

# Revisiting Specialisation and the Sexual Division of Labour (HILDA)

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4. A Descriptive Profile of Specialisation
5. SI 2 & SI 3
6. Is Specialisation Consistent with AA in Domestic or Market Work?
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## 1. Overview

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1. First study to facilitate a direct measure of specialisation, combining information about paid work and domestic work from both couple members into a single index of specialisation.
  2. First study to consider absolute advantage in the labour-market alongside absolute advantage in the household (i.e. sex) as determinants of comparative advantage.
- Initial findings: absolute advantage in the labour-market is becoming increasingly important in terms of how couples allocate their time, relative to a sexual division of labour.

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Becker (1981) "If women have a comparative advantage over men in the household sector when they make the same investments in human capital, an efficient household with both sexes would allocate the time of women mainly to the household sector and the time of men mainly to the market sector" (p. 22)

**How can we measure specialisation in same-sex households?**

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## Limitations of current measures of specialisation:

- Studies measuring specialisation using a labour-market proxy: Hersch & Stratton (2000) Jepsen & Jepsen (2005), Antecol & Steinberger (2013), Giddings et al. (2014), Jepsen & Jepsen (2015)
- Studies measuring specialisation using time-use inputs from the household only: Stratton (2005), Bonke et al. (2008), Notmeyer (2011)
- Descriptive profiles of specialisation: Black et al. (2007), Juhn & McCue (2017)

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$$SI_1 = |LFS_1 - HWS_1|$$

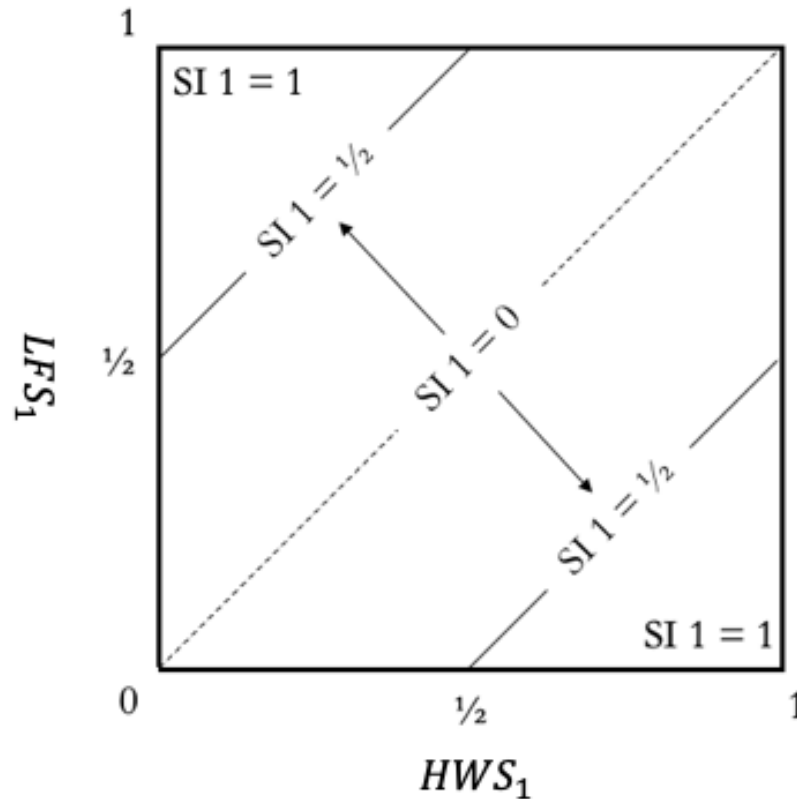
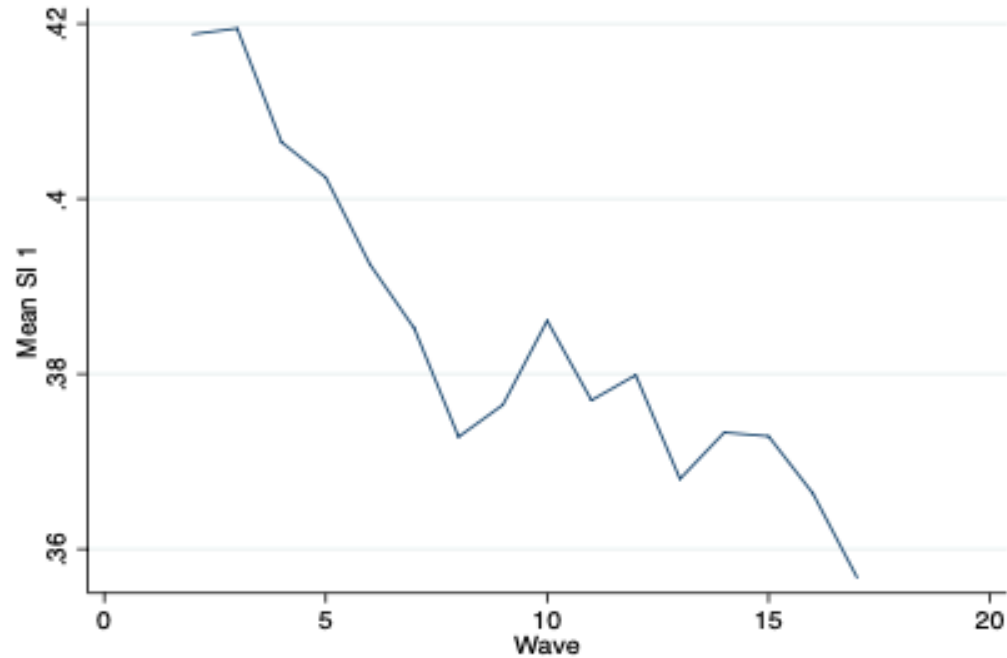


Figure 1: Map of Specialisation

$LFS_1$  = Share of market work done by Partner 1

$HWS_1$  = Share of housework done by Partner 1

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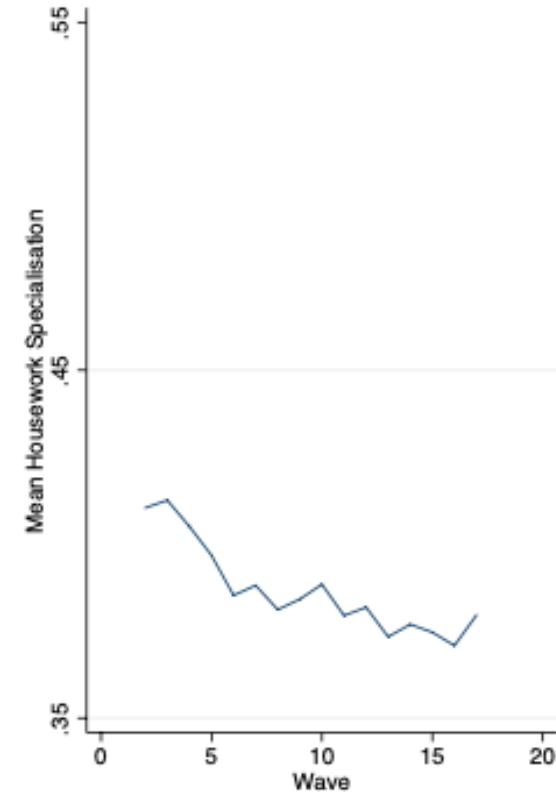
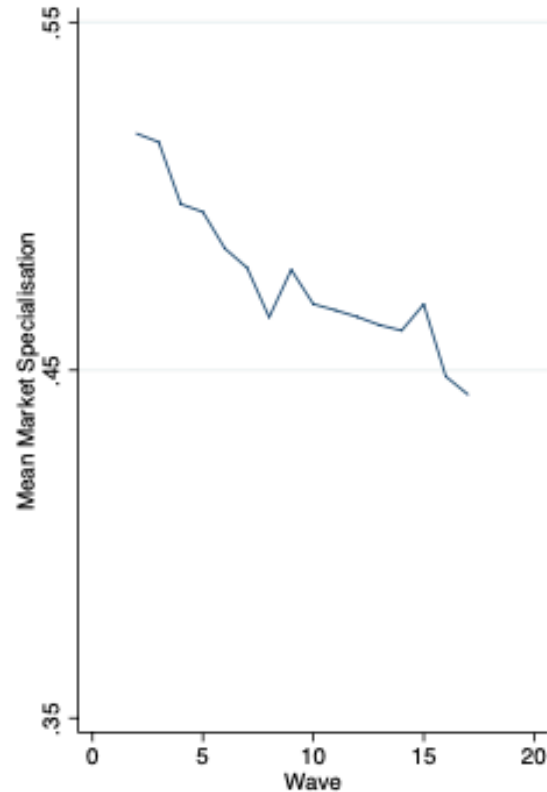


**Figure 2: Mean SI 1 by Wave**

*Source:* HILDA Release 17.0

*Notes:* Descriptive statistics based on a matched sample across waves 2 to 17. Couple year observations were excluded if a member reported an age less than 18 or greater than 64. Couple year observations were excluded if a member did not return a self-completion questionnaire and non-responding households were excluded. The graph has been weighted using household cross-sectional population weights.

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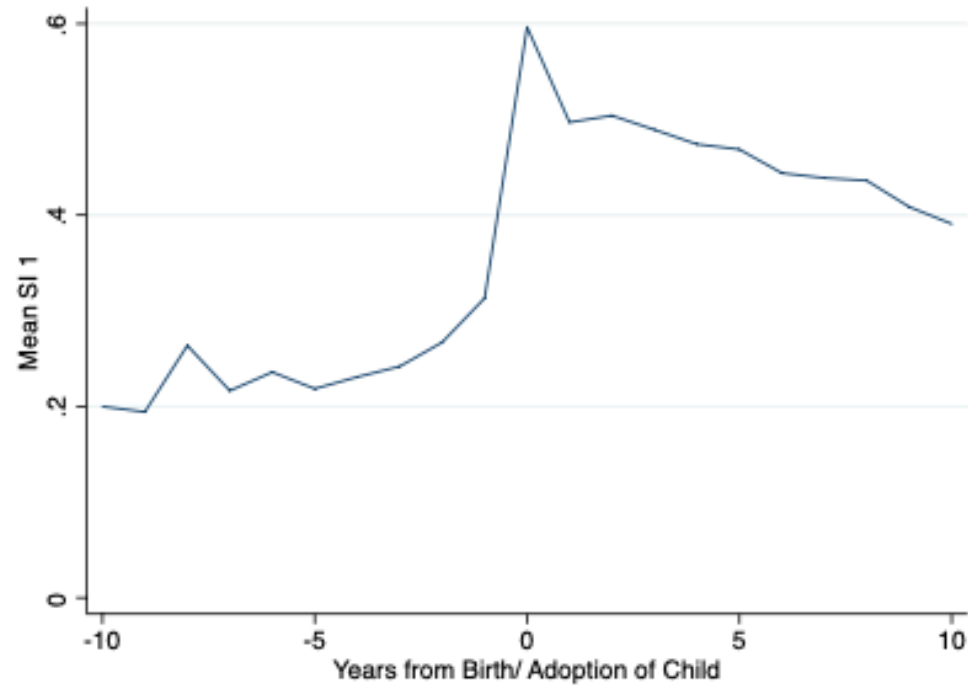


**Figure 3: Mean Labour-Force Specialisation** **Figure 4: Mean Housework Specialisation**

*Source:* HILDA Release 17.0

*Notes:* Descriptive statistics based on a matched sample across waves 2 to 17. Couple year observations were excluded if a member reported an age less than 18 or greater than 64. Couple year observations were excluded if a member did not return a self-completion questionnaire and non-responding households were excluded. The graph has been weighted using household cross-sectional population weights.

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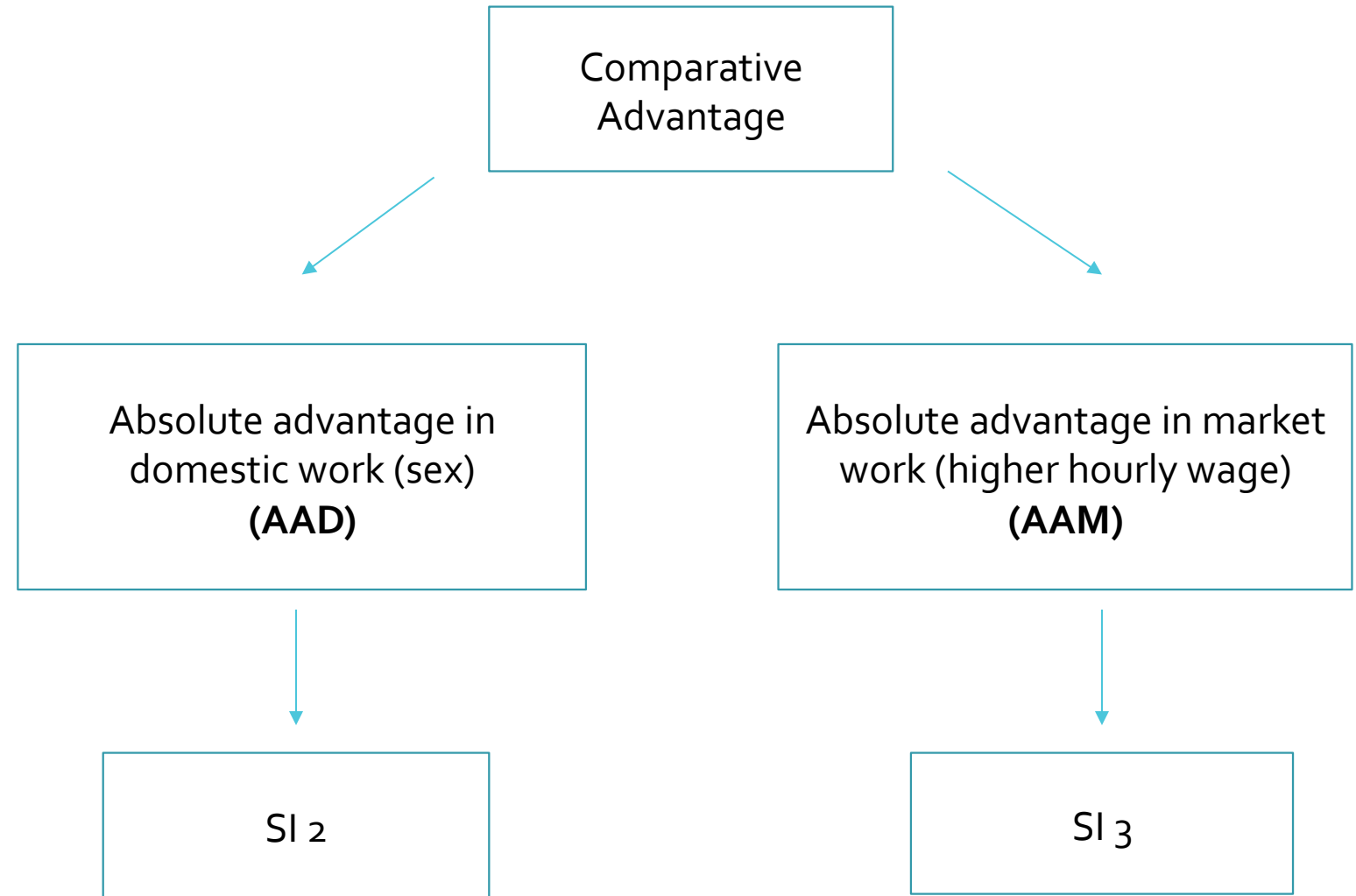
**Figure 5: Specialisation Before & After Children**

*Source:* HILDA Release 17.0

*Notes:* Descriptive statistics based on a matched sample across waves 2 to 17. Couple year observations were excluded if a member reported an age less than 18 or greater than 64. Couple year observations were excluded if a member did not return a self-completion questionnaire and non-responding households were excluded. The graph has been weighted using household cross-sectional population weights.



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$$SI_2 = HWS\downarrow FEM - LFS\downarrow FEM$$

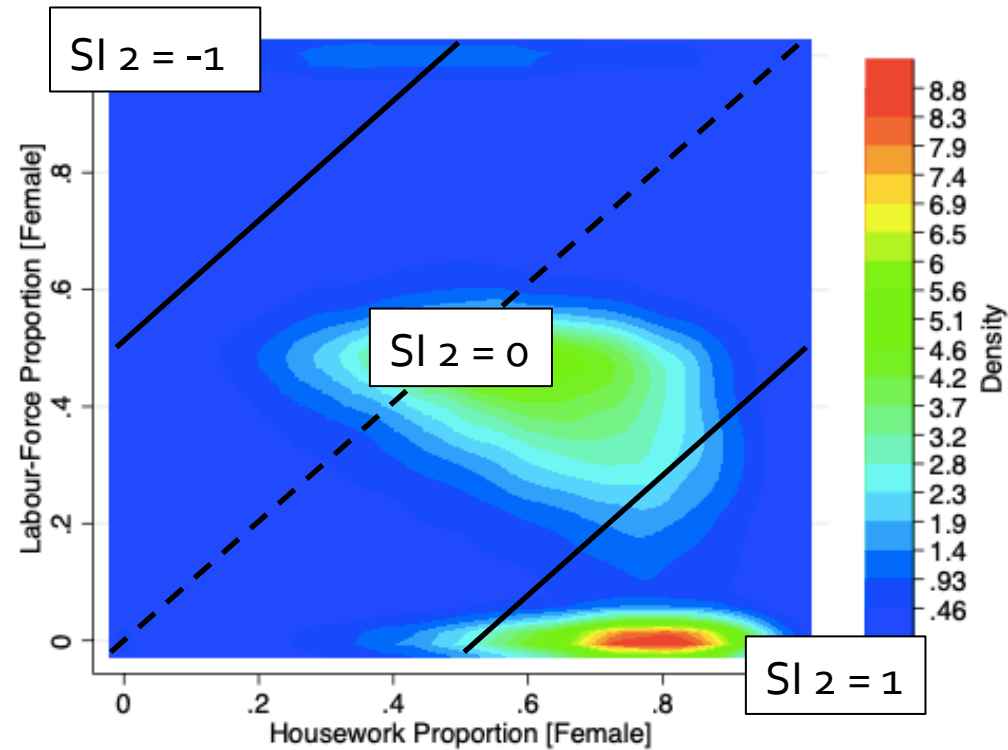


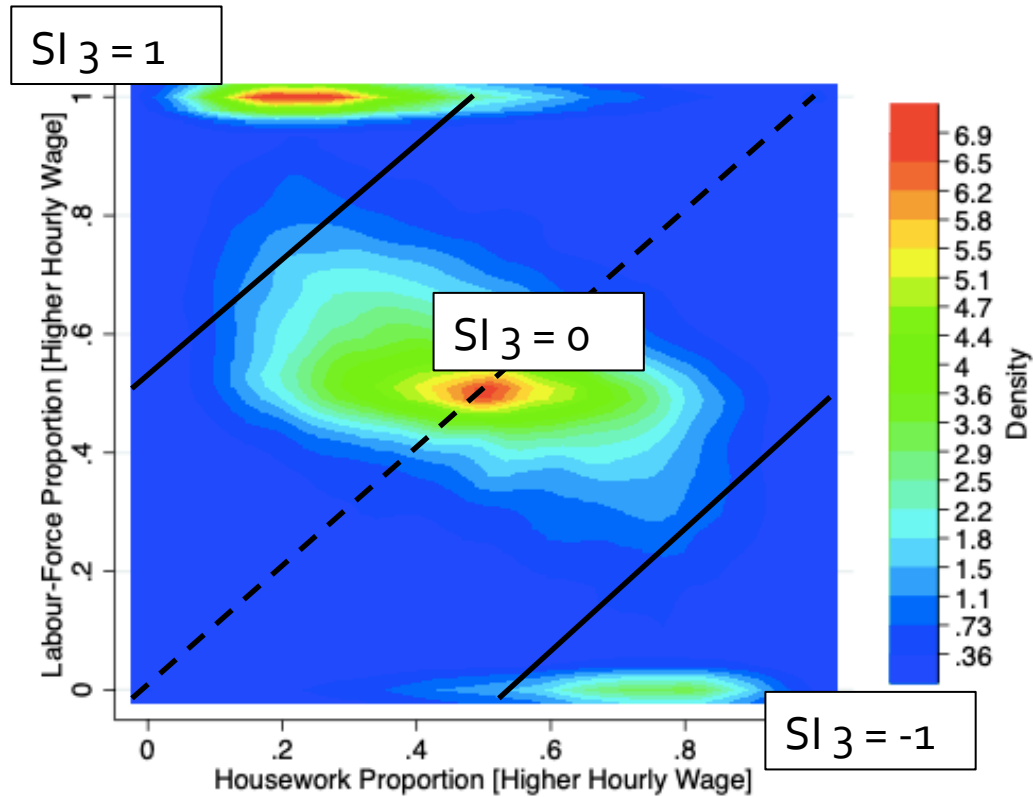
Figure 6: Density Plot SI 2

Source: HILDA Release 17.0

Notes: Descriptive statistics based on a matched sample across waves 2 to 17. Couple year observations were excluded if a member reported an age less than 18 or greater than 64. Couple year observations were excluded if a member did not return a self-completion questionnaire and non-responding households were excluded. Gay and lesbian households were excluded. The graph has been weighted using household cross-sectional population weights.

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$$SI_3 = LFS \downarrow HI - HWS \downarrow HI$$



Source: HILDA Release 17.0 **Figure 7: Density Plot SI 3**

Notes: Descriptive statistics based on a matched sample across waves 2 to 17. Couple year observations were excluded if a member reported an age less than 18 or greater than 64. Couple year observations were excluded if a member did not return a self-completion questionnaire and non-responding households were excluded. Missing wages were imputed based on median hourly wage and any couple wave observation where at least one partner had missing wages remaining after imputation was dropped from the sample. The graph has been weighted using household cross-sectional population weights.

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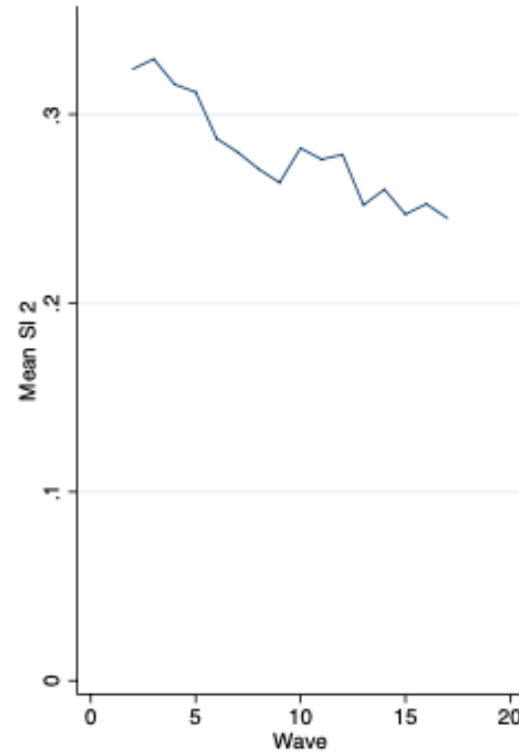


Figure 8: Mean SI 2 by Wave

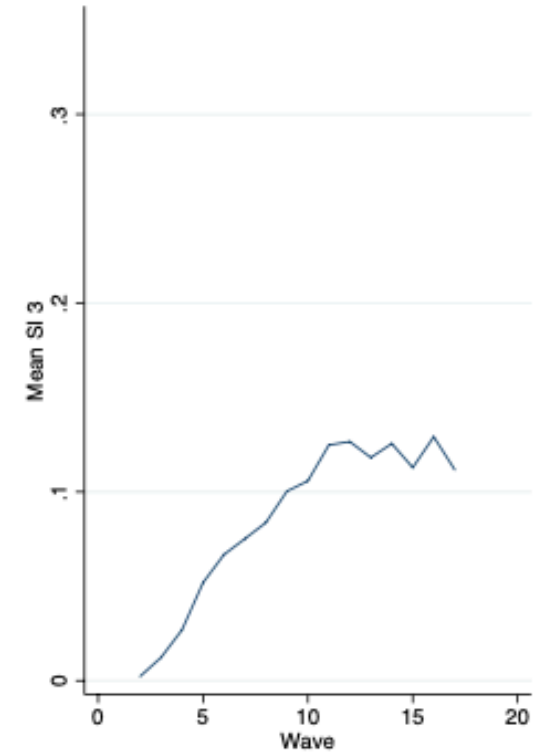


Figure 9: Mean SI 3 by Wave

Source: HILDA Release 17.0

Notes: Descriptive statistics based on a matched sample across waves 2 to 17. Couple year observations were excluded if a member reported an age less than 18 or greater than 64. Couple year observations were excluded if a member did not return a self-completion questionnaire and non-responding households were excluded. The graphs were weighted using household cross-sectional population weights.

Figure 10: Gay & lesbian couple wave observations were excluded.

Figure 11: Missing wages were imputed based on median hourly wage and any couple wave observation where at least one partner had missing wages remaining after imputation was dropped from the sample.

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## Next Steps

- Take our specialisation indices SI 1, SI 2 & SI 3 and run a range of regressions with the indices as the outcome variables.
- This should allow us to better understand the determinants of specialisation. Does controlling for couple age, children or fertility intentions explain specialisation or specialisation according to absolute advantage?

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Thank you to the organisers of AGEW19 and the Women in Economics Network for having me!

We would love to hear any suggestions or feedback you have regarding our research.

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## Appendix 1: LFS & HWS for SI 1

Appendix 2: LFS & HWS for SI 2 & SI 3

Appendix 3: Specialisation indices LF & HW (SI 1)

Appendix 3: Endogeneity of AAM

Appendix 4: Survey vs. diary time-use information

$$LFS\downarrow 1 = LF_1/LF_1 + LF_2 \quad (\text{I})$$

$$HWS\downarrow 1 = HW\downarrow 1 / HW\downarrow 1 + HW\downarrow 2 \quad (\text{II})$$

$$SI\ 1 = |LFS\downarrow 1 - HWS\downarrow 1|$$

Appendix 1: LFS & HWS for SI 1

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For SI 2, information is drawn from the male couple member  $MAL$ , to determine the female partner's supply share in the labour-market and domestic work, as detailed below.

$$LFS\downarrow FEM = LF\downarrow FEM / LF\downarrow FEM + LF\downarrow MAL$$

$$HWS\downarrow FEM = HW\downarrow FEM / HW\downarrow FEM + HW\downarrow MAL$$

Similarly, for SI 3, via the partner with the lower hourly wage  $LO$ .

$$LFS\downarrow HI = LF\downarrow HI / LF\downarrow HI + LF\downarrow LO$$

$$HWS\downarrow HI = HW\downarrow HI / HW\downarrow HI + HW\downarrow LO$$



Appendix 1: LFS & HWS for  
SI 1

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**Appendix 3: Specialisation  
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SI 1

$$LF \downarrow SI 1 = \frac{LF \downarrow 1 - LF \downarrow 2}{LF \downarrow 1 + LF \downarrow 2}$$

$$HW \downarrow SI 1 = \frac{HW \downarrow 1 - HW \downarrow 2}{HW \downarrow 1 + HW \downarrow 2}$$

Appendix 1: LFS & HWS for SI 1

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### **Appendix 3: Endogeneity of AAM**

Appendix 4: Survey vs. diary time-use information

#### **Issue:**

- A key challenge for this analysis is the endogeneity of AAM i.e. the relative wage of couple members.
- AAM is partially determined by human capital accumulation, which is partially determined by choices about time use allocation made in earlier periods of life – through labour supply, and education decisions.

#### **Potential remedies:**

- Robustness check: regress absolute advantage in earlier periods on SI 3 at time  $t$ .

#### **Missing wages:**

- Missing wages imputed using within-person median hourly wages.
- Repeat analysis using couples with only one partner working (therefore including those with missing wages), where the working partner is the one with the AAM.

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Appendix 3: Specialisation indices LF & HW (SI 1)

Appendix 3: Endogeneity of AAM

**Appendix 4: Survey vs. diary time-use information**

Time-use inputs for both housework and paid work drawn from the self-completion questionnaire in HILDA, asking respondents to classify how much time they typically spend on a range of activities per week. For paid work, this relates to time spent in paid employment, whilst for housework, responses were combined for time spent completing housework, household errands, outdoor tasks and childcare.

- To determine specialisation we are interested primarily in *typical* time-allocation, making survey information suitable in this setting.
- Time-use variables drawn from SCQ which is completed individually by each adult in the household. This should help to reduce the extent to which household members are influenced by each others responses.