WOMEN'S RELATIVE RESOURCES AND COUPLES' GENDER BALANCE IN FINANCIAL DECISION MAKING

Supplementary online material

A. Questions on decision making according to EU-SILC guidelines 2010

(reproduced verbatim from EU-SILC Guidelines 2010, Eurostat)

PA030: Decision-making on everyday shopping

Suggested wording:

Thinking of you and your spouse or partner, who is more likely to take decisions on everyday shopping?

Values:

- 1 More me
- 2 Balanced
- 3 More my partner

Guidelines:

The individual level is vital for this question as it asks for a subjective perception of decisionmaking in the household. There is thus no inconsistency if for example both persons in the household answer that they are more likely to take decisions on a specific subject.

This variable refers to real decisions that are or were taken by the couple.

All expenses on everyday shopping are to be covered, including expenses made by the respondent for himself or herself.

If certain decisions (i.e. depending on the amount spent) are made by one or other partner, the code 2 – "Balanced" should be used.

A couple includes married people and partners in consensual union (with or without a legal basis)

PA050: Decision-making on expensive purchases of consumer durables and furniture

Suggested wording:

Thinking of you and your spouse or partner, who is more likely to take decisions on expensive purchases of consumer durables and furniture?

Values:

- 1 More me
- 2 Balanced
- 3 More my partner
- 4 Never arisen

Guidelines:

The individual level is vital for this question as the question asks for a subjective perception of decision-making in the household. There is thus no inconsistency if for example both persons in the household answer that they are more likely to take decisions on a specific subject.

This variable refers to real decisions that are or were taken by the couple. Consumer durables include one-off purchases of items such as white goods (fridges, washing-machines), larger pieces of furniture, electrical appliances, etc. according concretely defined as durable goods acquired by households for final consumption (i.e. those that are not used by households as stores of value or by unincorporated enterprises owned by households for purposes of production); they may be used for purposes of consumption repeatedly or continuously over a period of a year or more (source OECD).

If certain decisions (i.e. depending on the amount spent) are made by one or other partner, the code 2 - "Balanced" should be used.

A couple includes married people and partners in consensual union (with or without a legal basis)

All expenses are to be covered, including expenses made by the respondent for him/herself.

Purchasing goods with the help of hire purchase instalments and credit cards usage should be included.

PA060: Decision-making on borrowing money

Suggested wording:

Thinking of you and your spouse or partner, who is more likely to take decisions on borrowing money? (This includes decisions on mortgages and loans.)

Values:

- 1 More me
- 2 Balanced
- 3 More my partner
- 4 Never arisen

Guidelines:

The individual level is vital for this question as the question asks for a subjective perception of decision-making in the household. There is thus no inconsistency if for example both persons in the household answer that they are more likely to take decisions on a specific subject.

This variable refers to real decisions that are or were taken by the couple.

If certain decisions (i.e. depending on the amount borrowed) are made by one or other partner, the code 2 - "Balanced" should be used.

A couple includes married people and partners in consensual union (with or without a legal basis).

PA070: Decision-making on use of savings

Suggested wording:

Thinking of you and your spouse or partner, who is more likely to take decisions on the use of savings?

Values:

- 1 More me
- 2 Balanced
- 3 More my partner
- 4 We do not have (common) savings
- 5 Never arisen

Guidelines:

The individual level is vital for this question as the question asks for a subjective perception of decision-making in the household. There is thus no inconsistency if for example both persons in the household answer that they are more likely to take decisions on a specific subject.

This variable refers to real decisions that are or were taken by the couple.

If certain decisions (i.e. depending on the amount of savings used) are made by one or other partner, the code 2 – "Balanced" should be used.

A couple includes married people and partners in consensual union (with or without a legal basis).

Code 5 (Never arisen) should be used where common savings exist but a decision on the use of these savings has never been necessary.

PA080: Decision-making – general

Suggested wording:

Thinking of you and your spouse or partner who is, on the whole, more likely to have the last word when taking important decisions? (choice see values)

Values:

- 1 More me
- 2 Balanced
- 3 More my partner

Guidelines:

This question refers to the current situation and should entirely reflect the respondent's selfperception. Important decisions are not restricted to financial decisions. On top of monetary decisions, important decisions refer to shopping decisions, daily life decisions as well as to one-off decisions such as getting married, labour market decisions, having children or relocation/ emigrating. All of the issues mentioned in the previous questions (PA030-PA070) constitute important decisions, although they are not limited to the topics mentioned in those questions.

The individual level is vital for this question as the question asks for a subjective perception of decision-making in the household. If certain decisions are made by one or other partner, the code 2 - "Balanced" should be used.

B. Missing values in the major outlays variable, analysis of women's responses

The dependent variable (which we call "major outlays") in the main analysis is missing for 5.1% of observations (n=3,702). Using the binary logistic regression model shown below, we checked that missing values for the dependent variable are not systematically associated with the major explanatory variables (relative earnings and relative education). The results indicate that low education of the woman, as compared with medium education, increases the probability of non-response to the decision making questions. Relative earnings and relative education, however, are not significant predictors.

	Coef.	SE
Relative earnings	-0.500	(0.510)
Relative earnings squared	0.609	(0.478)
Educational pairing (ref=Homogamy)		
Hypogamy	-0.041	(0.100)
Hypergamy	-0.065	(0.092)
Woman's level of education (ref=Medium)		
Low	0.323***	(0.081)
High	-0.016	(0.143)
Woman's age	0.023***	(0.003)
Length of cohabitation	-0.047***	(0.009)
Man's months of unemployment	0.039**	(0.014)
Household finance regime (ref=All common)		
Some common	0.668***	(0.149)
All separate	1.244***	(0.127)
Missing	0.201	(0.167)
Couple's income quartile (ref=2)		
1	0.601***	(0.106)
3	-0.402^{***}	(0.078)
4	-0.476	(0.247)
Woman's marital status (ref=Married)		
Never married	1.233***	(0.209)
Divorced, separated	0.985***	(0.220)
Constant	-4.305***	(0.244)
Ν	71,824	
Adj. R-squared	0.155	

Table B1. Logistic regression of missing values, major outlays variable

Source: EU-SILC 2010, authors' own estimates.

Note: Country dummy variables omitted from the table. Sampling weights and robust standard errors are clustered by country.

*p < 0.05 **p < 0.01 ***p < 0.001

C. Balance of decision making with regard to major outlays, the male sample

In the main text of the paper we studied the female sample. The same analytical design is applied below to men's responses in order to find out whether their responses to the decision making questions corroborate the results that were drawn from women's responses.

We applied the same sample selection procedure as for women, including the same age limits and partners' income criteria. It is important to note, however, that the households in the women's and men's study samples do not necessarily overlap, because both partners did not answer the decision making questions in all households. In the men's study sample (N=69,429), less than half of the respondents (N=32,130) come from the same households that were represented in the women's sample (N=72,638). In some countries (Denmark, Finland, Iceland, the Netherlands, Norway, Sweden, and Slovenia), there is no overlap of samples as it appears that the survey design did not allow for more than one respondent per household.

The dependent variable was constructed identically to that for the women's analysis, resulting in a score ranging from -3 to 3, which was then categorized as a three-level "major outlays" factor variable ("more man," "balanced," "more woman"). As before, observations with more than one missing answer were not included in the regression modelling but are shown in the descriptive section.

Descriptive results

Figure C1 shows the distribution of the dependent variable and missing values by categories of the woman's relative earnings. Men's responses exhibit a distribution across relative earnings that is very similar to the one based on women's responses.



Figure C1. Distribution of the major outlays variable by the woman's relative earnings

Source: EU-SILC 2010, authors' own calculations, sampling weights Note: Vertical lines indicate 95% confidence intervals of point estimates

Results of the model

Based on the model shown in Table C1, predicted probabilities are shown in Figure C2 and they indicate a positive association between relative earnings and the probability of being reported to be the decision maker. The model predicts that women in the 76–90% relative earnings category are slightly more likely to be decision makers than women who earn 91-100% of the couple's income. The probability of men being the decision maker is negatively associated with relative earnings, but the association is not linear: The probability of men's decision making is lowest for couples in which the woman earns 76–90% of the joint income, but rises in the 91-100% category.



Figure C2. Predicted probabilities of decision making by relative earnings categories, the male sample

···· Balanced — Man - - Woman

Source: Table C1.

	Main	n major outlays d	lecision maker (ref. =	= Balanced)
	Woman		Man	
	Coef.	SE	Coef.	SE
Woman's relative earnings % (ref=26-	50)			
0–10	0.061	(0.040)	0.511***	(0.032)
11–25	-0.060	(0.051)	0.342***	(0.040)
51–75	0.324***	(0.044)	-0.328***	(0.047)
76–90	0.577***	(0.086)	-0.349***	(0.105)
91–100	0.530***	(0.057)	-0.121	(0.070)
Educational pairing (ref=Homogamy)				
Hypogamy	0.054	(0.041)	-0.170***	(0.036)
Hypergamy	-0.042	(0.046)	0.213***	(0.034)
Man's level of education (ref=Medium))			
Low	0.168***	(0.039)	0.100**	(0.037)
High	-0.247***	(0.045)	-0.042	(0.034)
Length of cohabitation	0.005	(0.003)	-0.013***	(0.002)
Man's age	0.004	(0.003)	-0.001	(0.002)
Man's age square	0.000	(0.000)	0.000**	(0.000)
Joint earnings 20-quantile	-0.002	(0.012)	-0.034**	(0.011)
Joint earnings 20-quantile sq.	-0.000	(0.001)	0.003***	(0.000)
Number of children	0.027	(0.016)	0.033*	(0.014)
Woman's unemployment	0.008	(0.006)	-0.008	(0.005)
Man's marital status (ref=Married)				
Never married	0.205***	(0.051)	0.255***	(0.038)
Separated, widowed	0.355***	(0.098)	0.384***	(0.077)
Constant	-2.659***	(0.120)	-1.875***	(0.097)
Observations			65,574	

Table C1. Multinomial regression of major outlays decision making, coefficients and standard errors, the male sample

Source: EU-SILC 2010, authors' own estimates

Note: Country dummy variables omitted from the table. Bootstrapped model estimation using 200 replications. p < 0.05 * p < 0.01 * p < 0.001, two-tailed test.

D. Regression model of women's responses using a continuous dependent variable

This section shows the results of a linear regression model in which the continuous score of the decision making questions (ranging from -3 to +3) is the dependent variable. The score was inverted so that positive values reflect decision making on the part of women. Thus, a positive regression coefficient indicates an increase in the probability of female decision making.

Model M1 in Table D1 includes relative earnings, specified in third degree polynomial form, relative education, and all of the control variables. Model M2 in the same table adds the interaction effects between relative earnings and relative education (variable "pairing"). Model M2 was used to predict score values over relative earnings for each educational pairing. The predicted scores shown in Figure D1 support the findings of the main analysis. There is a positive association between relative earnings and the likelihood that the woman would be reported to be the couple's decision maker. This outcome is more likely when the woman is partnered to a man who is comparatively less educated. Traditional hypergamy reduces the woman's odds of being the decision maker. At the higher end of the relative earnings scale, there is a small drop in the predicted scores compared with the point at which she earns 80% of joint income. This corresponds to "gender display," as seen in the main analysis.



Figure D1. Predicted values based on the linear model M2 in Table D1

Source: Model M2 in Table D1.

	M1		M2	
	Coef.	SE	Coef.	SE
Relative earnings				
Linear	0.022	(0.175)	0.084	(0.160)
Quadratic	1.313*	(0.614)	1.055	(0.531)
Cubic	-1.141*	(0.452)	-0.942*	(0.385)
Educational pairing (ref=Homogamy)				
Hypogamy	0.107**	(0.032)	0.115***	(0.027)
Hypergamy	-0.091***	(0.017)	-0.109***	(0.028)
Level of education (ref=Medium)				
Low	0.008	(0.026)	0.008	(0.026)
High	-0.068***	(0.014)	-0.066^{***}	(0.014)
Woman's age	0.001	(0.001)	0.001	(0.001)
Length of cohabitation	0.002	(0.001)	0.002	(0.001)
Household finances (ref=All common)				
Some common	-0.030	(0.022)	-0.030	(0.022)
All separate	-0.051*	(0.025)	-0.052*	(0.024)
Missing	-0.184***	(0.049)	-0.185***	(0.049)
Couple's income quartile (ref.=2)				
1	-0.016	(0.022)	-0.015	(0.022)
3	-0.021*	(0.009)	-0.021	(0.010)
4	-0.052*	(0.022)	-0.052*	(0.022)
Man's unemployment	0.011**	(0.004)	0.011**	(0.004)
Woman's marital status (ref=Married)				
Never married	0.046	(0.023)	0.046	(0.024)
Separated, divorced	0.114*	(0.051)	0.113*	(0.051)
Interaction terms				
Hypogamy * linear			-0.499*	(0.218)
Hypogamy * quadratic			1.460	(0.736)
Hypogamy * cubic			-0.954	(0.551)
Hypergamy * linear			0.185	(0.182)
Hypergamy * quadratic			-0.174	(0.484)
Hypergamy * cubic			-0.057	(0.330)
Constant	-0.182***	(0.022)	-0.181***	(0.023)
Observations	68,826		68,826	

Table D1. Linear regression of the continuous inverted score of decision making questions

Note: The score based on single questions was multiplied by (-1); therefore, values above zero indicate that decisions are more often made by the woman. *p < 0.05 **p < 0.01 ***p < 0.001

E. Daily shopping decision making, the female sample

Except providing a basic distribution of the variable, everyday shopping decisions are not analysed in the main text of the article. Figure E1 plots the distribution of daily shopping decision making by the relative earnings variable. The results indicate that this dimension of decision making is more closely related to "female tasks" in the household: women are most often reported as being responsible for these decisions, while the role of men is generally small. In Figure E1, it is clearly negatively associated with relative earnings as women who earn higher proportion of the joint income are reported to be less involved with daily shopping decisions. For men, the same association is positive. This is in accordance with the resource theory, as the spouse with a smaller contribution to the joint income is more occupied with day-to-day household issues, be it housework or routine decisions about grocery shopping. Interestingly, balanced decision making is more often reported in couples in which the woman earns a considerable proportion of the joint income.



Figure E1. Distribution of everyday shopping decision making variable by relative earnings

Source: EU-SILC 2010, authors' own estimates

For a comparison with major outlay decisions and general decision making, a similarly specified model is shown here for everyday shopping decision making. The left column in Table E1 displays coefficients for the probability that the woman is the primary decision maker in daily shopping decisions and the right column is the same for the man. The relative earnings variable's coefficients indicate a negative association with the woman's probability of decision making: she is most likely to do daily shopping decision when she earns up to 10% of the joint income and least likely to do so

when she earns over 90% of the joint income. For male decision making the probability is highest when the woman earns over 90% of the joint income and lowest when she earns 11–25%.

	W	oman	Ν	Лаn
	Coef.	SE	Coef.	SE
Relative earnings % (ref=26–50)				
0–10	0.250***	(0.023)	0.235***	(0.051)
11–25	0.195***	(0.030)	-0.079	(0.065)
51–75	-0.064**	(0.024)	0.079	(0.056)
76–90	-0.010	(0.064)	0.560***	(0.109)
91–100	-0.111**	(0.036)	0.616***	(0.078)
Woman's relative education (ref=Homogamy)			
Hypogamy	0.193***	(0.022)	-0.009	(0.049)
Hypergamy	-0.110***	(0.023)	0.039	(0.054)
Woman's level of education (ref=Medium)				
Low	0.100***	(0.024)	0.116*	(0.058)
High	-0.241***	(0.021)	0.025	(0.052)
Woman's age	0.004*	(0.002)	0.011**	(0.004)
Woman's age squared	-0.001***	(0.000)	0.000	(0.000)
Woman's marital status (ref=Married)				
Never married	-0.082**	(0.029)	-0.008	(0.061)
Separated, widowed	0.032	(0.050)	-0.041	(0.112)
Number of children in household	0.108***	(0.009)	-0.032	(0.022)
Joint earnings 20-quantile	0.035***	(0.007)	0.012	(0.014)
Joint earnings 20-quantile squared	-0.001***	(0.000)	-0.000	(0.001)
Length of cohabitation in years	0.014***	(0.002)	-0.004	(0.003)
Man's unemployment in months	-0.001	(0.004)	-0.013	(0.008)
Constant	-0.516***	(0.070)	-2.431***	(0.147)
Ν		7	2,508	

Table E1	. Multinomial	regression	model of	everyday	shopping	g decision	making,	the female	e sample
				Main sho	opping deci	sion maker	(ref. = Bala	anced)	

Source: EU-SILC 2010, authors' own estimates

Note: Country dummy variables omitted from the table. Bootstrapped model estimation using 200 replications. *p < 0.05 **p < 0.01 ***p < 0.001, two-tailed test.

Although we would expect that men who earn almost all of the joint income would be least involved in daily shopping decisions, this is not the case according to our model (see also the predicted probabilities of each outcome in Figure E2). In the category 0–10% of relative earnings, the probability of male decision making is slightly higher than in the 11–25% category. The overall pattern of male decision making, however, is positively associated with the woman's relative earnings. In conclusion, our results suggest that daily shopping decisions resemble housework tasks. In this perspective, the resource theory holds for daily shopping decisions as the financially more contributing spouse is less likely to be involved in such activity.



Figure E2. Predicted probabilities of everyday shopping decision making, the female sample

Interestingly, balanced decision making is least likely when she earns up to 10% of the join income and it is considerably higher when the woman earns over 25% of the joint income.

Based on the gender display argument, we would expect that a woman who earns the overwhelming majority of the joint income would report herself more often as the decision maker of routine household tasks. However, in our results there is no sign of gender display with regard to daily shopping decisions.

Source: Table E1.

F. Excluding the woman's relative education variable, including the man's absolute education instead

Sensitivity test to include both partners' absolute education in the model instead of the woman's absolute and relative education.

	Main	financial decis	ion maker	
	Woman		Man	
	Coef.	SE	Coef.	SE
Relative earnings % (ref=26–50)				
0–10	0.103**	(0.037)	0.581***	(0.038)
11–25	0.033	(0.054)	0.396***	(0.041)
51–75	0.285***	(0.037)	-0.264***	(0.046)
76–90	0.512***	(0.078)	-0.205	(0.112)
91–100	0.468***	(0.055)	0.075	(0.063)
Woman's abs. education (ref=Medium)				
Low	-0.078	(0.043)	0.214***	(0.041)
High	0.014	(0.036)	-0.092**	(0.032)
Man's abs. education (ref=Medium)				
Low	0.257***	(0.035)	-0.071*	(0.036)
High	-0.306***	(0.039)	0.148***	(0.037)
Woman's age	0.010***	(0.003)	-0.003	(0.003)
Woman's age squared	0.000	(0.000)	0.001***	(0.000)
Woman's marital status (ref=Married)				
Never married	0.295***	(0.050)	0.180***	(0.042)
Separated, widowed	0.584***	(0.083)	0.093	(0.086)
Number of children in household	0.017	(0.015)	0.047***	(0.013)
Joint earnings 20-quantile	0.008	(0.011)	-0.033**	(0.011)
Joint earnings 20-quantile squared	-0.000	(0.000)	0.002***	(0.000)
Length of cohabitation in years	-0.002	(0.003)	-0.010***	(0.002)
Man's unemployment in months	0.013*	(0.006)	-0.026***	(0.007)
Constant	-2.679***	(0.126)	-1.995***	(0.103)
Ν	68.82	.7		-

Table F1. Major outlays regression model, including both partners' absolute level of education

Source: EU-SILC 2010, authors' own estimates

Note: Country dummy variables omitted from the table. Bootstrapped model estimation using 200 replications. *p < 0.05 **p < 0.01 ***p < 0.001, two-tailed test.

G. Replication of the major outlays model in the main text with transfer income included

Our analysis in the main text only considers earned income and does not include transfers as part of earnings. We have repeated our analysis using income measure that also takes into account unemployment benefits and sick leave benefits. Benefits are included in both women's and their partners' income. The results in table and figure shown below do not differ much from our results reported in the paper.

	Main financia	al decision make	r
W	oman		Man
Coef.	SE	Coef.	SE
0.076*	(0.037)	0.589***	(0.034)
-0.001	(0.048)	0.380***	(0.042)
0.289***	(0.038)	-0.288***	(0.047)
0.500***	(0.077)	-0.160	(0.100)
0.492***	(0.057)	0.086	(0.059)
y)			
0.319***	(0.036)	-0.092*	(0.039)
-0.282***	(0.042)	0.140***	(0.032)
0.177***	(0.039)	0.139***	(0.036)
-0.276***	(0.041)	0.024	(0.032)
-0.003	(0.012)	-0.032**	(0.010)
0.000	(0.001)	0.002***	(0.000)
0.016**	(0.005)	-0.027***	(0.007)
0.008**	(0.003)	-0.004	(0.002)
0.000	(0.000)	0.001***	(0.000)
-0.001	(0.003)	-0.010***	(0.002)
0.024	(0.014)	0.045***	(0.012)
0.289***	(0.048)	0.165***	(0.042)
0.611***	(0.073)	0.122	(0.080)
Constant	-2.683***	(0.127)	-1.987***
	W <u>Coef.</u> 0.076* -0.001 0.289*** 0.500*** 0.492*** 0.319*** -0.282*** 0.177*** -0.276*** -0.003 0.000 0.016** 0.008** 0.000 -0.001 0.024 0.289*** 0.611*** Constant	Main financia WomanCoef.SE 0.076^* (0.037) -0.001 (0.048) 0.289^{***} (0.038) 0.500^{***} (0.077) 0.492^{***} (0.057) y) 0.319^{***} (0.036) -0.282^{***} (0.042) 0.177^{***} (0.039) -0.276^{***} (0.041) -0.003 (0.012) 0.000 (0.001) 0.016^{**} (0.003) 0.000 (0.003) 0.001 (0.003) 0.024 (0.048) 0.611^{***} (0.073) Constant -2.683^{***}	Main financial decision make WomanCoef.SECoef. 0.076^* (0.037) 0.589^{***} -0.001 (0.048) 0.380^{***} 0.289^{***} (0.038) -0.288^{***} 0.500^{***} (0.077) -0.160 0.492^{***} (0.057) 0.086 y) 0.319^{***} (0.036) -0.092^* -0.282^{***} (0.042) 0.140^{***} 0.177^{***} (0.039) 0.139^{***} -0.276^{***} (0.041) 0.024 -0.003 (0.012) -0.032^{**} 0.000 (0.001) 0.002^{***} 0.016^{**} (0.003) -0.004 0.000 (0.003) -0.010^{***} 0.001 (0.003) -0.010^{***} 0.024 (0.014) 0.45^{***} 0.289^{***} (0.048) 0.165^{***} 0.611^{***} (0.073) 0.122 Constant -2.683^{***} (0.127)

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Note: country dummies included in the model but omitted from the table. Bootstrapped estimation with 200 replications.

 $p^{2} < 0.05 *p^{2} < 0.01 *p^{2} < 0.001$, two-tailed test.



Figure G1. Predicted probabilities of major outlays decision making, income including transfers

Source: Table G1.

H. Major outlays decision making model by country

As a sensitivity test, we applied the model used in the main analysis to each country (omitting country dummies) and predicted probabilities of decision making by either the man or the woman. The results are shown in Figure H1.



Figure H1. Predicted probabilities of major outlays decision making, single-country models

···· Woman — Man

Source: multinomial regression model applied to each country data separately (not shown here).