Gender, Financial Literacy and Pension Savings
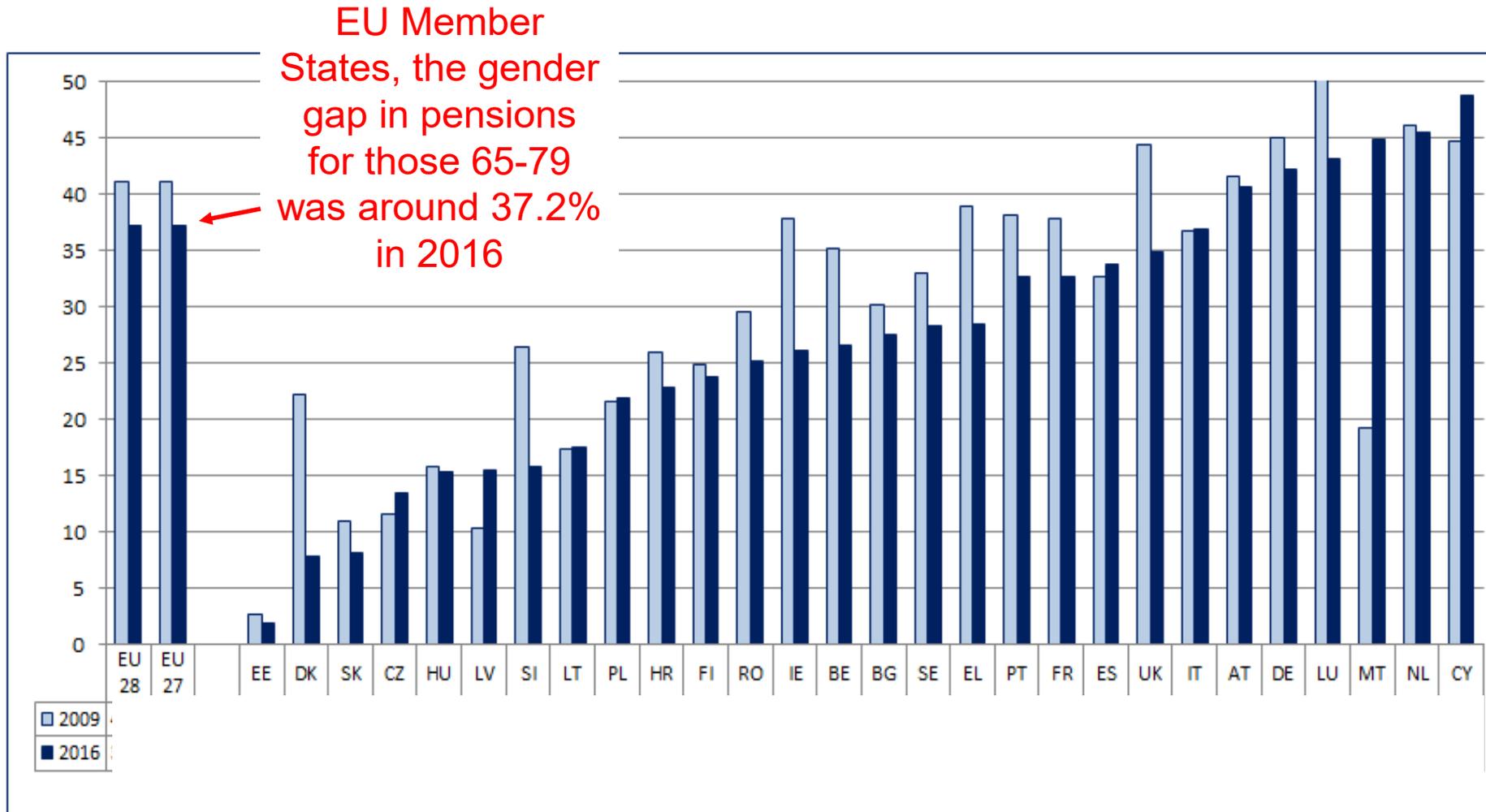
Alison Preston, Department of Economics,

University of Western Australia

&

Robert E. Wright, Adam Smith Business School,

University of Glasgow

Globally women have lower pensions (superannuation) than men

EU Member States, the gender gap in pensions for those 65-79 was around 37.2% in 2016
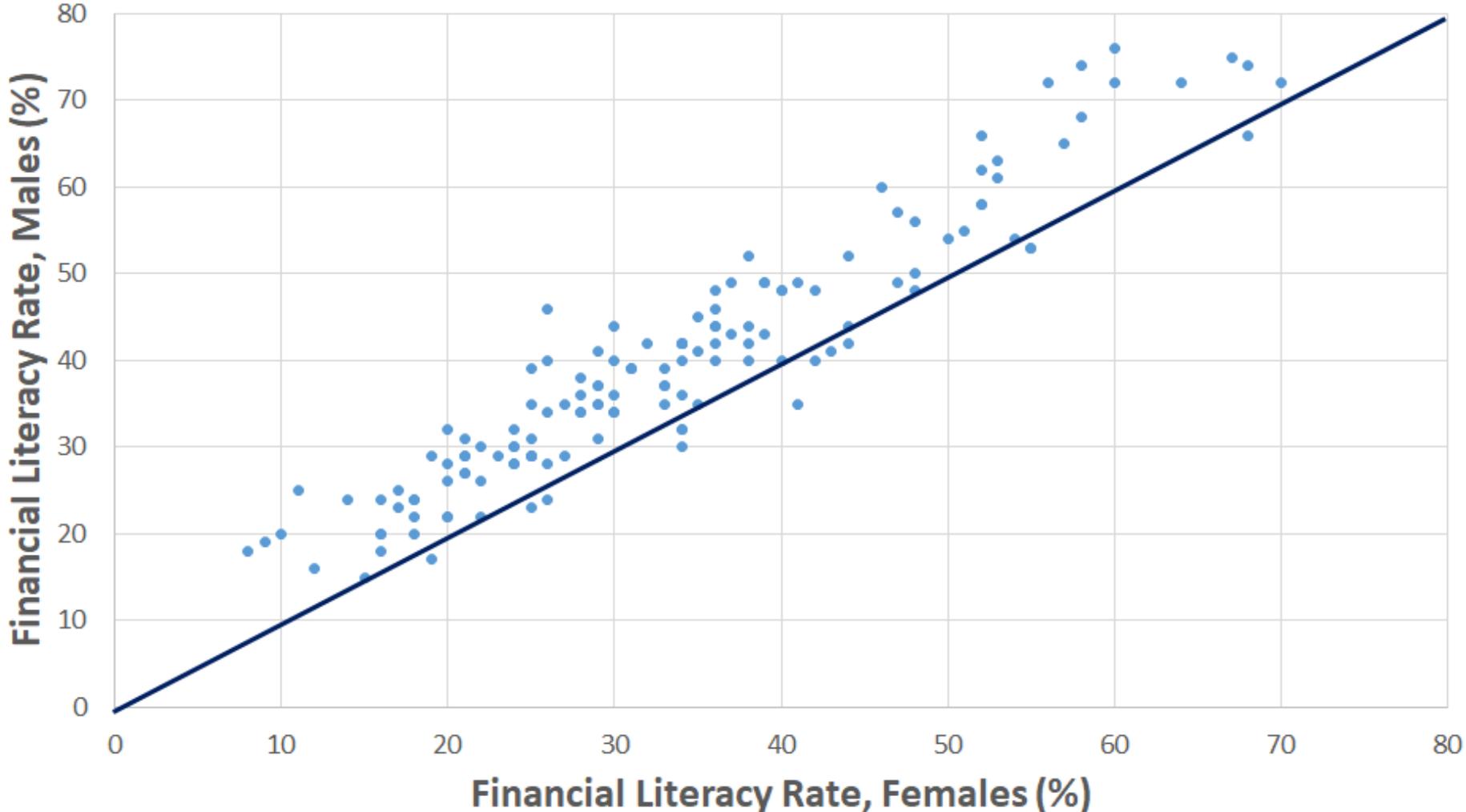
Source: European Union (2018), Pension Adequacy Report 2018, Figure 38.

Globally women have lower financial literacy than men

Global Financial Literacy Rates, 2014

Financial Literacy Rate, Males (%) vs Financial Literacy Rate, Females (%)

Source: S&P Global Financial Literacy Survey, 2014.

Overview

1. Motivation & research question

2. What is financial literacy?

3. Australia as an empirical case study

4. Method

5. Results

6. Concluding comments

Motivation

- The gender gap in pensions is known to reflect gender differences in characteristics such as earnings, intensity of employment, duration of years worked.

- Across countries the gender gap also relates to institutional arrangements and the design of the pension system – eg.

  - Coverage or premium for child-care
  - Universal pension or means tested pension
  - Pension eligibility conditions

Motivation (continued)

- Over recent decades a common policy response to the fiscal costs associated with an ageing population has been the adoption of supplementary pensions.

- Supplementary pensions are pension schemes that provide <u>additional</u> retirement savings and <u>complement statutory pensions</u>

  – In the Australian context occupational superannuation is an example of a supplementary pension

  – The equivalent in the US context are 401k pension plans

Motivation (continued)

- Supplementary pensions may support income adequacy in retirement, however, there is still a sizeable gap between men and women.

- Supplementary schemes generally confer benefits on high wage workers with continuous work histories (typically males) and disadvantage those with lower earnings and shorter work histories (typically females).

- **A potential compounding problem is that women are, on average, are less financially literate than men.**

Motivation (continued)

Why might financial literacy be a problem?

- Studies show that there is a relationship between financial literacy, wealth accumulation, planning for retirement and retirement savings

  (Behrman et al., 2012; Lusardi & Mitchell, 2007 & 2014; Japelli & Padula, 2013; van Rooij, Lusardi & Alessie, 2012; Chan & Stevens, 2008; Dahlquist, Martinez & Söderlind, 2017).

- Our research is, therefore, aimed at understanding **whether or not the gender gap in pension savings relates, in part, to the gender gap in financial literacy**.

- To the best of our knowledge this is a research question that has not yet been empirically addressed in the literature.

Previous studies

There is an extensive literature showing considerable heterogeneity in savings behaviour. Aside from earnings, other important factors affecting savings include:

- Discount rates
- Risk aversion
- Planning failures, moral hazard
- Peer group effects
- Design of pension plans – e.g. default settings; framing effects
- Differences in individual decision making abilities and financial literacy

Gender differences in retirement savings and wealth accumulation are primarily linked to differences in work-life-histories, contribution profiles and pension coverage / eligibility.

Hypotheses

We build on this literature and hypothesise that

H1: The gender gap in financial literacy is an important determinant of the gender gap in pension savings (superannuation accumulations).

Section 2. What is financial literacy

What is financial literacy?

Lusardi and Mitchell (2014, p. 6) definition:

"…peoples' ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt and pensions."

- Financial literacy is not numeracy.

- Perhaps most importantly a low level of financial literacy contributes to poor financial decisions, such a taking on a mortgage that you cannot afford or borrowing on your credit card.

- In fact some have argued that the low level of financial literacy was the main factor "causing" the so-called sub-prime mortgage crisis in the United States.

How is it financial lit. measured?

Research to date (mostly from the USA) suggests that there are three key dimensions of financial literacy:

1. Understanding of *interest rates*, especially compounding.

2. Understanding of *inflation*.

3. Understanding of *risk diversification*.

Lusardi, Mitchell and other colleagues have developed four batteries of questions that have been shown to be temporally consistent and internationally comparable:

1. Three questions set: "the so-called "Big Three"
2. Five questions set [which contains (1 (the Big-3)]
3. Seventeen questions set [which contains (2 above)]

Choice is largely determined by time allocated on the survey.

In the data set that we employ (the Household, Income and Labour Dynamics in Australia) survey, financial literacy was tested via a 5 question set.

Distribution of Correct Responses to Financial Literacy Questions; Males and Females; Adults; Australia; 2016
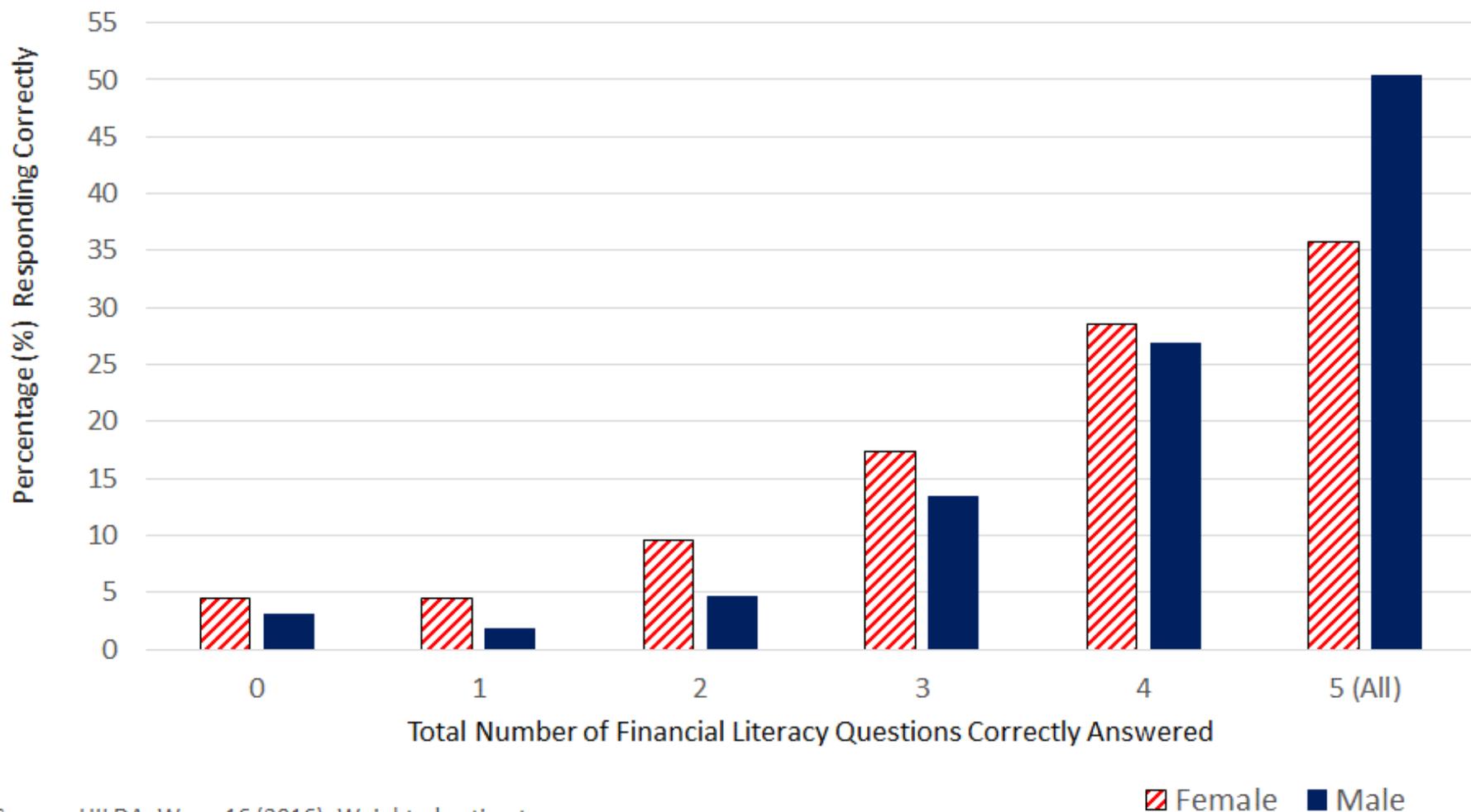
Section 3. Australia as an empirical case study

Australian case study

Australia is a valuable case study for a number of reasons. It has:

1. A mature supplementary pension system with widespread coverage. Before Covid-19 (!) around 90% of adults aged 18-64 had some supplementary pension savings

2. an "above average" level of financial literacy

3. a sizeable gender gap in financial literacy

4. a sizeable gender gap in supplementary pension savings

5. savings in the supplementary pension system may be affected by the financial decisions that individuals make

6. Large nationally representative dataset (HILDA) with information on pension savings and financial literacy

Mean superannuation balance of males and females aged 18-64, 2018
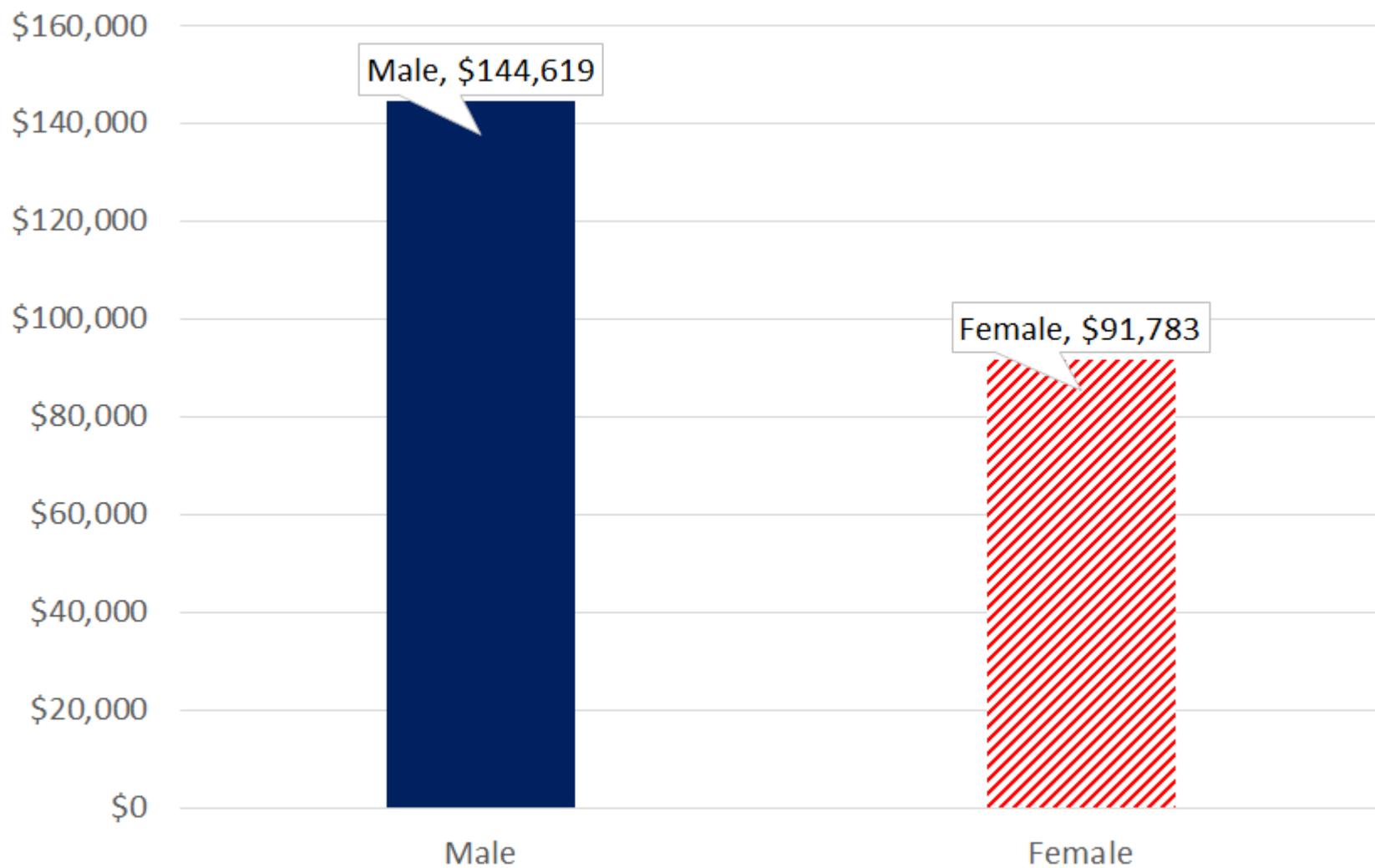
Male, $144,619

Female, $91,783

Australia as a case study

- Financial decisions that individuals may make and which may affect their supplementary pension savings include

  - Choice of fund

  - Choice of investment strategy

  - # of fund accounts held (consolidation to minimise fees and charges)

  - Tied products (e.g. life-insurance)

  - Early draw-downs (eg – first home buyers may access up to A$30,000 of person contributions) or early draw down during Covid.

  - Voluntary contributions to take advantage of tax concessions

JULY 2 2020 - 4:00PM

Half a million Australians have emptied their super accounts

Sally Whyte

Business

Under measures announced by the federal government to stimulate the economy as the COVID-19 pandemic hit, Australians were given the ability to apply to take out up to $10,000 out of their super in the 2019-20 financial year and another $10,000 in the 2020-21 financial year.

Industry Super Australia has analysed the available data and estimates about 480,000 Australians have completely emptied their accounts, even before access was open this financial year. The body representing industry super funds also estimates 395,000 of those who have wiped out their funds are under the age of 35.

HILDA

- High quality micro-data collected in the *Household, Income and Labour Dynamics in Australia (HILDA) survey* – presently an 18 wave (unbalanced) panel survey (2001-2018).

- Large nationally representative sample.

- Household based, so all household members (aged 15+) are interviewed.

- Rich in potential covariates e.g.: labour market (earnings, employment histories), education, family dynamics (marriage and fertility history), demography, wealth.

- In wave 16 (2016), *five* financial literacy questions were included for the first time.

- A wealth module with questions on superannuation balances conducted in waves 2, 6, 10, 14 and 18

Section 4. Method

The basic model (continued)

- To examine how the gender gap in financial literacy impacts on the gender gap in pension savings (S) we estimate separate male and female regressions with the dependent variable a measure of self-reported superannuation (pension) savings.

- We then decompose using the Oaxaca (1973) and Blinder (1973) technique. In the linear case it may be explained as follows:

$$\overline{\ln S_F} = \hat{\alpha}_F + \hat{\boldsymbol{\beta}}_F \overline{\mathbf{X}}_F \tag{1}$$

$$\overline{\ln S_M} = \hat{\alpha}_M + \hat{\boldsymbol{\beta}}_M \overline{\mathbf{X}}_M \tag{2}$$

- Subtract 'equation # 1' from 'equation #2' = gender gap in pension savings. This gap can then be decomposed as follows:

$$Gap = \hat{\boldsymbol{\beta}}_M (\overline{\mathbf{X}}_M - \overline{\mathbf{X}}_F) + (\hat{\boldsymbol{\beta}}_M - \hat{\boldsymbol{\beta}}_F)\overline{\mathbf{X}}_F + (\hat{\alpha}_M - \hat{\alpha}_F)$$

Gap due to means

Gap due to coefficients

Gap due to Diff in constants

Explained component

Unexplained component

In the non-linear case the decomposition may be undertaken in Stata using the 'nldecompose' command.

Sinning, Mathias, Markus Hahn, and Thomas K. Bauer, "The Blinder-Oaxaca decomposition for nonlinear regression models", 8(4) (2008), 480-492.

Method (continued)

Dependent variable:

- S = *self-reported pension savings*

Key independent variable:

- *FinLit* = continuous variable measuring the number of correct responses.

Method (continued)

Other independent variables $X =$

- Predicted permanent income ($\widehat{w}$)
- Time in the labour market (t)
- Schooling (continuous variable measuring years of education)
- Marital status (married (& never div or wid); if ever div; if ever wid)
- Dummy variables "if ever": had children, born outside Australia; ever worked part-time; ever self-employed; ever unemployed; ever owned own home;
- Dummy if had a gap year (potential exp > actual exp)
- Dummy if born pre 1974 (i.e. >18 in 1992 at start of SG Act).

NB: predicted permanent income (i.e. average life-time earnings) was estimated from an earnings-experience profile where the RHS controlled for schooling, actual experience and its square, marital status, a dummy if employed full year; a dummy if employed full-time & state and territory dummies. The predicted value ($\widehat{w}$) is at 28 years (the turning point on the profile) for males and 31 years for females

Method (continued)

It should be noted that our focus is not on understanding the precise determinants of pension balances (S) per se, but, rather, the extent to which the gender gap in financial literacy explains the gender gap in S.

Section 5. Results

Tobit estimates (S>=0) (N=10,491)

THE UNIVERSITY OF
WESTERN
AUSTRALIA

- ## Select findings:

	Males	Females
t	5,858.2*** (455.8)	4,806.3** (314.7)
Ever-divorced	-30,988.7*** (10,143.9)	-12,545.3 (7,904.7)
Ever-kid	3,361.4 (5,763.7)	-24,703.4*** (8,656.4)
Ever-govt	31,872.1*** (6,937.0)	21,456.4*** (4,707.6)
Ever-PT	-8,958.2 (7,252.1)	-16,122.1*** (6,191.3)

Each additional year of work increases male super by around $6k and female by around $5k

Males who have divorced have pension balances $31k < males never married

Females who have had children have pension balances $25k < females who haven't had children. (This result over and above effect of children on permanent income)

Other regressors included permanent income, schooling, marital status, foreign born, ever self-employed, ever own home, gap year and born pre1974 (pre SGC)

Adding in FL (S>=0; N=10,491)

	Males	Females
FL	13,058.4*** (3,096.6)	5,344.2*** (1,466.1)

Each additional FL question correctly answered increases male super by around $13k and female super by around $5.3k

OB Decomposition (based on Tobit regressions)

	Model (1)	Model (2) (with FL)
Raw gap	$58,355.4	$58,355.4
Explained component	$42,465.8*** (10,637.4)	$46,390.5*** (11,102.3)
Unexplained component	$15,889.6** (6,660.6)	$11,964.9 (11,953.4)
Explained as a % of raw gap	72.8%	79.5%
Change in explained share (%point)		6.7 %point

Source: HILDA, wave 18. Estimated weighted to reflect population totals.
Robust standard errors in parentheses. Significance levels given by ***p<0.01;
** p<0.05

- Some evidence that:
  - financial literacy is a determinant of pension savings
  - The gender gap in pension savings may be partly explained by the gender gap in financial literacy
- Suggests that interventions aimed at improving women's financial literacy may help narrow the gender gap in pension savings.

Future work

- Endogeneity – done some work on FL but more to do.

- Presently only have one wave FL. HILDA 2020 survey will ask about FL again and is collecting info on superannuation because of withdrawals.

- Superannuation data has been collected multiple times so we could look at more dynamic analysis - but has its costs in terms of sample size and representativeness.

- Individualistic model – but we know in reality that some households make pension decisions in a joint framework (eg. transfers – which is analogous to an increase in lifetime earnings).

Thank You