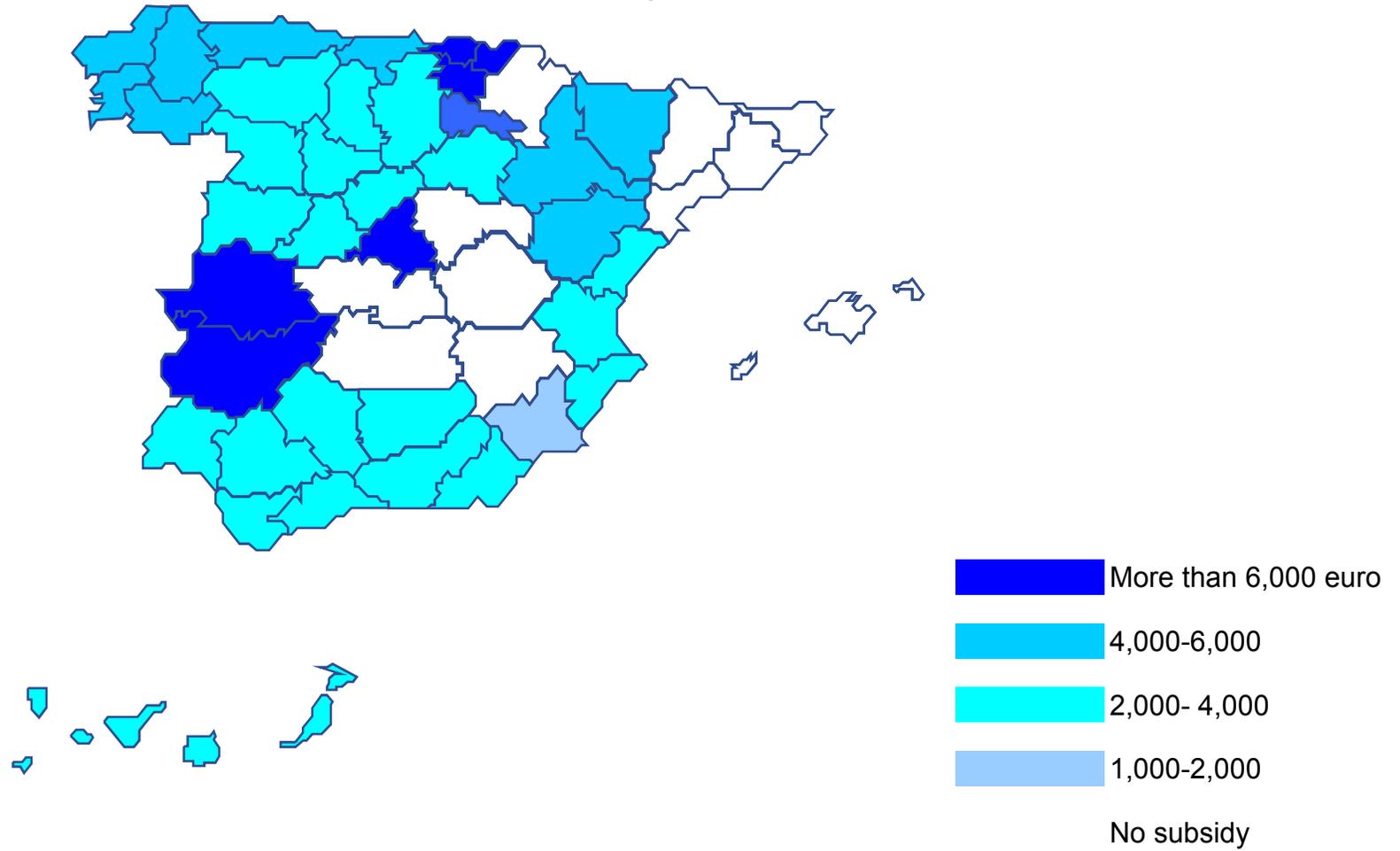 – Prevalent in Europe (Italy, France, Germany, Portugal...).

Our contribution:

- Problematic issues in the literature:

  1. Measuring exposure to job loss.

  2. Making sure only unemployment risk changes across such groups?

  3. Workers exposed to job loss more likely to have used their wealth

  4. Liquidity constraints.

- First, we use legally-induced differences in firing costs (1).

- Second, use regional variation in legal incentives of firms to sign open-ended contracts (2 & 3).

  – In 1997, several Spanish regions introduced subsidies to (1) convert fixed-term contracts and (2) hiring unemployed workers using open-ended contracts.

  – Arguably suitable instrument: affect type of contract a worker has and are unrelated to wealth.

  – Subsidies varied by region, demographic group (age, gender), and year.

Regional subsidies to sign open-ended contracts in 1997
(males aged over 30)

More than 6,000 euro

4,000-6,000

Less than 4,000
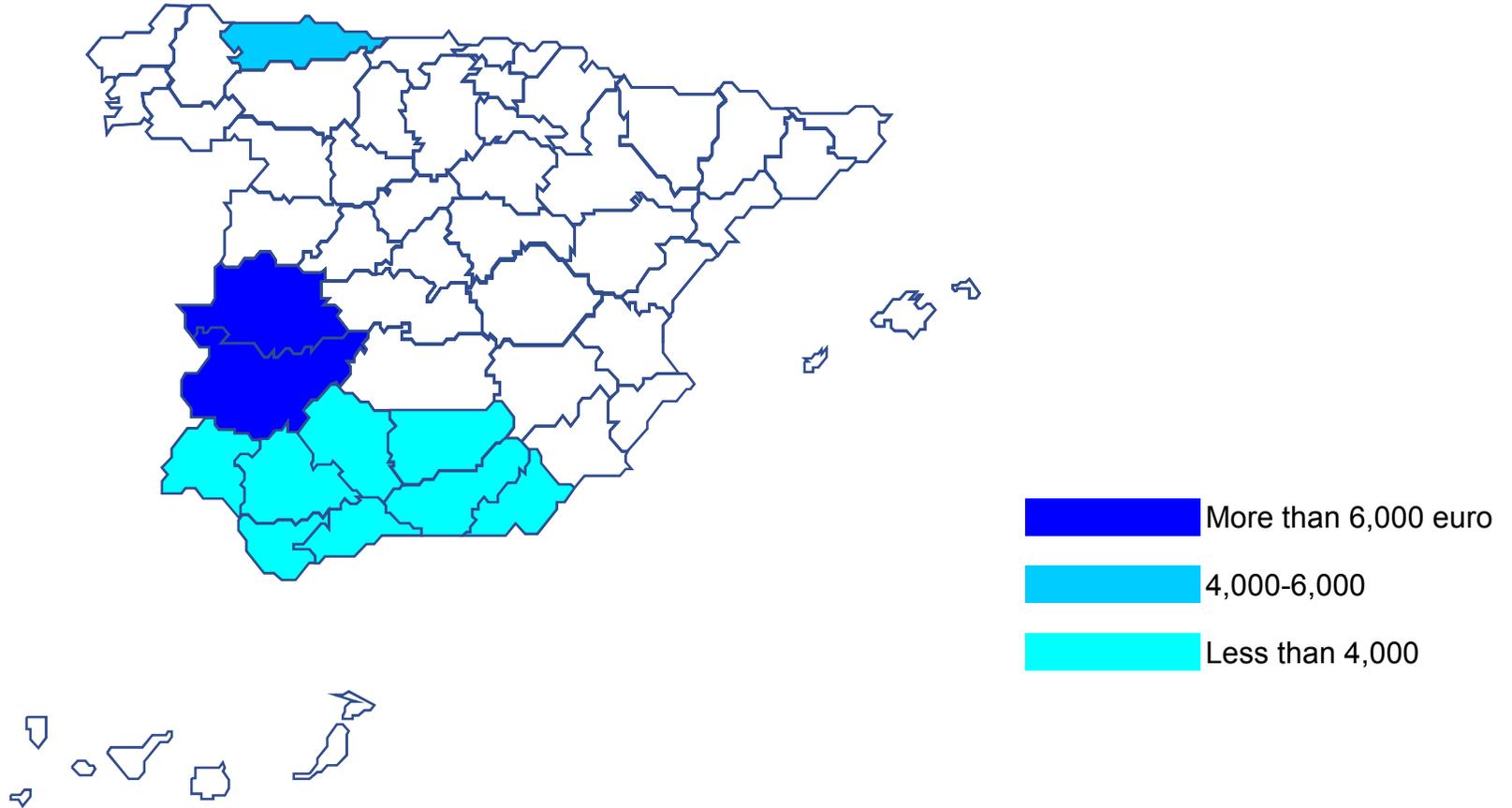
Regional subsidies to sign open-ended contracts, 1998
(males aged over 30)

More than 6,000 euro

4,000-6,000

2,000- 4,000

1,000-2,000

No subsidy

Regional subsidies to sign open-ended contracts in 2000
(males aged over 30)

More than 6,000 euro

4,000-6,000

2,000- 4,000

1,000-2,000

No subsidy
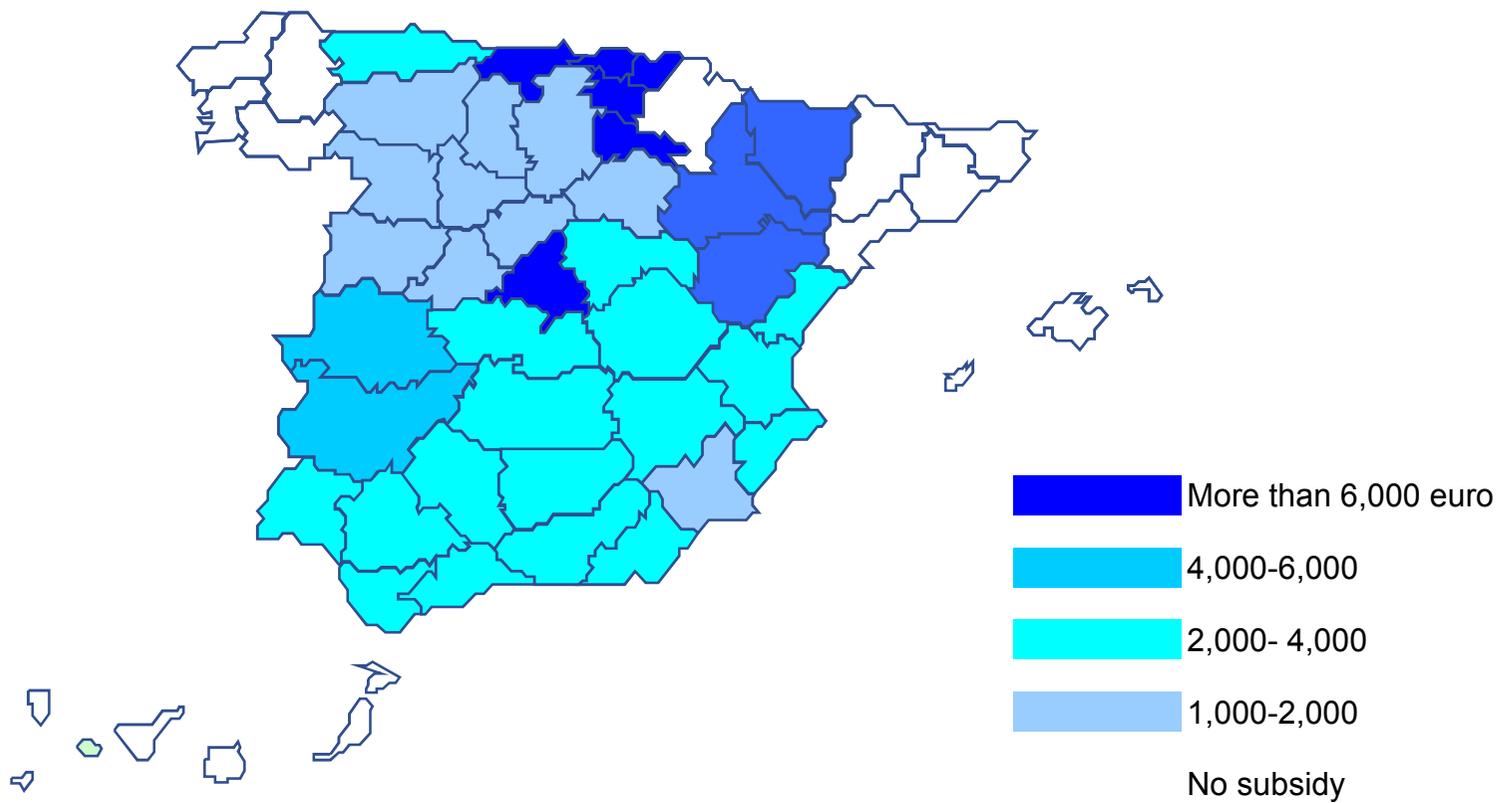
Regional subsidies to sign open-ended contracts in 2003
(males aged over 30)

- More than 6,000 euro
- 4,000-6,000
- 2,000- 4,000
- 1,000-2,000
- No subsidy
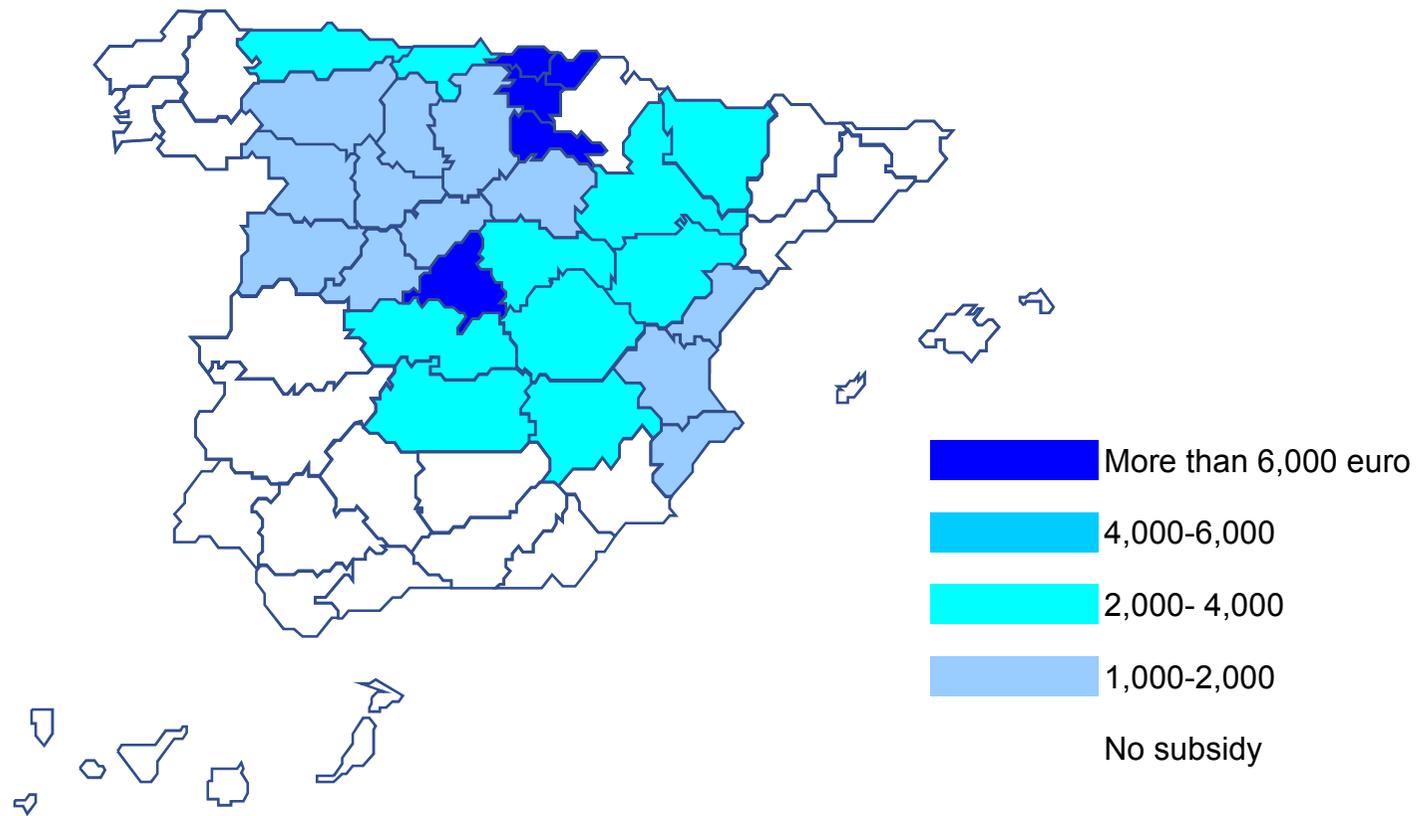
Regional subsidies to open-ended contracts in 1997
females

Above 10,000 eur

Between 4,000- 5,000

No subsidy
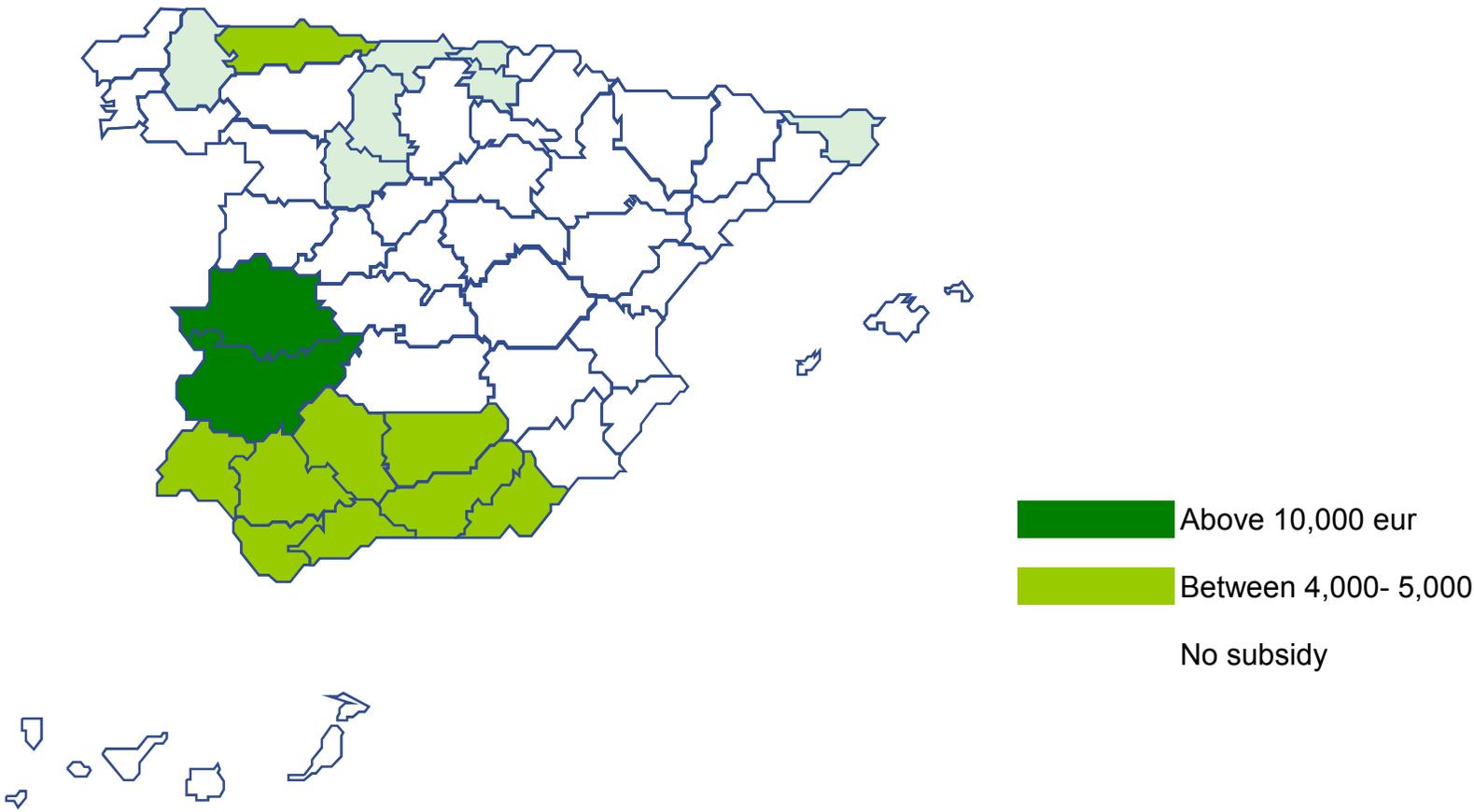
Regional subsidies to open-ended contracts, 1998
females

Above 10,000 eur

Between 4,000- 5,000

Between 3,000-4,000
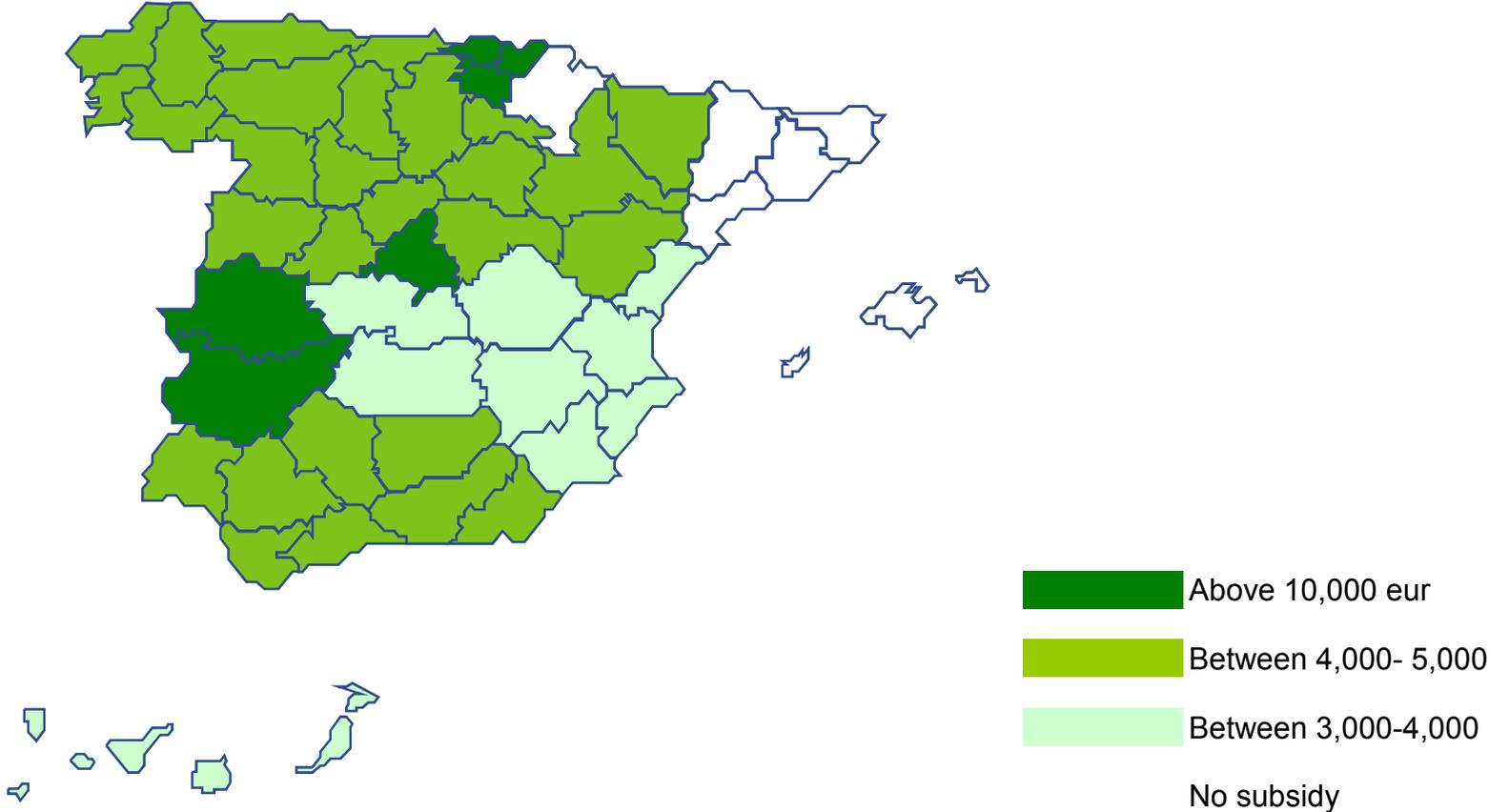
No subsidy

Regional subsidies to open-ended contracts, 2000
females

Above 10,000 eur

Between 4,000- 5,000

Between 3,000-4,000

No subsidy

Regional subsidies to open-ended contracts, 2003
females

Above 10,000 eur

Between 4,000- 5,000

Between 3,000-4,000
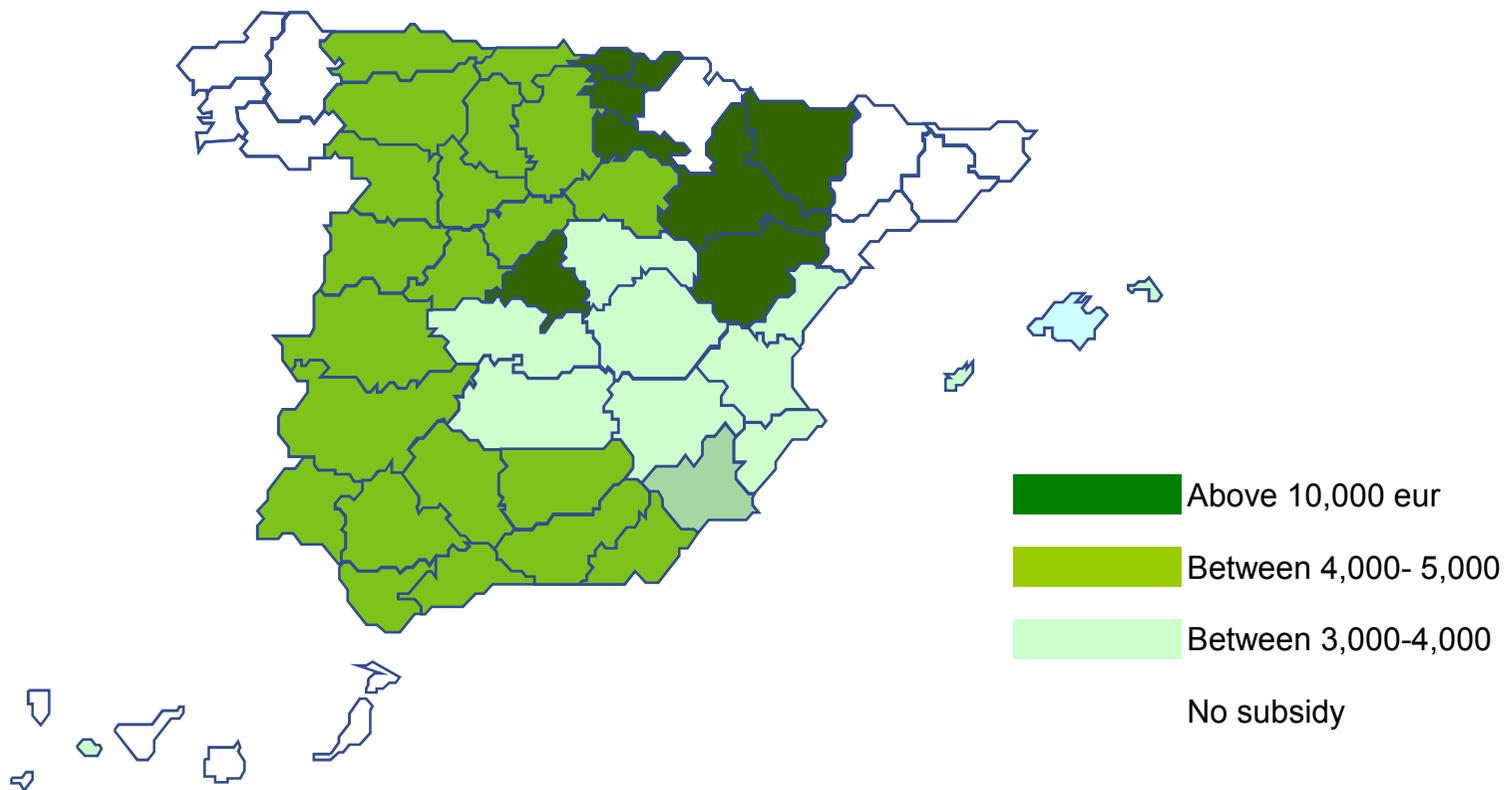
No subsidy

Strategy

- Spanish Survey of Household Finances (EFF2002 & EFF2005).

    - Household wealth.

    - Head's type of contract (and info to impute subsidy).

    1. Check if workers whose job started when a more generous subsidy to convert FTC more likely to have an open-ended contract.

    2. Reduced-form causal impact of having an open-ended contract on household wealth.

    3. Compare our reduced-form estimates to extremely simple models of buffer stock and permanent income.

- Suggestive evidence of consumption responses to the risk of job loss.

Fixed-Term Contracts in Spain

- Rigid labor market, introduced in 1984 low-severance payment contracts [Dolado *et al* (02), Güell and Petrongolo (07)].

- Strong differences in severance payments:
  - Open-ended contract: 20/45 wage days per year worked.
  - Fixed-term contracts (FTCs): 12 days per year, possibly zero.

- FTCs widely used: 30% of working adults, 19% of heads.

- Workers covered by open-ended contracts protected twice:
  - Costlier for the firm to dismiss.
  - Upon lay-off, receive higher compensation package.

Table A.1: The distribution of the probability of losing the job, by education.

Panel A: Probability of head transiting into unemployment in the next quarter
(Source: Spanish EPA)

	Open-ended contract	Fixed-term contract
Total	0.011	0.088
Primary school	0.018	0.111
Secondary school	0.012	0.082
Upper secondary school	0.009	0.074
College	0.006	0.062

Mean predicted values by cell

Theoretical Considerations

- Linear approximation in Blundell and Stoker (EER, 99).

  – Two periods, log-utility, zero discount, job loss with probability P.

  – Period 2: Income a binary random variable, Y if employed and $b + F$ if unemployed (sum of unemployment benefits and severance payments).

  $$E(Y_2) = P(b + F) + (1 - P)Y$$

  $$var(Y_2) = P(1 - P)(Y - b - F)^2$$

  – Present value of expected wealth, $W = W_1 + P(b + F) + (1 - P)Y$.

- Higher risk of job loss:

  – Leads to lower consumption in first period: $c_1 = \dfrac{W}{2 + \frac{Var(Y_2)}{W^2}}$

  – Increases consumption growth

  $$\log c_2 - \log c_1 = \frac{Var(Y_2)}{W^2} + \frac{\xi_2}{c_1}$$

  – $\xi_2 = Y_2 - E(Y_2)$ Revision of income in period 2 after uncertainty is solved.

Dataset

- The Spanish Survey of Household Finances (EFF2002 & EFF2005):

  – Representative of wealth distribution.

  – Rich info on assets, income and labor market information.

- Sample selection: Households headed by an employee between 23 and 65 years of age.

  – Drop if self-employed, unemployed or inactive heads or hired in 2005/06. Labor earnings above 1,000 euros.

  – Open-ended contract: from first job reported by head.

- Measure 1 of W_{it}: "liquid wealth" (excluding private and public pension schemes and life insurance).

  - Checking and savings accounts, mutual funds, stocks and bonds.

  - 3% cases are zero, we lose them (logs).

  - Sample size: 3,662 households, both years.

- Measure 2 of W_{it}: Measure 1 + real estate net of debts other than main house.

- Measure 3 of W_{it}: Measure 2 + net value of owner-occupied housing $\rightarrow$ net worth (excluding pension schemes and life insurance).

  - Sample size: 3,583 household-years.

Table 1.A: Summary statistics, combined EFF2002 and EFF2005

	Total sample	Open-ended contract	Fixed-term contract
Head with open-ended contract	0.805	--	--
	(0.396)		
Head with fixed-term contract	0.195	--	--
	(0.396)		
Age of household head	43.412	44.308	39.704
S.D.	(9.742)	(9.562)	(9.606)
Married	0.799	0.815	0.733
	(0.401)	(0.389)	(0.443)
Household size	3.218	3.244	3.107
	(1.239)	(1.210)	(1.346)
Prob. job loss (quarter),head	0.03	0.016	0.086
S.D.	(0.034)	(0.011)	(0.041)
# Years at current job	12.20	14.23	3.82
	(10.481)	(10.405)	(5.407)
Head eligible for subsidy	0.278	0.261	0.579
	(0.448)	(0.490)	(0.494)
Amount head is eligible for	1.063	0.900	1.741
	(1.962)	(1.869)	(2.181)
Subsample of working spouses:			
Spouse with open-ended contract	0.642	0.683	.408
	(.479)	(.465)	(.49)
Spouse eligible for subsidy	0.379	0.311	0.543
	(0.485)	(0.463)	(0.499)
Amount spouse is eligible for	1.357	1.128	1.913
	(2.169)	(2.067)	(2.308)

3,583 household-years in two EFF waves (2002 and 2005). All statistics weighted. S.D. are standard deviations.

Table 1.B: Summary statistics of the combined EFF2002 and EFF2005 sample.

	Total sample	Open-ended contract	Fixed-term contract
Household earnings	27.205	22.784	13.103
	(19.031)	(14.488)	(7.572)
Non-durable expenditure	12.555	13.119	10.218
S.D.	(7.353)	(7.669)	(5.254)
Net worth			
Median	119.452	132.223	65.522
Mean	166.896	185.143	91.333
Net worth to earnings ratio			
Median	4.909	5.147	3.476
Mean	7.276	7.118	7.929
Owns real estate	0.832	0.866	0.693
Financial wealth			
25th centile	0.977	1.167	0.522
Median	3.381	4.347	1.646
Mean	15.739	18.053	6.156
Financial wealth to earnings ratio			
Median	0.156	0.169	0.117
Mean	0.550	0.565	0.488

Sample size: households in two EFF waves (2002 and 2005). S.D. are standard deviations (in parentheses). Monetary variables are in 2002 thousand euros. Net worth: value of real assets (excluding jewellery, cars and furniture) plus "liquid" financial assets (saving and checking accounts, all types of bonds and stocks, mutual funds and other financial products). Business, pension schemes and life insurance excluded.

Methodology (i)

$$\log(\frac{W}{Y}) = \beta_0 + \beta_1 Open\_ended^{head} + \beta_2 Open\_ended^{spouse}$$
$$+ g_1(Tenure^{head} - 3) + g_2(Tenure^{spouse} - 3) + X'\beta_3 + u$$

- W: "liquid wealth" X proxies of lifetime income and taste shifters.

- Test: β_1 negative.

- BUT: FTC holders have discontinuous careers:

  - Less ability to accumulate.

  - More frequent use of accumulated wealth.

Methodology (ii): How large is the mean effect?

- Impact of $Open\_ended^h$ on financial wealth using IV estimation:

$$\log(\frac{W}{Y}) \quad = \quad \gamma_0 + \gamma_1 Open\_ended^{head} + \gamma_2 Open\_ended^{spouse}$$

$$+g_1(Tenure^{head} - 3) + g_2(Tenure^{spouse} - 3) + X'\gamma_3 + v;$$

$$Open\_ended^h = \alpha_0 + \alpha_1 Subsidy^h_{R,g,t_0} + \alpha_2 Subsidy^h_{R,g,t_0} 1(Age^h \leq 35)+$$

$$\alpha_3 Subsidy^h_{R,g,t_0} \cdot Female^h + \sum_{g=1}^{g=4} \alpha_{4,g} Age^h_g + \alpha_5 Female^h+$$

$$\alpha_6 Hired\_post97^h_{t_0} + f(Tenure^h - 3) + X'\alpha_7 + \varepsilon, \ \ h = \text{head, spouse};$$

- First-stage separately for head and spouse.

- γ_1 and γ_2: Average change in (log of) household wealth when contract changes from fixed-term into open-ended.

- Fraction of gross yearly household earnings accumulated as precautionary wealth: $-\gamma_1 \text{Med} \left(\frac{W}{Y}\right)_{\text{FTC}}$

Table 2: The average effect of being covered by high firing costs contract on the log of financial wealth over earnings ratio.

Estimation method:	OLS	Two Stage Least Squares			
Sample:	All households	All households	Headed by a male		
	(1)	(2)	(3)	(4)	
				Head	Spouse
Panel A Dependent variable takes value 1 if the household member has an open-ended contract (first stage).					
1. Subsidy amount head was eligible for	--	0.017 (0.005)***	0.019 (0.005)***	0.020 (0.006)***	-0.001 (0.005)
2. Subsidy amount * (Age <=35)	--	-0.012 (0.007)*	-0.022 (0.007)***	-0.022 (0.007)***	-0.006 (0.007)
3. Subsidy amount * (Head is female)	--	-0.002 (0.007)	--	--	--
4. Subsidy amount spouse was eligible for	--	--	--	-0.005 (0.005)	0.032 (0.006)***
5. Constant	--	0.555 (0.038)***	0.533 (0.041)***	0.524 (0.043)***	0.341 (0.030)***
Panel B Dependent variable is the logarithm of financial wealth over earnings of head and spouse					
1. Head covered by high firing cost contract	-0.0040 (0.091)	-2.5040 (1.493)*	-3.7120 (1.483)**	-2.831 (1.587)*	
2. Spouse covered by high firing cost contract	--	--	--	-2.992 (1.008)***	
3. Constant	-2.7000 (0.197)***	-1.3070 (0.856)	-0.5840 (0.834)	-0.184 (0.966)	
Panel C: Fraction of gross earnings held as financial wealth (at the median)					
3. Head with fixed-term contract	**0.000**	**0.293**	**0.434**	**0.331**	
4. Spouse with fixed-term contract	--	--	--	**0.350**	
Region dummies?	No	No	No	No	
Sample size:	3,662	3,662	3,144	3,144	

The same set of regressors used in Tables 2 and 4 is used in all specifications, but not shown. Standard errors (in parentheses) are corrected for arbitrary autocorrelation at the age-region-gender-year of entry at the firm level.

Table 2: The average effect of being covered by high firing costs contract on the log of financial wealth over earnings ratio (Contd.).

Estimation method:	Two Stage Least Squares			
Sample:	All households	Headed by a male		
	(1)	(2)	(3)	
			Head	Spouse
Panel A Dependent variable takes value 1 if the household head has an open-ended contract (first-stage).				
1. Subsidy amount head was eligible for	0.011 (0.005)**	0.014 (0.006)**	0.014 (0.006)***	0.002 (0.005)
2. Subsidy amount * (Age <=35)	-0.011 (0.007)*	-0.022 (0.007)***	-0.021 (0.007)***	-0.007 (0.007)
3. Subsidy amount * (Head is female)	-0.001 (0.007)	--	--	--
4. Subsidy amount spouse was eligible for	--	--	-0.006 (0.005)	0.034 (0.006)***
5. Constant	0.583 (0.039)***	0.559 (0.042)***	0.552 (0.044)***	0.321 (0.031)***
Panel B Dependent variable is the logarithm of financial wealth over earnings of head and spouse				
1. Head covered by high firing cost contract	-3.157 (2.478)	-4.174 (1.939)**	-3.097 (1.906)*	
2. Spouse covered by high firing cost contract	--	--	-3.090 (1.076)***	
3. Constant	-1.016 (1.483)	-0.418 (1.130)	-0.375 (1.187)	
Panel C: Fraction of gross earnings held as financial wealth (at the median)				
3. Head with fixed-term contract	**0.369**	**0.488**	**0.362**	
4. Spouse with fixed-term contract	--	--	**0.362**	
Region dummies?	Yes	Yes	Yes	
Sample size:	3,662	3,144	3,144	

The same set of regressors used in Tables 2 and 4 is used in all specifications, but not shown. Standard errors (in parentheses) are corrected for arbitrary autocorrelation at the age-region-gender-year of entry at the firm level.

Table 3. The impact of subsidies to open-ended contracts on transitions to unemployment

Sample:	Male heads		Female spouses	
Dependent variable has value 1 if individual is observed transiting from employment to unemployment				
Estimation method:	OLS	Probit	OLS	Probit
	(1)	(2)	(3)	(4)
1. Mean subsidy amount in first year of job tenure	-.00101 (.0005)**	-.00045 (.00016)**	-.00101 (.00041)**	-.00035 (.00025)
2. Subsidy amount *(Age< 35)	-0.00013 (.00015)	.00006 (.00013)	--	--
Contract started after 1997	0.0066 (.00254)	0.0044 (.0021)	0.0082 (.0046)	-0.0004 (.0028)
Constant	0.0412 (.0056)	--	0.0608 (.0075)	--
Region dummies	Yes	Yes	Yes	Yes
Time at the job dummies	Yes	Yes	Yes	Yes
Sample size:	137,008		87,720	

Sample: Spanish Labor Force Survey (EPA). The first two columns use a sample of heads of households employees and older than 25 years of age. Columns (3) and (4) use a sample of married spouses, employed and older than 25 years of age. In all specifications, the dependent variable takes value 1 if the individual is unemployed in the following quarter, and zero otherwise. The estimates shown in Columns (2) and (4) are marginal impacts on the probability of job loss holding the rest of the variables at their sample means. Standard errors are corrected for arbitrary autocorrelation at the time at the job level. Other covariates used and not shown here: indicators of age bands, education level, marital status and year dummies.

Table 4: The average effect of being covered by high severance payments on various measures of household wealth.

	Falsification exercise	Alternative dependent variables	
	Subsidy available during the 5th year	Net wealth minus net value of main house	Net wealth as dependent variable
	(1)	(3)	(5)
1. Head covered by high dismissal cost	0.771 (1.210)	-3.651 (1.751)**	1.324 (1.335)
Fraction of gross earnings held as financial wealth (at the median):			
2. Head with a fixed-term contract	**-0.090**	**0.427**	**--**
Sample size:	3,144	3,135	3,038

Two-stage-least squares estimates, "Subsidy to conversion" and its interaction with age of the head below 35 as instruments. Sample of male heads.

Precautionary savings and liquidity constraints

(i) Liquid financial wealth increases with risk of losing the job.

(ii) No impact on household's total net wealth.

These facts consistent with:

- Demand factor: temporary workers want to invest in liquid assets, cashable in case of unexpected job losses.

- Credit supply: temporary workers invest in more liquid assets instead of housing due to liquidity constraints.

$\Rightarrow$ study differences in the access to credit according to the risk of job loss.

Table 5: Probability of being "credit constrained" and exposure to firing costs

Estimation method: multinomial logit (base outcome: asked not for a loan in the last 2 years)

| | Asked for a loan and fully accepted (1) | Kinds of "credit constrained" households | | | Constrained households (2)+(3)+(4) (5) |
		Did not ask, fears rejection (2)	Asked and was rejected (3)	Less than asked (4)	
Sample means:	0.282	0.011	0.010	0.015	**0.036**
Model 1: Open-ended contract as a regressor					
1. Fixed-term contract	0.269	0.047	0.003	0.012	**0.063**
2. Open-ended contract	0.276	0.016 (***)	0.002	0.006 (**)	**0.024**
Model 2: Subsidy as a regressor					
1. Zero subsidies	0.271	0.037	0.002	0.009	**0.040**
2. 1,000-euro subsidies	0.261	0.036	0.003 (***)	0.008 (*)	**0.047**

Entries are fitted probabilities of a multinomial logit that has "Not asked for a loan"
as the base outcome. (***), (**) and (*) mean that the latent variable coefficient is significant at
the 1, 5 and 10 percent, respectively. Model 1 uses "Open-ended contract" as a regressor,
model 2 uses our instrument (subsidies). Rest of covariates: age dummies, marital status, logarithm of income,
schooling of head and spouse, family size, third order polynomial in tenure minus 3.

How concentrated are the impacts?

- Mean impacts may be negative if

  - Only a few households accumulate substantial precautionary savings in response to the risk of losing the job.

  - All households respond somewhat to the risk of losing the job.

- We estimate the impact of $1(Open\_ended^{head} = 1)$ on household wealth at various centiles.

- Estimator by Chernozhukov and Hansen (04, 08).

Table 6: The causal effect of an open-ended contract on financial wealth to income ratio across quantiles.

Dependent variable: logarithm of financial wealth over household income

Instrumental Variable Quantile Regression (Chernozhukov and Hansen)

	25th centile	50th centile	75th centile
Sample of male heads above 35			
1. Open-ended contract	-1.7	-1	-2.9
[95% confidence interval]	[-5.8, 2.4]	[-4.1, 0.4]	[-10, 2.7]
[90% confidence interval]	[-5.4, -1.0]	[-3.7, 0.4]	[-10, 2.3]
2. Constant	-2.221	-1.760	0.806
3. Mean predicted fraction of yearly earnings held as wealth	**0.089**	**0.109**	**-**

Additional controls as in previous specifications, but not including region dummies.

Which model of wealth accumulation is consistent with estimates?

1. A buffer-stock model with uncertainty (Carroll, 2001).

$$
\begin{aligned}
\max_{c_t} U &= \sum_{t=0}^{t=\infty} \frac{1}{1+\beta} E_t \left[\frac{(c_t)^{1-\rho}}{1-\rho} \right] \\
A_{t+1} &= (1+r)[A_t - c_t] + Y_{t+1} \\
Y_t &= GPS_t Y_{t-1}^P; \ Y_t^P = N_t Y_{t-1}^P
\end{aligned}
$$

A_t: beginning-of-period wealth; r: riskless interest rate; P: binary random variable of chances to transiting into unemployment; G: income growth; N_t: iid lognormally distributed shocks.

- On average, wealth-earnings ratio of fixed-term workers exceeds that of permanent workers by 0.24.

- Wealth responses proportionally larger at the bottom of the wealth distribution.

Table 7: Simulated steady state distribution of wealth by probability of job loss.

	Probability of job loss		Absolute change	Relative
	0.02 (1)	0.10 (2)	(3)	(4)
Mean W /Y of:				
All households	0.404	0.643	0.239	0.592
1.. 20th-30th W /Y Percentile	0.175	0.353	0.178	1.019
2. 40th-50th W /Y Percentile	0.315	0.534	0.218	0.693
3. 60th-70th W /Y Percentile	0.467	0.725	0.258	0.553
4. 80th-90th W /Y Percentile	0.703	1.026	0.323	0.459

2. A permanent income model without uncertainty.

When $r = \beta$, $C_t = \frac{r}{1+r} A_t + \frac{r}{r-g} Y_t$

With $r = 0.02$, $g = 0$ (no income growth), probability of job loss: $P = 0.10$ for fixed-term workers and $P = 0.02$ for permanent workers, zero benefits, a wage loss of 10% after an unemployment spell of six months, 45 days of severance payments for permanent workers and 3 years of tenure $\rightarrow$

$$E_t[\Delta C_t] = E_t[\Delta Y_t] = \frac{r}{r-g} \cdot P \cdot (\text{time unemployed} + \text{wage drop})$$

(a) Fixed-term workers: $E[\Delta C_t] = E[\Delta Y_t] = (-0.1 - 0.5) \cdot 1 \cdot 0.10 = -0.06$.

(b) Permanent workers:
$E[\Delta C_t] = E[\Delta Y_t] = (-0.1 - 0.5 + \frac{45}{365} \cdot 3) \cdot 1 \cdot 0.02 = -0.0046$.

(c) The excess of wealth-earnings ratio is 0.06-0.0046=0.055.

$\Rightarrow$ Wealth responses much more likely to be generated by a precautionary saving motive than by lower future expected income.

Suggestive Evidence for Consumption (i)

- Do workers more exposed to the risk of losing the job exhibit a higher consumption growth?

$$\log(c_{2005,i}) - \log(c_{2002,i}) = \gamma_0 + \gamma_1 Opterm_{2002,i}^{hd} + \gamma_2 Opterm_{2002,i}^{sp} + \delta X_i + \Delta u_i$$

  $\log(c_{2005,i}) - \log(c_{2002,i})$: consumption growth between 2005 and 2002 (several measures of consumption: food expenditure, non-durable consumption and total consumption).

  X_i: various sets of regressors of household i.

  Hypothesis: $\gamma_1 < 0$ and $\gamma_2 < 0$.

- OLS estimates due to:

  – Small sample size to estimate by IV.

  – Consumption changes less affected by biases as not to be affected by past shocks as wealth.

  – Unobserved risk aversion would bias the test against precautionary saving hypothesis.

Table 8: The impact of the risk of losing the job on 3-year consumption growth.

Dependent variable: Estimation method: OLS	Food consumption (1)	Non-durable consumption (2)	Total consumption (3)
1. Head covered by open-ended contract	-0.12 (.0642)*	-0.19 (.073)**	-0.128 (.061)**
2. Spouse covered by open-ended contract	-0.0065 (.0639)	-0.0528 (.0737)	-0.0359 (.0607)
Spouse works	-0.0307 (.0606)	-0.0518 (.0735)	-0.022 (.0576)
Constant	0.0846 (.0765)	0.192 (.0879)**	0.1633 (.072)

Notes: Sample size: 625. Standard errors are in parentheses.
Other covariates used and not shown here: family head's age bands, change in household
size and age household composition, marital status and family head's education level.

Conclusions:

1. Variation in firing costs to address: Do households hold more wealth in response to the risk of losing the job.

2. Evidence for excess of wealth-income ratios around 30-40%.

   - Financial wealth response larger and more precisely estimated at the bottom tail.

   - No evidence of excess of wealth when including owner-occupied housing (durables postponed).

   - Little evidence of liquidity constraints.

3. Wealth responses more consistent with a buffer-stock model than with a model of permanent income without uncertainty.

Table A.1: The distribution of the probability of losing the job, by education.

Panel B: Probability of head experiencing a non-employment spell in 2004
by the type of contract in 2002 (Source: EFF)

	Open-ended contract	Fixed-term contract
Total	0.055	0.187
Primary school:	0.117	0.289
Secondary school	0.050	0.138
Upper secondary school	0.046	0.130
College	0.027	0.079

Mean predicted values by cell.

Table A.1: The distribution of the probability of losing the job, by education.

Panel C: Probability of spouse experiencing a non-employment spell in 2004
by the type of contract in 2002 (Source: EFF)

	Open-ended contract	Fixed-term contract
Total	0.105	0.511
Primary school:	0.170	0.589
Secondary school	0.148	0.550
Upper secondary school	0.112	0.469
College	0.057	0.300

Mean predicted values by cell

Table A.3: First stage: the impact of subsidies to open-ended contracts at start of relationship on the share of open-ended contracts in 2002-2005

Estimation method: OLS (Linear probability models)

Sample:	All households		Sample of male heads			Spouse with an open-ended
Dependent variable: head covered by an open-ended contract						
	(1)	(2)	(3)	(4)	(5)	(6)
1. Mean subsidy amount in two first years of job tenure -head	0.017 (0.005)***	0.011 (0.005)**	0.019 (0.005)***	0.014 (0.006)**	0.020 (0.006)***	-0.001 (0.005)
2. Subsidy amount *(Age< 35) - head	-0.012 (0.007)*	-0.011 (0.007)*	-0.022 (0.007)***	-0.022 (0.007)***	-0.022 (0.007)***	-0.006 (0.007)
3. Subsidy * Female head -head	-0.002 (0.007)	-0.001 (0.007)	--	--	--	--
4. Mean subsidy amount in two first years of job tenure -spouse	--	--	--	--	-0.005 (0.005)	0.032 (0.006)***
Head is a female	0.012 (0.023)	0.000 (0.024)	--	--	--	--
Head aged under 25	0.015 (0.069)	0.007 (0.069)	0.139 (0.073)*	0.125 (0.074)*	0.137 (0.073)*	-0.025 (0.046)
Head aged 26-35	0.014 (0.023)	0.014 (0.023)	0.033 (0.024)	0.032 (0.024)	0.030 (0.024)	0.031 (0.019)

Table A.3: First stage: impact of subsidies on open-ended contracts (Contd.)

Head started contract after 1997	0.064	0.080	0.054	0.070	0.053	-0.015
	(0.029)**	(0.030)***	(0.032)*	(0.032)**	(0.032)*	(0.025)
Unemployment rate in region	-0.001	0.000	-0.001	-0.001	-0.001	0.000
(year entered current firm)	(0.000)**	(0.001)	(0.001)**	(0.001)	(0.001)**	(0.000)
Head entered labor market	-0.053	-0.054	-0.041	-0.041	-0.041	0.039
after 1984	(0.016)***	(0.016)***	(0.018)**	(0.018)**	(0.018)**	(0.014)***
Spouse works	-0.034	-0.036	-0.030	-0.033	-0.008	0.098
	(0.013)***	(0.013)***	(0.013)**	(0.013)**	(0.019)	(0.018)***
Tenure on the job-3, head	0.065	0.064	0.063	0.062	0.063	-0.001
	(0.005)***	(0.005)***	(0.005)***	(0.005)***	(0.005)***	(0.004)
Tenure on the job squared, head	-0.004	-0.004	-0.004	-0.003	-0.003	0.000
	(0.0002)***	(0.0002)***	(0.0003)***	(0.0003)***	(0.0003)***	(0.0004)
Tenure on the job-3, spouse	--	--	--	--	-0.002	0.092
					(0.003)	(0.004)***
Tenure on the job squared, spouse	--	--	--	--	0.000	-0.005
					(0.000)	(0.000)***
Constant	0.555	0.583	0.533	0.559	0.524	0.341
	(0.038)***	(0.039)***	(0.041)***	(0.042)***	(0.043)***	(0.030)***
Region fixed-effects	No	Yes	No	Yes	No	No
Sample size	3,662	3,662	3,144	3,144	3,144	3,144
R-squared	0.29	0.29	0.27	0.28	0.27	0.74

Source: Spanish Survey of Household Finances, sample of households headed by an employee between 23 and 65 years of age.
Standard errors are corrected for heteroscedasticity and arbitrary correlation among observations belonging to the cell at which subsidies are imputed: years at the job, region, age group and gender. Household earnings are the deviation from the weighted sample mean. Other regressors not shown here: schooling dummies, 5 age dummies, household size, marital status, public sector, year.

Table A.4: OLS estimates of the impact of subsidies to open-ended contracts on financial wealth.

Dependent variable: Logarithm of wealth held in "liquid" financial assets over household earnings

	All households		Sample of male heads		
	(2)	(3)	(4)	(5)	(6)
1. Mean subsidy amount in	-0.059	-0.038	-0.071	-0.049	-0.051
two first years of tenure -head	(0.023)**	(0.025)	(0.024)***	(0.027)*	(0.024)**
2. Subsidy amount	0.068	0.079	0.080	0.097	0.088
*(Age< 35) -head	(0.030)**	(0.031)**	(0.033)**	(0.034)***	(0.033)***
3. Subsidy * Female head	0.070	0.068	--	--	--
	(0.038)*	(0.038)*			
4. Mean subsidy amount,	--	--	--	--	-0.084
spouse					(0.023)***
Head is a female	-0.329	-0.384	--	--	--
	(0.142)**	(0.143)***			
Head aged under 25	-0.341	-0.437	-0.394	-0.575	-0.410
	(0.234)	(0.235)*	(0.284)	(0.280)**	(0.284)
Head aged 26-35	-0.214	-0.255	-0.215	-0.288	-0.239
	(0.108)**	(0.109)**	(0.116)*	(0.117)**	(0.115)**
Constant	-2.672	-2.860	-2.562	-2.762	-2.683
	(0.188)***	(0.199)***	(0.204)***	(0.218)***	(0.217)***
Region fixed effects	No	Yes	No	Yes	No
Sample size	3,662	3,662	3,144	3,144	3,144
R-squared	0.16	0.18	0.17	0.19	0.17

Notes: Sample of households headed by an employee between 18 and 65 years of age. We pool the 2002 and 2005 waves. Standard errors are corrected for heteroscedasticity and arbitrary correlation among observations belonging to the cell at which the job, region, age group and subsidies are imputed: years at gender. Household earnings are the deviation from the weighted sample mean. Rest of covariates shown in the text.