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Unpaid Care Work & The Life Cycle Patterns of Gender Gaps in the Labour Market

A Time-Use Survey Methodological Innovation in the Malaysian Context

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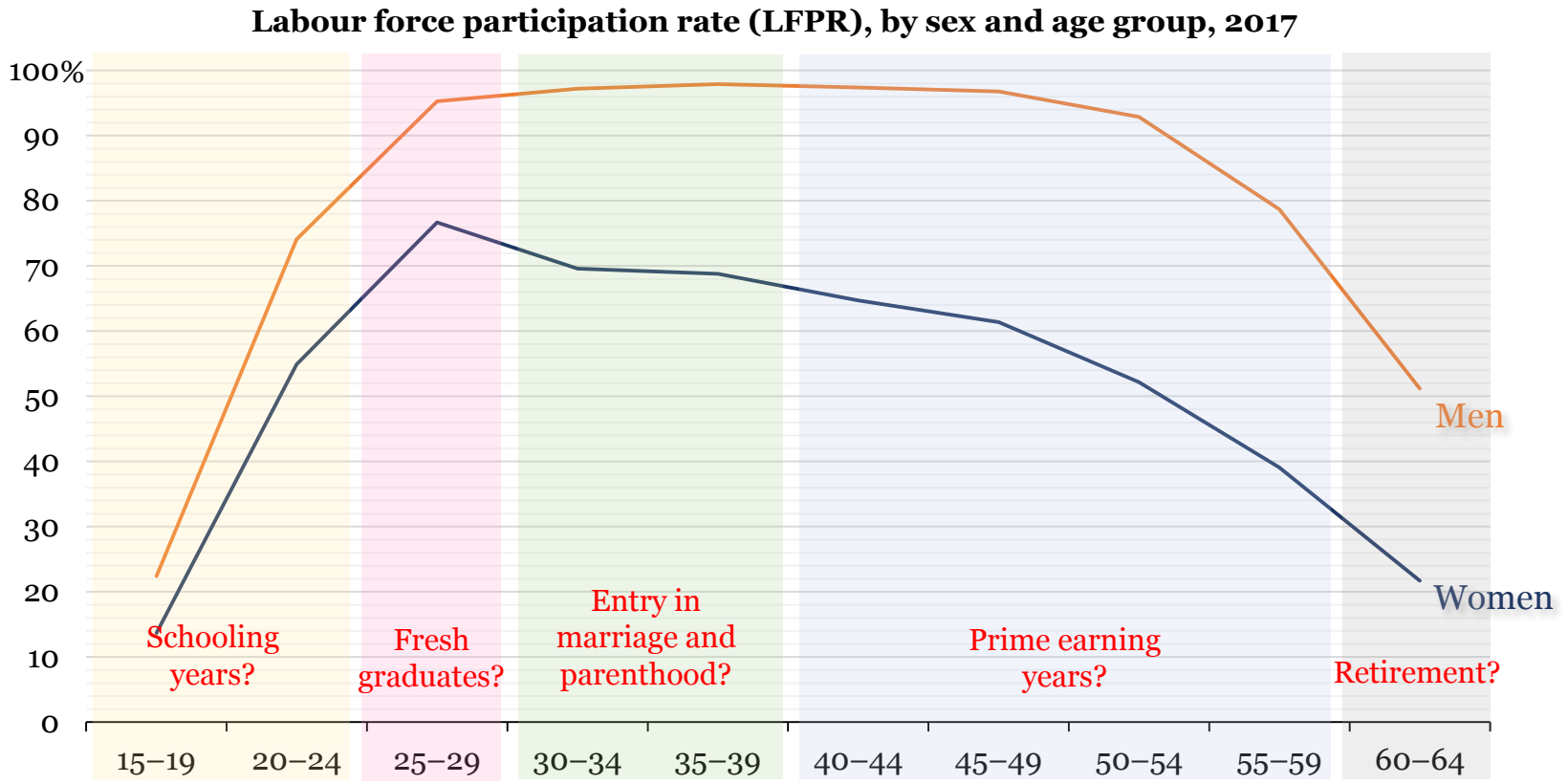
Research Motivation

The younger the better

Women's labour supply varies more across age group, compared with men



Source: Department of Statistics Malaysia

Research Objective

Main Objectives:

(1) Articulate the care hypothesis using existing Labour Force Survey statistics.

(2) Put forward the case for a small-scale TUS to supplement official statistics to test the care hypothesis.

(3) Explore the theoretical plausibility of extending the results of the TUS to larger datasets to enable the construction of life-cycle profiles of time use for a broader national population.

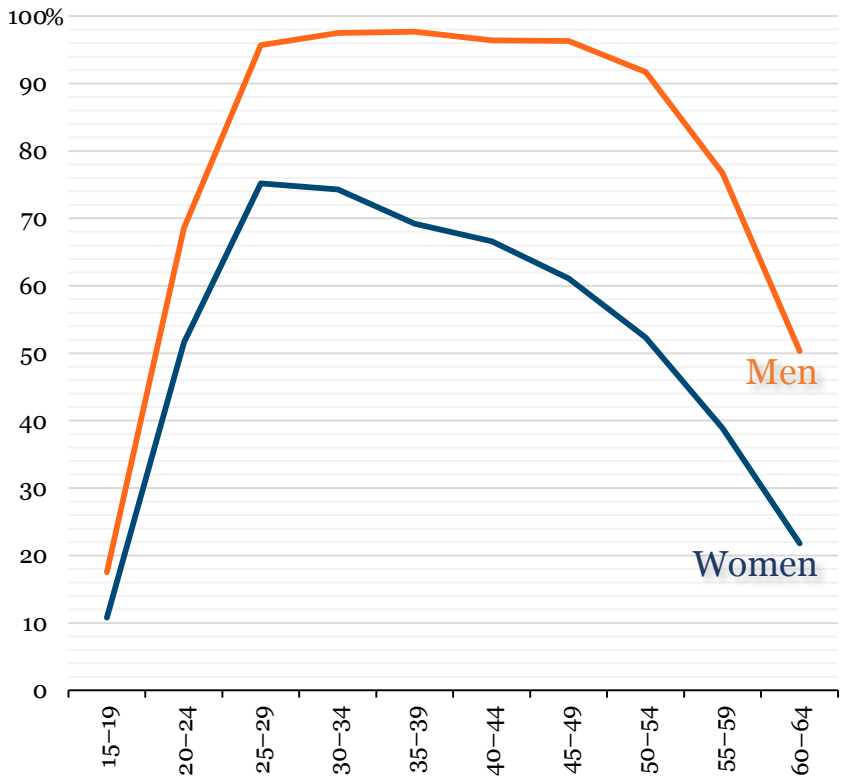
Content

The Care Hypothesis –

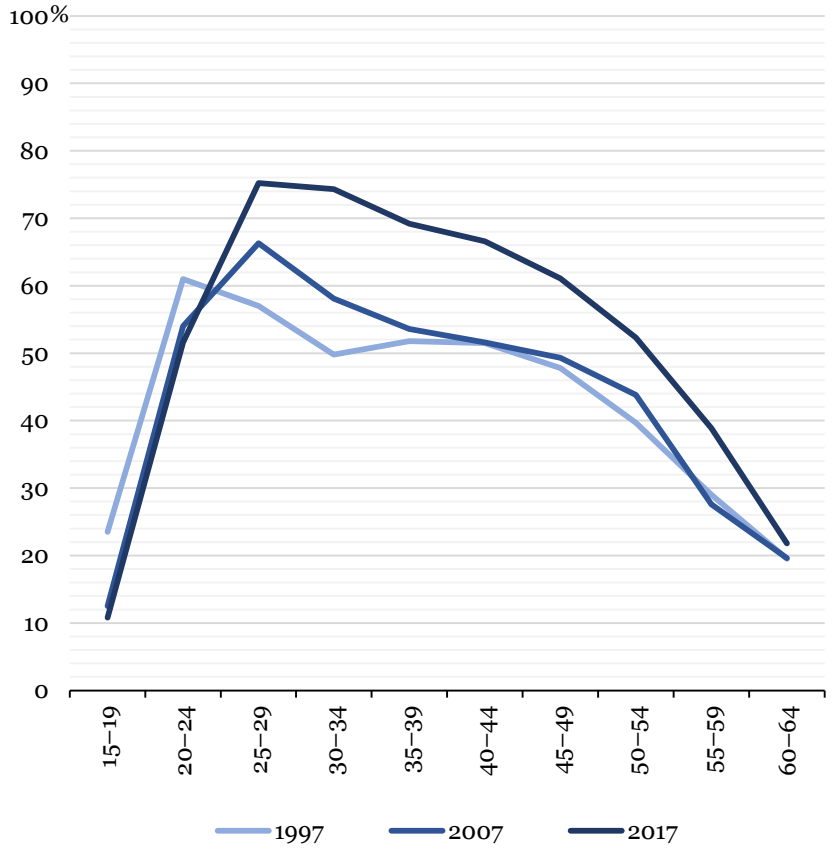
What do the statistics tell us

Persisting single-peaked pattern

Labour force participation rate, by sex and age group, 2017

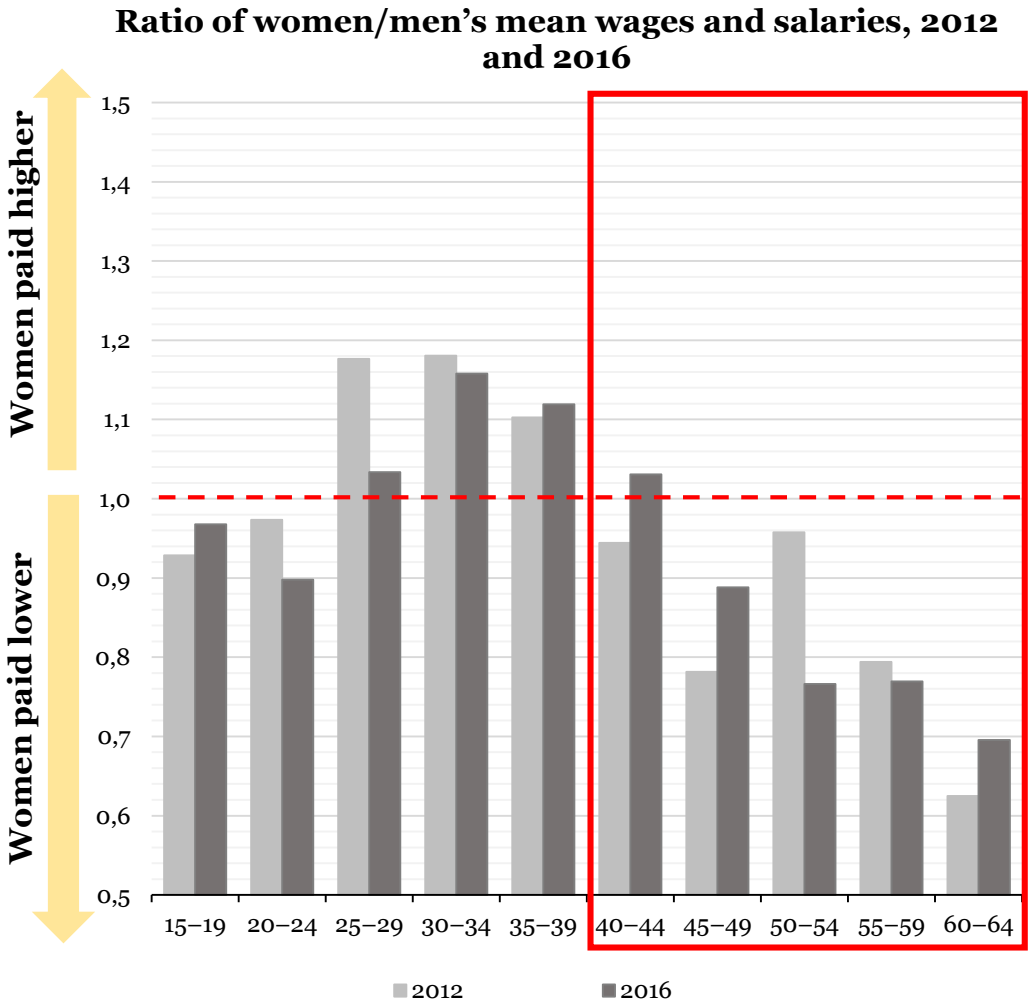


Women's labour force participation rate, 1997, 2007 and 2017



Source: DOSM (Various Years)

Wage gap reversed after 40s



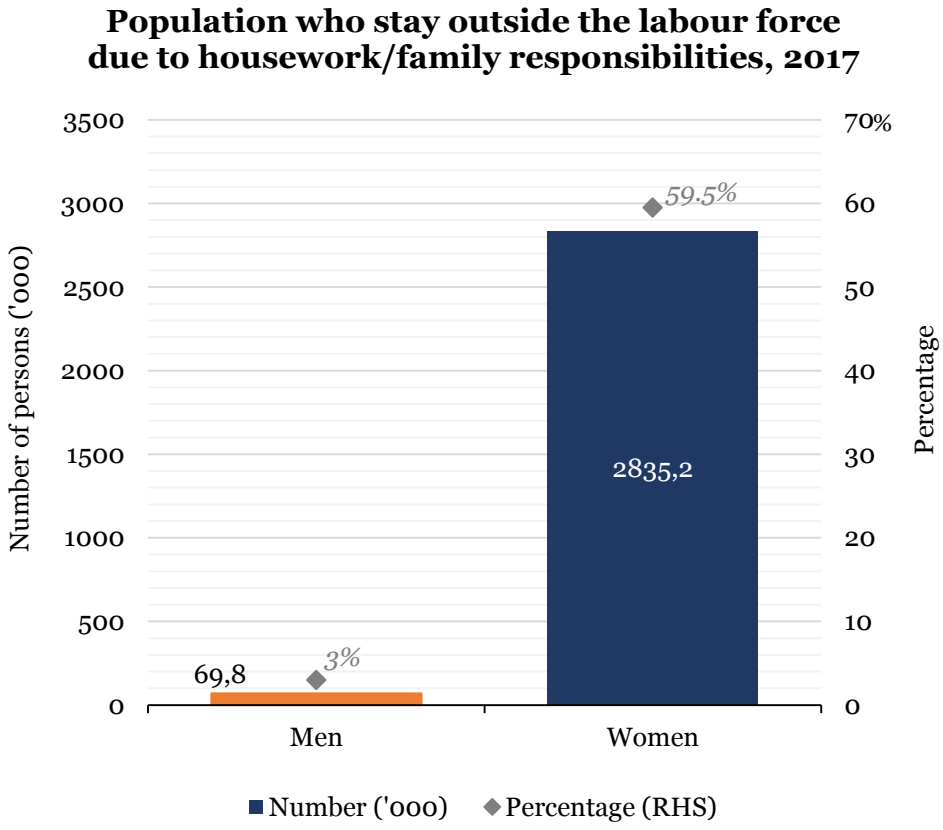
Age distribution of gender wage gap mirrors women's LFPR curve by age:

- Women are paid higher between 25 and 44
- The gap is reversed for those in their 40s

Source: DOSM (2017)

The Care Hypothesis

Hypothesis:
Women in their childbearing years are participating less in the labour force but could potentially return to the labour force in the 40s with a wage penalty.



Stark difference between proportion of men and women held back by housework:

- 60%, or 2.8 million women stayed outside the labour force because of housework
- Compared to 3%, or 69,800 men

Source: DOSM (2018)

Addressing the gap –
Conducting a small-scale TUS

3 Primary Questions

Intra-household labour division

Q1:

What is the difference in time spent on paid work and unpaid care work between men and women in different social, economic, and spatial contexts?

Life-cycle evolution

Q2:

How does this vary for men and women at different stages in life and co-vary with their economic and demographic profiles?

Empirical evidence

Q3:

Is time spent on unpaid care work correlated with various labour market outcomes, including labour force participation, hours worked, income, and status in employment?

For Q1: Designing TUS with emphasis on unpaid care work

Sampling Design – *Purposive Sampling*

- Where : One of Kuala Lumpur's strategic zones
- Who : Age 20-64 (net care-giver within working-age population)
- Stratification:

Class \ Gender	Male	Female
Top 20% households	10%	10%
Middle 40% households	20%	20%
Bottom 40% households	20%	20%
TOTAL	**50%**	**50%**

Survey Framework

- Stand-alone, ad-hoc survey with 24-hour full diaries
- Face-to-face recall interviews

Survey Instruments

3 survey instruments:

- Time-Use Diary
- Structured Interview Form
- Profile Questionnaire

Design specification of Time-Use Diary

Time	What were you doing? (Activity 1)	What else were you doing at the same time? (Activity 2)	Where were you and/or how were you travelling?		Who did you do this activity (or these activities) with?	
			Transport	Location	Activity 1	Activity 2
4.00am						
4.15						
4.30						
4.45						
5.00am						
5.15						
5.30						
5.45						
6.00am						
6.15						
6.30						
6.45						

***Activity 2** is important in capturing the full extent of unpaid care demand – a lot of care work in a household, e.g. look after kids, are done simultaneously with other main activities*

***Travel information** captures the accessibility of care services/infrastructure*

***The social context** of care captures any sharing of care responsibilities*

Structured Interview: Questions spanning 3 domains

(1) Regularity	(2) Optionality	(3) Transition
Whether the day recorded is a regular/typical workday	Whether the respondents have a choice in determining the nature and length of these activities.	Whether and why care management mechanism has changed in one's life course
E.g. Do you think the last 24 hours as recorded in your time diary is representative of your usual weekday? Yes or no?	*E.g. In general, are you satisfied with the amount of time you spend in your job(s) and care work/housework currently? If not, how would you want to change?*	*E.g. Looking back at how your family/household manages care and housework. How and why has the way your family/household manages care and housework changed?*

Recap: 3 Primary Questions

Intra-household labour division

Q1:

What is the difference in time spent on paid work and unpaid care work between men and women in different social, economic, and spatial contexts?

Life-cycle evolution

Q2:

How does this vary for men and women at different stages in life and co-vary with their economic and demographic profiles?

Empirical evidence

Q3:

Is time spent on unpaid care work correlated with various labour market outcomes, including labour force participation, hours worked, income, and status in employment?

For Q2: Re-defining life-cycle stages

Stage 1	Young individuals (aged 49 and below) with no children in the household
Stage 2	Individuals (of any age) with the youngest child less than 7 years old in the household
Stage 3	Individuals (of any age) with the youngest child between 7 and 20 years old in the household
Stage 4	Older individuals (aged above 49) with no children OR youngest child above 20 years old in the household

- *Reflect stages with significant changes in household's care demand*
- *Hinge more on the presence and age of children in the household*

Example of life-cycle profile for men and women:

Life-Cycle Phase	Men's hours of work			Women's hours of work		
	Market Work	Unpaid Care Work	**Total**	Market Work	Unpaid Care Work	**Total**
1						
2						
3						
4						

Recap: 3 Primary Questions

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Q3:

Is time spent on unpaid care work correlated with various labour market outcomes, including labour force participation, hours worked, income, and status in employment?

For Q3: Regression analysis

$$\boldsymbol{Labour\ Market\ Outcome_i} = \alpha + \boldsymbol{\beta_1 Unpaid\ Care\ Hours_i} + \boldsymbol{\beta_2 Unpaid\ Care\ Hours_i * Gender_i} + \beta_3 Gender_i + \gamma' Control\ Variables'_i + \varepsilon_i$$

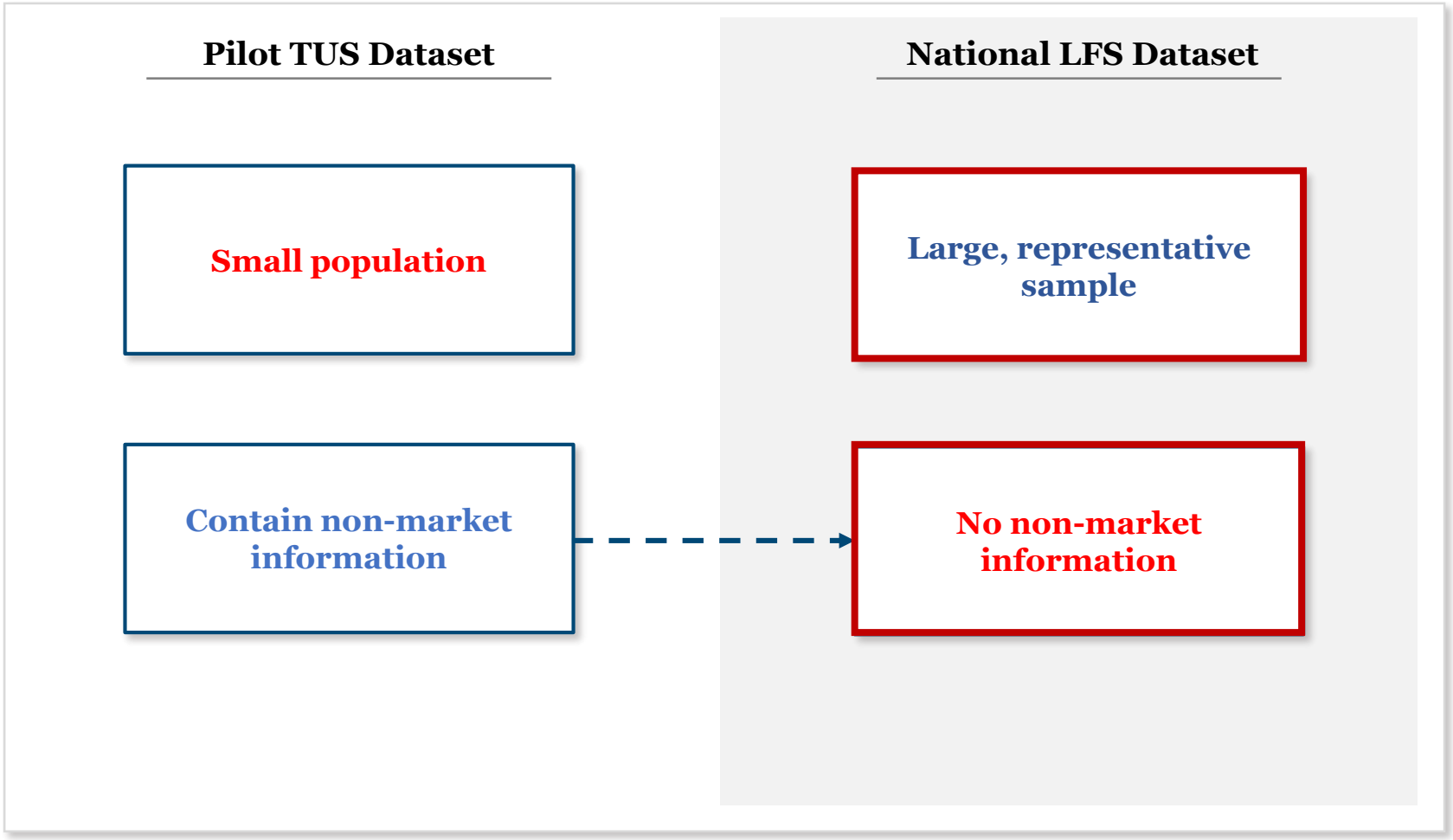
The association between unpaid care hours and labour market outcome

The differential effect of unpaid care work between men and women on labour market outcomes

- **Labour Market Outcomes** include labour force participation, market hours worked, personal income and status in employment.
- **Unpaid Care Hours** is the sum of time spent on unpaid child and/or aged care and housework, e.g. cleaning, cooking, shopping for households etc.
- Other **Control Variables** include ethnic group, education level, marital status, household income, number of children, number of household members, and whether the household employ any external care service.

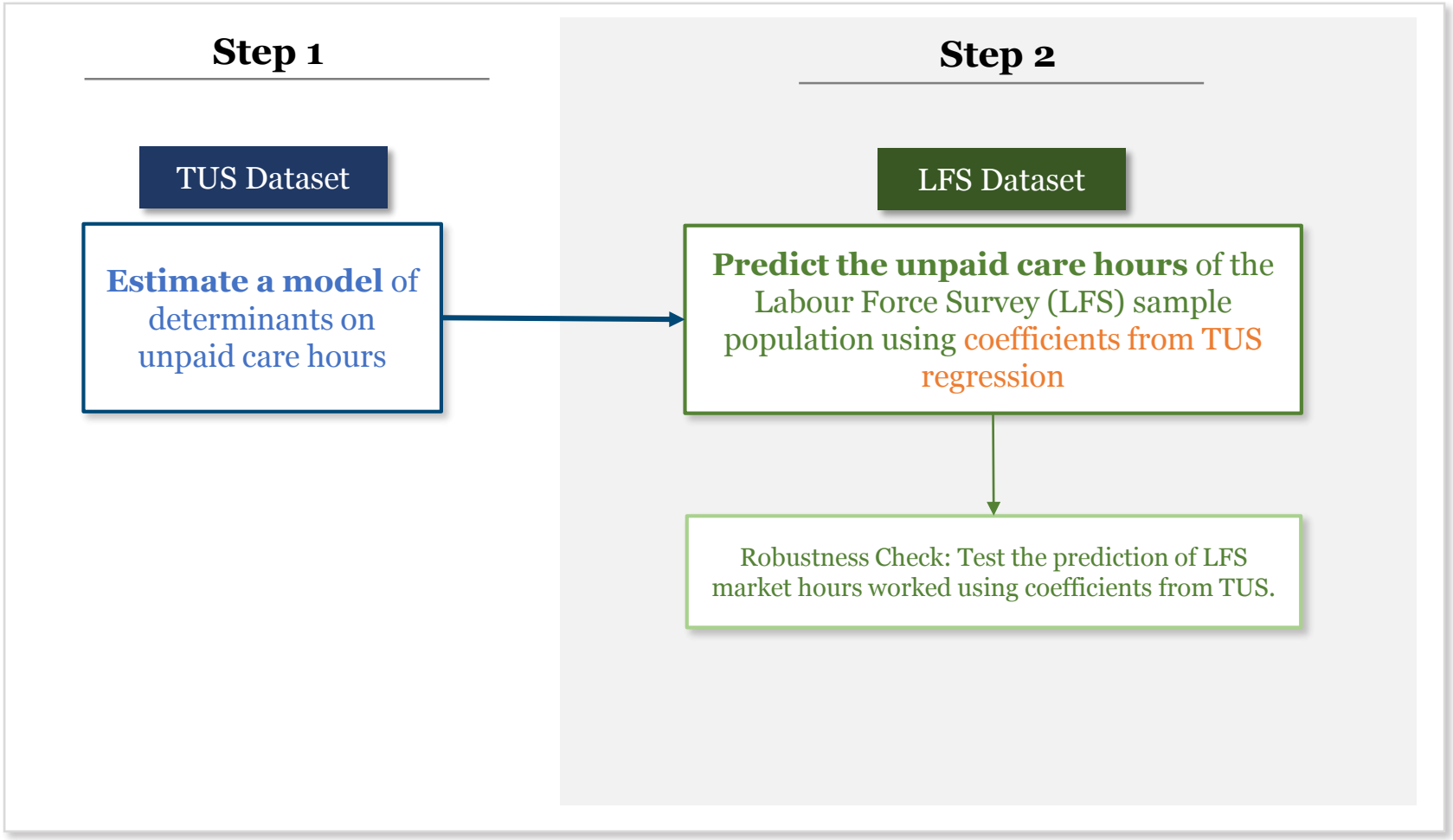
Methodological Innovation - *Extending TUS results to larger datasets*

Merging two datasets



Overview: The 2-Step Procedure

Adapted from Leete and Schor (1994):



Step 1: Estimate a model of determinants of unpaid care hours

$$\textbf{Unpaid Care Hours}_i = \alpha + \beta'_1 Household\ Factors_i + \beta'_2 Demographic\ Factors_i + \beta'_3 Economic\ Factors_i + \varepsilon_i$$

(1)Household Factors:

- Number of household members
- Number of children aged <20
- Number of old person aged >64

(2) Demographic Factors:

- Gender
- Marital status
- Education level
- Ethnic group
- Status as head of household

(3) Economic Factors:

- Hours spent on market work
- Personal wages & salaries

Step 1: Estimate a model of determinants of unpaid care hours

$$\boldsymbol{Unpaid\ Care\ Hours_i} = \boldsymbol{\alpha} + \boldsymbol{\beta'_1} Household\ Factors_i + \boldsymbol{\beta'_2} Demographic\ Factors_i + \boldsymbol{\beta'_3} Economic\ Factors_i + \varepsilon_i$$

Coefficients that will be used in the next step for prediction of unpaid care hours.

(1) Household Factors:

- Number of household members
- Number of children aged <20
- Number of old person aged >64

(2) Demographic Factors:

- Gender
- Marital status
- Education level
- Ethnic group
- Status as head of household

(3) Economic Factors:

- Hours spent on market work
- Personal wages & salaries

Step 2: Predict LFS unpaid care hours

$$\textbf{Unpaid Care Hours}_i = \alpha + \beta'_1 Household\ Factors_i + \beta'_2 Demographic\ Factors_i + \beta'_3 Economic\ Factors_i$$

Labour Force Survey Dataset

Individual	Gender	Edu level	Ethnic group	.....	.....	No. of hh members	No. of children	Status as HoH	Market hours worked	Unpaid care hours
Ind. #1	…	…	…	…	…	…	…	…	…	…
Ind. #2	…	…	…	…	…	…	…	…	…	…
Ind. #3	…	…	…	…	…	…	…	…	…	…
Ind. #4	…	…	…	…	…	…	…	…	…	…
Ind. #5	…	…	…	…	…	…	…	…	…	…
Ind. #6	…	…	…	…	…	…	…	…	…	…
Ind. #7	…	…	…	…	…	…	…	…	…	…
Ind. #8	…	…	…	…	…	…	…	…	…	…
Ind. #9	…	…	…	…	…	…	…	…	…	…
Ind. #10	…	…	…	…	…	…	…	…	…	…
Ind. #11	…	…	…	…	…	…	…	…	…	…
Ind. #12	…	…	…	…	…	…	…	…	…	…

Life-cycle profiles

Table 1: Men and women's hours of market work, domestic work and unpaid child care, by life-cycle phase

Life-Cycle Phase	Men's hours of work				Women's hours of work			
	Market Work	Domestic Work	Unpaid child care	Total	Market Work	Domestic Work	Unpaid child care	Total
1								
2								
3								
4								
All								

Table 2: Men and women's labour market outcomes, by life-cycle phase

Life-Cycle Phase	Men				Women			
	Mean salaries & wages	Median salaries & wages	% in labour force	% employed full-time	Mean salaries & wages	Median salaries & wages	% in labour force	% employed full-time
1								
2								
3								
4								
All								

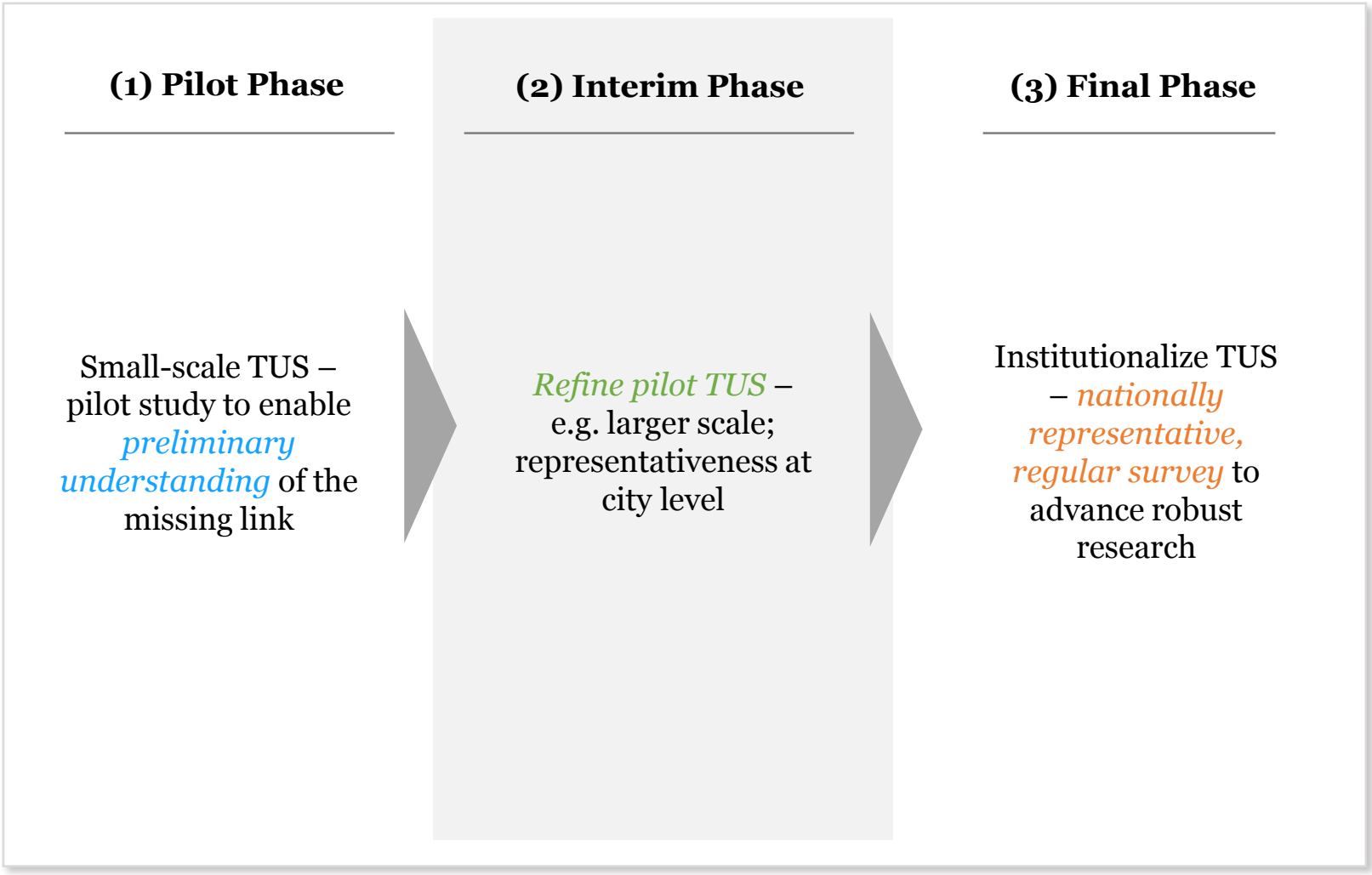
Robustness Check: Testing the prediction of market hours worked

$$\textbf{Market Hours Worked}_i = \alpha + \beta'_1 Household\ Factors_i + \beta'_2 Demographic\ Factors_i + \beta'_3 Economic\ Factors_i + \varepsilon_i$$

Individual	Gender	Edu level	Ethnic group	.....	.....	No. of hh members	No. of children	Status as HoH	Market hours worked
Ind. #1	…	…	…	…	…	…	…	…	…
Ind. #2	…	…	…	…	…	…	…	…	…
Ind. #3	…	…	…	…	…	…	…	…	…
Ind. #4	…	…	…	…	…	…	…	…	…
Ind. #5	…	…	…	…	…	…	…	…	…
Ind. #6	…	…	…	…	…	…	…	…	…
Ind. #7	…	…	…	…	…	…	…	…	…
Ind. #8	…	…	…	…	…	…	…	…	…
Ind. #9	…	…	…	…	…	…	…	…	…
Ind. #10	…	…	…	…	…	…	…	…	…
Ind. #11	…	…	…	…	…	…	…	…	…
Ind. #12	…	…	…	…	…	…	…	…	…

Conclusion

One step at a time



The End