

Item Non-Response and Imputation in a Cross-National Survey on Retirement Confidence: One Size Does Not Fit All

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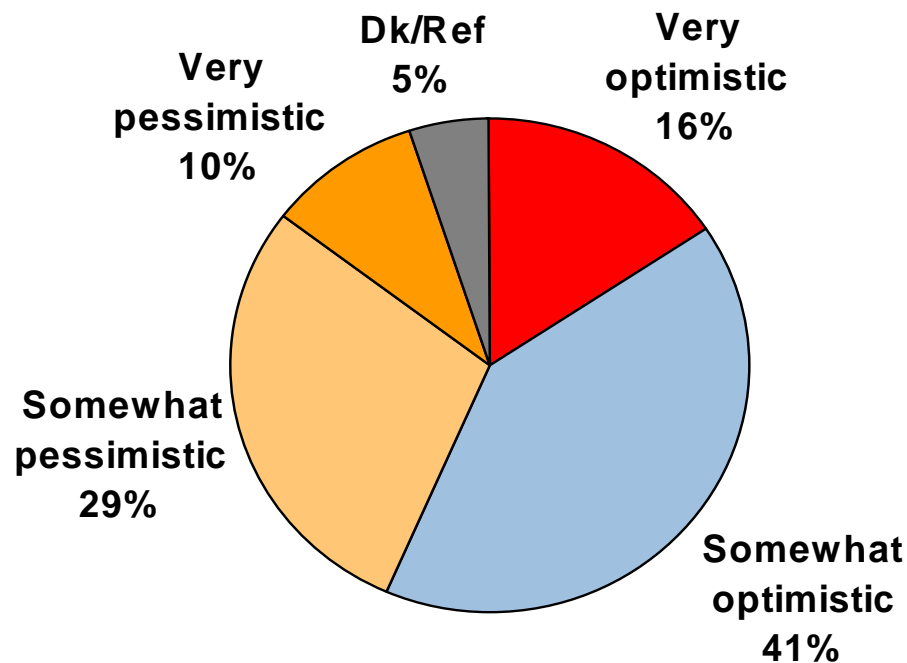
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The International Retirement Security Survey (IRSS)

- **IRSS was conducted in 2005 by AARP with assistance from Harris Interactive**
- **The survey measured attitudes toward retirement in ten developed countries: U.S., Canada, Australia, Japan, Sweden, Netherlands, Italy, France, Germany, and the UK.**
- **Respondents: general public age 30-65**
- **For each country N=401**
- **Focus of analysis: predictors of retirement optimism**
- **Challenge: item non-response, especially regarding income**

Overall Retirement Optimism

Retirement Optimism Among Respondents in 10 Countries



International Retirement Security Survey, 2005; N=4,011

Retirement Optimism by Country

<u>Country</u>	<u>Pct Optimistic (top 2 box)</u>
• Australia	77%
• Canada	77%
• US	68%
• Japan	68%
• UK	60%
• Netherlands	58%
• Sweden	52%
• France	36%
• Germany	35%
• Italy	34%

International Retirement Security Survey, 2005; N=4,011; For each country N=401

Drivers of Retirement Optimism: Overall Model

<u>Predictor</u>	<u>Beta Coefficient</u>	<u>R²</u>
Confident/Pay for Health Care	.163	.09
Country 65+/18-64 Ratio (Lower)	.278	.05
Saving/Planning Ahead of Schedule	.168	.04
Life Expectancy, at birth, 2002	.185	.02
Feel Well-Informed About Retirement	.117	.02
Trust/Future Gov't. Health Benefits	.121	.01
Gross Replacement Rate*	-.094	.01
Age	.081	.01
Total	1.019	.25

*Rates for a full career worker on average earnings (OECD, 2002)

Key Drivers of Retirement Optimism by Country

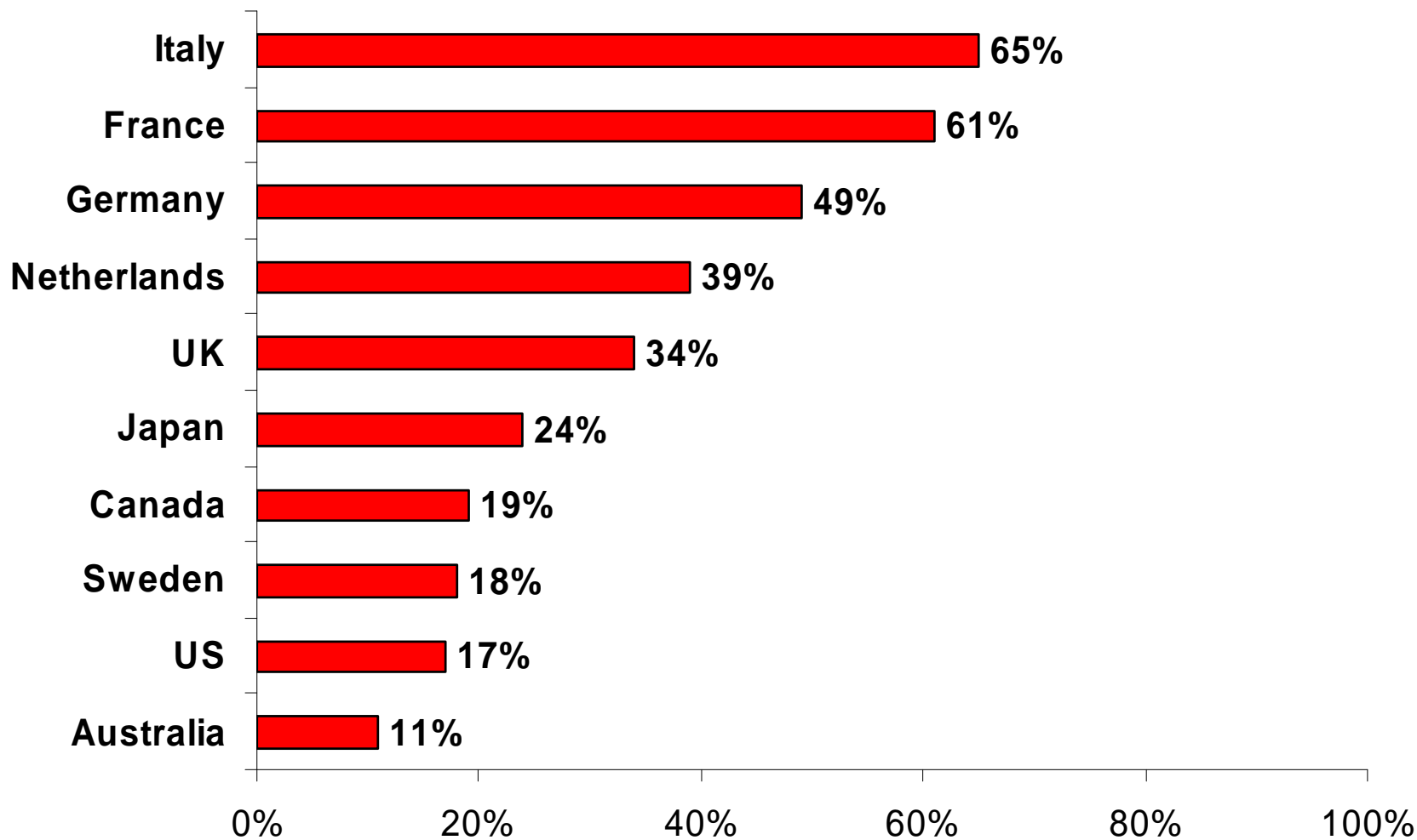
Predictor	US	UK	CAN	AU	GER	FR	IT	NE	SE	JP
Save/Plan Ahead of Schedule	X	x	X	x	X			X	x	
Informed about Retirement	x	x	x	x		x		x		
Age (older)	x					x	x		x	x
Confidence: Paying for Long Term Care	x	X		X				x		
Confidence: Access to Health Care		x				x	x		x	
Trust: Gov't. Pension Benefits	x	x						x	x	
Income								x		
Total R²	.30	.27	.26	.30	.10	.15	.23	.22	.29	.15

Item Non-Response* by Country

<u>Country</u>	<u>Content Questions</u>	<u>Demographic Questions</u>
Italy	19 of 53 (36%)	1 of 13 (8%)
France	9 of 53 (17%)	1 of 13 (8%)
Sweden	4 of 53 (8%)	1 of 13 (8%)
Australia	4 of 53 (8%)	1 of 13 (8%)
Netherlands	4 of 53 (8%)	1 of 13 (8%)
Germany	2 of 53 (4%)	1 of 13 (8%)
UK	2 of 53 (4%)	1 of 13 (8%)
Canada	2 of 53 (4%)	1 of 13 (8%)
Japan	1 of 53 (2%)	1 of 13 (8%)
US	0 of 53 (0%)	1 of 13 (8%)

*Non-Response = >/= 10% missing (includes refusals & "Don't know")

Item Non-Response*: Income



*Non-Response = Refusals, "Don't Know" & Extreme Outliers

Imputation Models for Income by Country

Predictors	Overall	US	CAN	UK	GER	FR	ITA	NL	JP	AU	SE
Household Employment Status	X	x	x	X	X				X	X	x
Education	x	X	x	x	x	X		x	x	x	x
Marital Status	x	x	X	x		x		x	x	x	X
Gender	x		x				X	X			
Overall R ²	.17	.26	.28	.18	.10	.09	.02	.10	.10	.26	.31

Changes in Models with Imputed Income Data

Country	Previous R ²	New R ²	Income Significant Previously	Income Significant After Imputations
Netherlands	.21	.22	No	Yes
United States	.29	.30	No	No
Canada	.26	.26	No	No
Australia	.30	.30	No	No
Germany	.10	.10	No	No
France	.15	.15	No	No
Sweden	.29	.29	No	No
Japan	.15	.15	No	No
Italy	.23	.23	No	No
UK	.27	.27	No	No
Overall Model	.25	.25	No	No

Conclusions

- **Models vary by country.**
- **Income is not a key driver of retirement optimism. Relative perceptions and expectations of financial means are more important than the current income status.**
- **When handling missing income data, imputations do not add significant value over mean substitution.**
- **Data quality and survey experience varies by country. Attention to the cultural context is needed in order to better understand and interpret the data.**