Understanding the Gender Gap in Financial Literacy: Evidence from Australia

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Aberdeen University
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Outline of Presentation

1. Motivation
2. What is financial literacy (FL) and how is it measured
3. Measuring FL in Australia
4. Method
5. Results
6. Summary
1. Motivation

2. What is financial literacy (FL) and how is it measured

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6. Summary
Australia one of the richest countries in the world

GDP Per Capita, 2018 (US $)
(Advanced economies, GDP per capita > US$42,000)

Source: https://www.imf.org/external/pubs/ft/weo/2018
...and its household’s are amongst the most indebted in the world. (Debt to net disposable income ratio is > 200%).

OECD Household debt: Total, % of net disposable income, 2016

Source: https://data.oecd.org/hha/household-debt.htm
Australia has relatively high rates of financial literacy (within top 10 countries globally).

Previous studies have shown that financial literacy is important for:

• Retirement planning
• Saving and wealth accumulation
• Women’s economic empowerment and domestic violence

Understanding why there are large gaps in the financial literacy of men and women is, therefore, important for policy development.

Surprisingly, very few studies have examined the determinants of the gender gap.
Previous Studies in Financial Literacy

• Field of FL been expanding since early 1990s.

• Three broad strands of research:
  – Effectiveness of interventions and education on FL
  – Determinants of FL
  – Impact of FL on financial behaviour (eg. retirement planning)

• Significant contributors include Professors Annamaria Lusardi and Olivia Mitchell, including their work in developing questions to test financial literacy ➔ questions now used in global surveys.
Previous studies find...

- Women less financially literate than men
- Gender gaps present in population sub-groups (e.g., migrants, young people, university students)
- Important determinants of FL include: age, education, employment
  - Inverted U-shape relationship with age (reflecting cognitive decline in older ages)
  - FL rises with education
  - FL higher amongst those in work
- Emerging research showing that FL also varies with psychological traits
  - Conscientiousness – positive association with FL
Why the gender gap?

- Why might women have less financial literacy than men?

  - Household specialisation?
  - Sex-segregated labour market? (by occupation, industry, hours (pt/ft) and vertical and horizontal)
  - Socialisation – mothers/daughters, fathers/sons?
  - Personality?
  - Cognition?
  - Numeracy? (but if numeracy is an explanation then the question is why is there a gender gap in numeracy?)
Studies of the gender gap in FL

Numerous studies have documented a significant gender gap in financial literacy but very few have specifically examined why this is the case. Exceptions include:

- **Cupak et al. (2018)** – OECD data for 12 countries from 2015. Included:
  - Netherlands: 24.6% gap (N=852); Canada: 19.7% gap (N=948)
  - UK: 17.2% gap (N=896)

- **Bucher-Koenen et al. (2017)**
  - USA: 13.8% (2009, N=1488); Germany: 6.6% (2009, N=1059)

- Studies with a focus on couples (spousal gap)

- Focus on young people: Bottazzi and Lusardi (2016)
General finding:

Very little of the gender gap in FL can be explained by covariates – eg. Cupak et al. (2018):

<table>
<thead>
<tr>
<th></th>
<th>NL</th>
<th>Canada</th>
<th>Denmark</th>
<th>UK</th>
<th>Austria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean gender gap FL %</td>
<td>24.6</td>
<td>19.7</td>
<td>18.5</td>
<td>17.2</td>
<td>8.4</td>
</tr>
<tr>
<td>% FL gender gap explained by RHS variables</td>
<td>16.0%</td>
<td>3.8%</td>
<td>16.7%</td>
<td>25.3%</td>
<td>15.8%</td>
</tr>
<tr>
<td>age (4 dummies), education (1 dummy), labour market status (4 dummies), household type (single or not), whether or not makes financial decisions (1 dummy)</td>
<td>16.0%</td>
<td>3.8%</td>
<td>16.7%</td>
<td>25.3%</td>
<td>15.8%</td>
</tr>
<tr>
<td>N</td>
<td>852</td>
<td>948</td>
<td>910</td>
<td>896</td>
<td>1,728</td>
</tr>
</tbody>
</table>

Source: Cupak et al. (2018)
Limitations of previous studies:

Limitations of previous studies include:

• Small samples (around 1,000 to 2,000 observations)

• Not always nationally representative data
  – Sometimes specific populations (e.g. university students)

• Limited set of possible covariates (e.g. Cupak et al., 2018)
This study

Uses the Household, Income and Labour Dynamics in Australia (HILDA) survey. Advantages are:

- Large scale (16,886 adult observations)
- Nationally representative
- 17 waves of data (2001-2017) - although only one wave of data on FL (special module 2016)
- Rich survey with information on socio-economic characteristics, demographics, personality, cognitive ability etc.
Australia as a case study

Australia makes an interesting case study for study of gender gap in FL because:

• Above average level of financial literacy
• One of the highest gender gaps in financial literacy globally (particularly amongst high income countries)
• Privatised pension arrangements (occupational superannuation) requires individuals to plan for retirement
• Highly sex-segregated labour market (historically Australia has had one of the most sex-segregated labour markets in the OECD with history rooted in industrial relations arrangements at the turn of the last century)
Our particular focus...

• We hypothesise that gender differences in labour market activities and experiences may be driving gender differences in financial literacy.

• Methodologically there are empirical challenges – eg. endogeneity (it is not unreasonable to think that financial literacy might affect choice of occupation).

...but I’ll return to this later. First I wish to explain what we mean by financial literacy and to present some descriptive statistics.
1. Motivation

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What is Financial Literacy?

• Within the financial literacy literature there is significant debate about the best way to define and measure financial literacy.

• Financial literacy has been defined as (Hung et al. 2009)
  a) a specific form of knowledge
  b) the ability or skills to apply that knowledge
  c) perceived knowledge
  d) good financial behaviour
  e) financial experiences
What is financial literacy (continued)

- The OECD define financial literacy as the “…knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life.” (OECD, 2005, Principle I.1).

• Financial literacy is not numeracy
  − Numeracy is the ability to use maths and arithmetic in a practical manner at a personal level and is more closely aligned to cognitive abilities (Hung, Parker and Yoong 2009)

• A common definition of financial literacy is knowledge of (Lusardi and Mitchell, 2011):
  − Compound interest
  − Real versus nominal inflation
  − Risk diversification
How is FL measured?

- Lusardi, Mitchell and others are credited with developing a battery of questions to assess (test) financial literacy knowledge.
  - “Big-3”: set of three questions covering interest rate, inflation and diversification.
  - “Big-5”: Five question set (which includes the Big-3)
  - Seventeen question set (which includes the Big-5)

- 2014 S&P Global Financial Literacy Survey (used in Hasler and Lusardi, 2017): tested four concepts
  - Interest rate
  - Compound interest
  - Inflation
  - Risk diversification

Considered financially literate if correctly answered at least three. This is slowly becoming the standard.
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Measuring FL in Australia

- In 2016 a module containing a set of five financial literacy questions was included in wave 16 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey.
  - 16,886 adults had their financial literacy ‘tested’.
Q1: Suppose you put $100 into a no-fee savings account with a guaranteed interest rate of 2% per year. You don’t make any further payments into this account and you don’t withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?

- Response options: record number; irrelevant answer; don’t know or don’t understand the question; refused.

% Adult Australians Answering Question Correctly

<table>
<thead>
<tr>
<th>PERSONS (N=16886)</th>
<th>MALE (N=7973)</th>
<th>FEMALE (N=8913)</th>
<th>Gap (%-point)</th>
<th>% gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>85.2%</td>
<td>91.7%</td>
<td>79.4%</td>
<td>12.3***</td>
<td>15.5%</td>
</tr>
</tbody>
</table>

***t-test. Significant 1% level.
Q2: Imagine now that the interest rate on your savings account was 1% per year and inflation was 2% per year. After one year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?

- Response options: more than today; exactly the same as today; less than today; don’t know / don’t understand the question; refused.

<table>
<thead>
<tr>
<th>% Adult Australians Answering Question Correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERSONS</strong> (N=16886)</td>
</tr>
<tr>
<td>70.9%</td>
</tr>
</tbody>
</table>

***t-test. Significant 1% level.
HILDA Diversification Question

**Q3:** Buying shares in a single company usually provides a safer return than buying shares in a number of different companies.

- Response options: true; false; don’t know or don’t understand the question; refused.

<table>
<thead>
<tr>
<th>% Adult Australians Answering Question Correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERSONS (N=16886)</td>
</tr>
<tr>
<td>76.7%</td>
</tr>
</tbody>
</table>

***t-test. Significant 1% level.
Q4: An investment with a high return is likely to be high risk.

- Response options: true; false; don’t know or don’t understand the question; refused.

% Adult Australians Answering Question Correctly

<table>
<thead>
<tr>
<th></th>
<th>PERSONS (N=16886)</th>
<th>MALE (N=7973)</th>
<th>FEMALE (N=8913)</th>
<th>Gap (%-point)</th>
<th>% gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>84.1%</td>
<td>88.5%</td>
<td>80.2%</td>
<td>8.3***</td>
<td>10.4%</td>
</tr>
</tbody>
</table>

***t-test. Significant 1% level.
Q5: Suppose that by the year 2020 your income has doubled, but the prices of all of the things you buy have also doubled. In 2020, will you be able to buy more than today, exactly the same as today, or less than today with your income?

- Response options: more than today; exactly the same as today; less than today; don’t know / don’t understand the question; refused.

% Adult Australians Answering Question Correctly

<table>
<thead>
<tr>
<th></th>
<th>PERSONS (N=16886)</th>
<th>MALE (N=7973)</th>
<th>FEMALE (N=8913)</th>
<th>Gap (%-point)</th>
<th>% gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>78.0%</td>
<td>79.7%</td>
<td>76.4%</td>
<td>3.3***</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

***t-test. Significant 1% level.
Financial Literacy Australia, 2016:
Count of Correct Responses

Mean # of Correct Responses (0-5)

<table>
<thead>
<tr>
<th>Source: Financial Literacy Australia, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERSONS</strong> (N=16,886)</td>
</tr>
<tr>
<td><strong>MALE</strong> (N=7,972)</td>
</tr>
<tr>
<td><strong>FEMALE</strong> (N=8,914)</td>
</tr>
<tr>
<td><strong>% Gender Gap</strong></td>
</tr>
<tr>
<td>3.9</td>
</tr>
<tr>
<td>4.1</td>
</tr>
<tr>
<td>3.7</td>
</tr>
<tr>
<td>11.4%</td>
</tr>
</tbody>
</table>
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This paper:

- Uses a count measure of financial literacy (# of correct answers: 0,1,2,3,4,5).

- Uses a human capital framework where financial literacy is considered a form of human capital (a skill or knowledge that one invests in).

- Our particular focus is on the effects of labour market participation.
  - Is it what people do that affects the gender gap in financial literacy?
Gender Gap in Mean Financial Literacy; Current or Last Occupation; Adults; Australia; 2016

*** All gaps significant at the 1% level or better.
**Gender Gap in Mean Financial Literacy; Current or Last Industry of Employment; Adults; Australia; 2016**

**With exception of ‘egw’ and ‘construct’, all gaps significant at the 5% level or better.**
Method:

• First uses a dummy variable approach (male=1; female=0).

\[ \ln(FL_i) = \alpha + \beta X_i + \gamma SEX_i + \varepsilon \]

• The coefficient on the sex dummy can be transformed into an ‘adjusted’ measure of the gender gap as follows:

\[ Gap^* = \exp(\hat{\gamma} - 1) \times 100 \]

• In policy terms it is how much more, measured as a percentage, the financial literacy of women would need to increase to be equal to that of men.

• A limitation of this approach is that it constrains the coefficients to be the same for men and women.
Blinder-Oaxaca:

- The Blinder-Oaxaca decomposition approach allows us to relax the assumption that the coefficients are the same for men and women. The decomposition is as follows:

- First estimate separate equations for men and women:

\[
\ln(FL_M) = \alpha_M + \beta_M X_M + \varepsilon_M
\]

\[
\ln(FL_F) = \alpha_F + \beta_F X_F + \varepsilon_F
\]
Blinder-Oaxaca - continued:

- After estimation these equations become:
  
  \[
  \ln(FL_M) = \hat{\alpha}_M + \hat{\beta}_M \overline{X}_M \\
  \ln(FL_F) = \hat{\alpha}_F + \hat{\beta}_F \overline{X}_F 
  \]

- Subtracting one equation from the other:
  
  \[
  \ln(Gap) = \ln(FL_M) - \ln(FL_F) \\
  = (\overline{X}_M - \overline{X}_F)\hat{\beta}_M + \overline{X}_F(\hat{\beta}_M - \hat{\beta}_F) + (\hat{\alpha}_M - \hat{\alpha}_F)
  \]
Blinder-Oaxaca - continued:

\[ \ln(Gap) = \ln(FL_M) - \ln(FL_F) \]

\[ = (\overline{X}_M - \overline{X}_F) \hat{\beta}_M + \overline{X}_F (\hat{\beta}_M - \hat{\beta}_F) + (\hat{\alpha}_M - \hat{\alpha}_F) \]

- \( \ln(Gap) \) is the (natural) logarithm of the difference between male and female financial literacy.

- If \( Gap > 0 \), it is simply how much higher male financial literacy is than female financial literacy expressed as a percentage.
Blinder-Oaxaca - continued:

\[
\ln(\text{Gap}) = (\bar{X}_M - \bar{X}_F) \hat{\beta}_M + \bar{X}_F (\hat{\beta}_M - \hat{\beta}_F) + (\hat{\alpha}_M - \hat{\alpha}_F)
\]

- Gap due to means
- Gap due to coefficients
- Gap due to Diff in constants

Explained component

Unexplained component
Method and dependent variable

- Method: Ordinary Least Squares
- Dependent variable: the natural log of the number of correct responses.
- As the dependent variable is expressed in natural logarithms respondents who scored zero are allocated a value of 0.35
  - NB: only a small share answered zero correctly (3% of males and 4.4% of females)
Various reasons for expressing in logarithms:
- Decompose using the Blinder-Oaxaca method
- Easy to interpret
- Models financial literacy (human capital) production as a Cobb-Douglas production function with diminishing returns
RHS variables and specifications

• Basic specification
  – Age (12 dummies in 5 year intervals)
  – Sibling status (dummies if has sibling and if younger or older)
  – Marital status (5 dummies)
  – Length of time in cohabiting relationship
  – Birthplace (2 dummies)
  – Presence dependent child (1 dummy)
  – Highest education attainment (6 dummies)
  – Field of highest post-high school qualification (14 dummies)
  – Whether or not still studying (1 dummy)
  – Geographic location (12 dummies)
RHS variables and specifications (con’t)

• **Extended specification (basic + …)**
  - Current labour market status (dummies for: employed FT, employed PT, unemployed, not in labour force)
  - Trade union membership (dummy if current or ever)
  - Sector of employment (dummy if current or ever worked government, private or not-for-profit sector)
  - Occupation (8 dummies) (current or last)
  - Industry (19 dummies) (current or last)

• Acknowledge the potential endogeneity of some of these RHS variables (eg. FL may affect choice of occupation).

• Potential endogeneity only especially problematic if degree of endogeneity was different for men and women.
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Results

The results confirm that the determinants of financial literacy are the same as that found by others elsewhere:

• There is a large and significant gender gap after controlling for human capital characteristics
• Financial literacy has an inverse u-shaped relationship with age
• Financial literacy rises with education
• Unemployed individuals have significantly lower financial literacy than other labour market groups
<table>
<thead>
<tr>
<th>Gender Gap:</th>
<th>Basic Specification</th>
<th>Extended Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>16886</td>
<td>16886</td>
</tr>
<tr>
<td>$R^2$(%)</td>
<td>17.2%</td>
<td>21.6%</td>
</tr>
<tr>
<td>% change $R^2$</td>
<td></td>
<td>25.6%</td>
</tr>
<tr>
<td>F-test of model basic &amp; extended specifications</td>
<td>21.8***</td>
<td><strong>p &lt; 0.01</strong></td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses *** p < 0.01.
Predicted financial literacy by age

Source: HILDA wave 16 (2016). Weighted estimates. M=male; F=female; mid=grouped rate derived from age indicator variables in human capital regression (Table 5). Male*, Female* - derived from the age and age² regression results N=16,886
Predicted financial literacy by education

Oaxaca & Blinder Decomposition
Blinder & Oaxaca Decomposition (Full Sample)

Mean ln(FL) Men = 1.33; Mean ln(FL) Women = 1.18

Raw ln(gap) = 0.149

<table>
<thead>
<tr>
<th>Model</th>
<th>Explained Gap</th>
<th>Unexplained Gap</th>
<th>% Raw Gap Explained</th>
<th>% Raw Gap Unexplained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic model</td>
<td>0.008 (0.009)</td>
<td>0.141***</td>
<td>5.4%</td>
<td>94.6%</td>
</tr>
<tr>
<td>Extended model</td>
<td>0.032**</td>
<td>0.117***</td>
<td>21.5%</td>
<td>78.5%</td>
</tr>
</tbody>
</table>

Implies that around 16% (21.5 - 5.4) of the gender gap explained by gender differences in labour market activities.
Including controls for cognitive ability, personality and numeracy
## Blinder & Oaxaca Decomposition (Reduced Sample)

### Mean ln(FL) Men = 1.44; Mean ln(FL) Women = 1.31

<table>
<thead>
<tr>
<th></th>
<th>Explained Gap</th>
<th>Unexplained Gap</th>
<th>% Raw Gap Explained</th>
<th>% Raw Gap Unexplained</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Basic model</td>
<td>0.010**</td>
<td>0.124***</td>
<td>7.5%</td>
<td>92.5%</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.094)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Model 1 + Labour Market</td>
<td>0.021***</td>
<td>0.112***</td>
<td>15.7%</td>
<td>84.3%</td>
</tr>
<tr>
<td></td>
<td>(0.008)</td>
<td>(0.011)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Model 2 + traits</td>
<td>0.028***</td>
<td>0.106***</td>
<td>20.6%</td>
<td>79.4%</td>
</tr>
<tr>
<td></td>
<td>(0.008)</td>
<td>(0.011)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: N=11,311; N(M)=5,274; N(F)=6,037 (not a representative sample; lost 1/3 sample).

Mean ln(FL) Men = 1.44; Mean ln(FL) Women = 1.31 → Raw ln(gap)= 0.134

Shows that when cognitive ability and personality traits controlled for the explained share increases to 20.6%, suggesting that the gender gap may, in part, reflect gender differences in these characteristics.
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Summary

- Analysis in this paper suggests that human capital variables such as age, education and marital status are not important in explaining the male-female gap in financial literacy.

- Labour market variables (such as current or previous occupation, industry and sector of employment, trade union membership and labour market status) are important and explain around 16% of the gap
  - Although this depends on the assumption that these variables are exogenous

- But there remains a large unexplained share which primarily derives from differences in the constants.
We show that men and women acquire (produce) financial literacy differently.

If human capital not explaining the gender gap and labour market factors possibly only explaining a small share, what else might be contributing to the gap?

- The large unexplained share, especially with detailed controls for age, suggests that the gap emerges during childhood and prevails through adulthood.
- It could be that the gap is the product of household and/or parental socialisation effects.
- This suggests that interventions are best focused in the childhood years.
Future work

- Financial Literacy – what is being measured and does it matter?
  - OECD sets out best practice guidelines for national surveys of FL (questions on interest rates, inflation, risk diversification etc.)
  - No agreement in the literature about how best to measure FL based on these data - eg.
    - Rate measure (eg % answering all 3 correct)
    - Index measure, sometimes using factor analysis
    - Count measure – eg. number of correct responses
    - Sizeable % of respondents choose “don’t know” or “refused to answer” and typically these responses are treated as equivalent as incorrect.
Future work (continued)

• Researchers commonly treat the “don’t know” or “refused to answer” responses as being equivalent to being incorrect (Agnew, Bateman and Thorp, 2013; Klapper et al., 2015).

• Von Gaudecker (2015) advocates that the don’t know responses be recoded with the probability of a random answer being correct
  o Eg. if a question has four response options, with one being “don’t know” then he advocates that “don’t know” be recoded as $\frac{1}{3}$.

• Both approaches potentially problematic, especially if there are significant differences between men and women in “don’t know” or “refused to answer” responses.
## Gender Differences in FL ‘test’ responses

<table>
<thead>
<tr>
<th></th>
<th>Count of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>m-correct</td>
<td>3.0</td>
</tr>
<tr>
<td>f-correct</td>
<td>4.4</td>
</tr>
<tr>
<td>Gender Gap %</td>
<td>-31.9%</td>
</tr>
<tr>
<td>m-wrong</td>
<td>58.1</td>
</tr>
<tr>
<td>f-wrong</td>
<td>50.4</td>
</tr>
<tr>
<td>Gender Gap %</td>
<td>15.3%</td>
</tr>
<tr>
<td>m-DK</td>
<td>86.1</td>
</tr>
<tr>
<td>f-DK</td>
<td>70.6</td>
</tr>
<tr>
<td>Gender Gap %</td>
<td>21.9%</td>
</tr>
<tr>
<td>m-refused</td>
<td>98.1</td>
</tr>
<tr>
<td>f-refused</td>
<td>98.0</td>
</tr>
</tbody>
</table>

## Ordered Logit: Blinder & Oaxaca Decomposition

<table>
<thead>
<tr>
<th></th>
<th>Explained Gap</th>
<th>Unexplained Gap</th>
<th>% Raw Gap Explained</th>
<th>% Raw Gap Unexplained</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Count Wrong (0,4)</strong></td>
<td>-0.042**</td>
<td>-0.093</td>
<td>30.8**</td>
<td>69.2</td>
</tr>
<tr>
<td></td>
<td>(0.019)</td>
<td>(0.061)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Count Don’t Know (0,5)</strong></td>
<td>0.020</td>
<td>-0.365***</td>
<td>-5.9</td>
<td>105.9***</td>
</tr>
<tr>
<td></td>
<td>(0.017)</td>
<td>(0.087)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Count Refused (0,5)</strong></td>
<td>0.111***</td>
<td>0.436***</td>
<td>20.3%***</td>
<td>79.7%***</td>
</tr>
<tr>
<td></td>
<td>(0.040)</td>
<td>(0.148)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Controlling for: age, demographic characteristics, education, field of study and geographic location

Notes: N=16,888. Estimates weighted
Thank you
## Oaxaca-Blinder Decomposition of the Gender Gap in Financial Literacy; Robustness Check; Adults; Australia; 2016

<table>
<thead>
<tr>
<th>Robustness check</th>
<th>(1) Human Capital Explained</th>
<th>Unexplained</th>
<th>(2) Human Capital and Labour Market Explained</th>
<th>Unexplained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main models</td>
<td>5.4%</td>
<td>94.6%</td>
<td>21.5%</td>
<td>78.5%</td>
</tr>
<tr>
<td>Number of correct responses zero allocated 0.1</td>
<td>4.1%</td>
<td>95.9%</td>
<td>25.0%</td>
<td>75.0%</td>
</tr>
<tr>
<td>Number of correct responses zero allocated 0.5</td>
<td>5.7%</td>
<td>94.3%</td>
<td>20.1%</td>
<td>79.9%</td>
</tr>
<tr>
<td>Number of correct responses zero allocated 1</td>
<td>6.6%</td>
<td>93.4%</td>
<td>17.4%</td>
<td>82.6%</td>
</tr>
<tr>
<td>Q1,Q2 and Q3 only</td>
<td>5.0%</td>
<td>95.0%</td>
<td>16.0%</td>
<td>84.0%</td>
</tr>
<tr>
<td>Responses weighted by difficulty</td>
<td>5.2%</td>
<td>94.8%</td>
<td>20.0%</td>
<td>80.0%</td>
</tr>
<tr>
<td>Dependent variable not in logarithms</td>
<td>7.3%</td>
<td>92.7%</td>
<td>17.9%</td>
<td>82.1%</td>
</tr>
</tbody>
</table>

Source: HILDA Wave 16 (2016); weighted estimates.

Notes: N=16,886
### Blinder & Oaxaca Decomposition (Full Sample)

<table>
<thead>
<tr>
<th>Source: HILDA Wave 16 (2016); weighted estimates. Notes: N=16,886. Standard errors in parentheses. Statistical significance levels: ** p&lt;0.050 and *** p&lt;0.010</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Differential</th>
<th>Coef.</th>
<th>Std.Err.</th>
<th>% of Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean-male</td>
<td>1.331</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean-female</td>
<td>1.182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gap</td>
<td>0.149***</td>
<td>(0.015)</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Explained</th>
<th>Coef.</th>
<th>Std.Err.</th>
<th>% of Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>human-cap</td>
<td>0.005</td>
<td>(0.009)</td>
<td>3.3%</td>
</tr>
<tr>
<td>lmstatus</td>
<td>0.016**</td>
<td>(0.008)</td>
<td>10.7%</td>
</tr>
<tr>
<td>occ</td>
<td>-0.013</td>
<td>(0.008)</td>
<td>-8.9%</td>
</tr>
<tr>
<td>ind</td>
<td>0.024**</td>
<td>(0.011)</td>
<td>16.2%</td>
</tr>
<tr>
<td>Total</td>
<td>0.032**</td>
<td>(0.013)</td>
<td>21.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unexplained</th>
<th>Coef.</th>
<th>Std.Err.</th>
<th>% of Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>human-cap</td>
<td>-0.169</td>
<td>(0.093)</td>
<td>-113.3%</td>
</tr>
<tr>
<td>lmstatus</td>
<td>0.001</td>
<td>(0.039)</td>
<td>0.7%</td>
</tr>
<tr>
<td>occ</td>
<td>-0.004</td>
<td>(0.045)</td>
<td>-2.5%</td>
</tr>
<tr>
<td>ind</td>
<td>-0.020</td>
<td>(0.076)</td>
<td>-13.4%</td>
</tr>
<tr>
<td>constant</td>
<td>0.309**</td>
<td>(0.129)</td>
<td>207.3%</td>
</tr>
<tr>
<td>Total</td>
<td>0.117***</td>
<td>(0.018)</td>
<td>78.7%</td>
</tr>
</tbody>
</table>

| Total %         | 100.0% | 100.0% |
