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**POPULATION  
AGEING  
RESEARCH**

# Macro-Demographics and Ageing in Emerging Asia: the Case of Indonesia<sup>[1]</sup>

George Kudrna, Trang Le and John Piggott

CEPAR, UNSW

email: [g.kudrna@unsw.edu.au](mailto:g.kudrna@unsw.edu.au)

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# Background

Part of Linkage project on **Policy Modelling for Ageing in Emerging Asia: Indonesia and beyond**

To provide/model retirement income support in emerging Asia to increase welfare, and reduce poverty and inequality among older people

Imperative because:

- Rapid ageing: lower fertility and longer lifespans
- High informal labor force
- Very immature social protection structures<sup>[2]</sup>

# The data

## Data used in project:

- UN World Population Prospects data (UN, 2019) [3]
- Indonesia Family Life Survey (IFLS)
- National Labour Force Survey (SAKERNAS)
- National Socio-Economic Survey (SUSENAS)

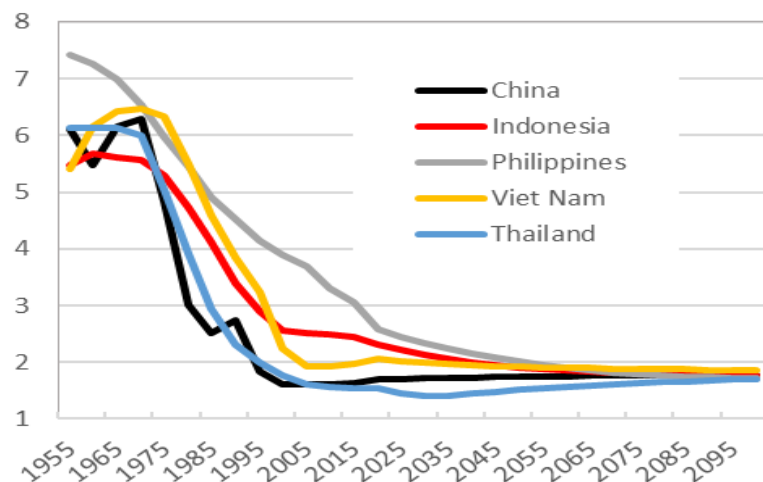
## IFLS:

- Ongoing longitudinal: 1993, 1997, 2000, 2007, 2014 [4]
- Representative of 83% of population
- 30,000+ individuals in 13 of 27 provinces
- Rich in socio-economic vars. + coverage of public programs

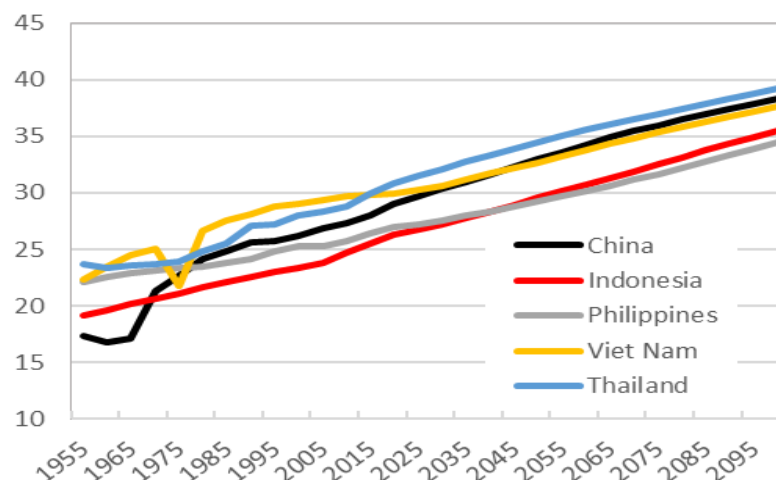
So, what does the data tell us?

# Demographic context (UN, 2019)

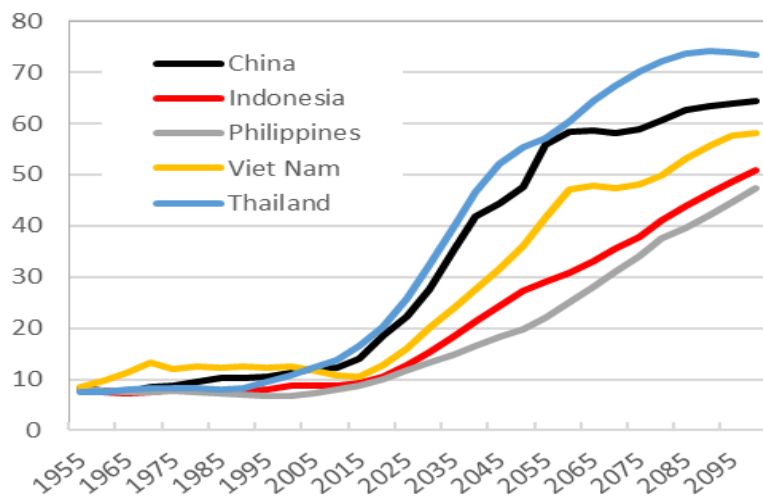
(a) Total fertility rate (life births per woman)<sup>a</sup>



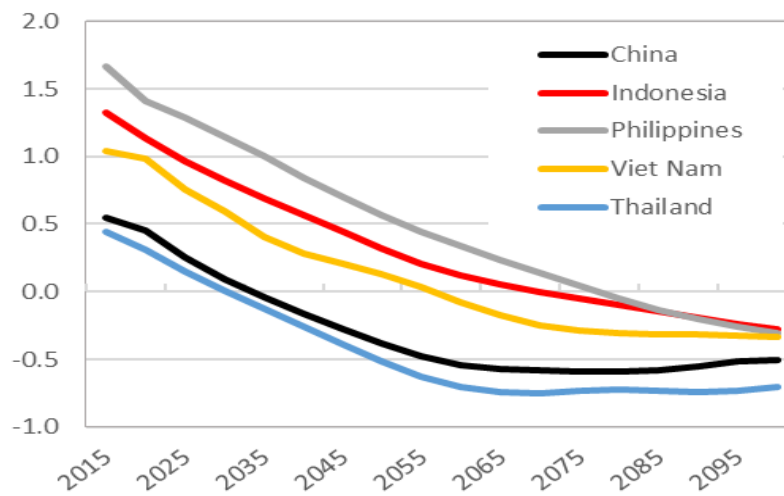
(b) Life expectancy at age 50 (remaining years)<sup>a</sup>



(c) Old-age dependency ratio (65+/20-64, %)<sup>b</sup>



(d) Population growth rate (p.a., %)<sup>a</sup>





# IFLS data: Objective & application

- Overall project to build OLG models relevant to emerging Asia
  - Integration of formal and informal sectors
- **Indonesia** an important case study
  - Almost no social pension
  - **Great data**
    - **IFLS** has much in common with the HRS family of surveys <sup>[4]</sup> :
      - Longitudinal (but covering the whole economic life cycle – 18+ for household head)
      - Nationally representative
      - Multiple domains – finance, education, work, health, family circumstances
      - Publicly available

# IFLS data: In this paper focus on

- **Labor force** (e.g., composition, hours worked and earnings by employment type (formal and informal) and employment transitions)
- **Older people** (e.g., living arrangements and marital status, hours worked, earnings and other sources of income, including transfers)
- Our definition of **informal employment**: all self-employed + employees with no health insurance and/or any other medical expenditure from employers<sup>[5]</sup>
- **IFLS waves in 2000, 2007, 2014**

# IFLS: Labor force composition

**Table 1: Composition of employment (males aged 20-54)**

Employment type <sup>a</sup>	2000	2007	2014	Overall <sup>b</sup>
Formal	22.0%	20.0%	25.2%	22.6%
Informal	78.0%	80.0%	74.8%	77.4%
No. of observations <sup>c</sup>	7041	8866	10646	26553

**Notes:** <sup>a</sup>See Section 2.2 for the informal employment definition used; <sup>b</sup>Derived from all three waves - IFLS in 2000, 2007 and 2014; <sup>c</sup>Number of observations used in each displayed IFLS wave (either 2000 or 2007 or 2014) and combined across all three waves in column "Overall".

As shown, informal employment is high and persistent.



# IFLS Labor force: Males vs. females

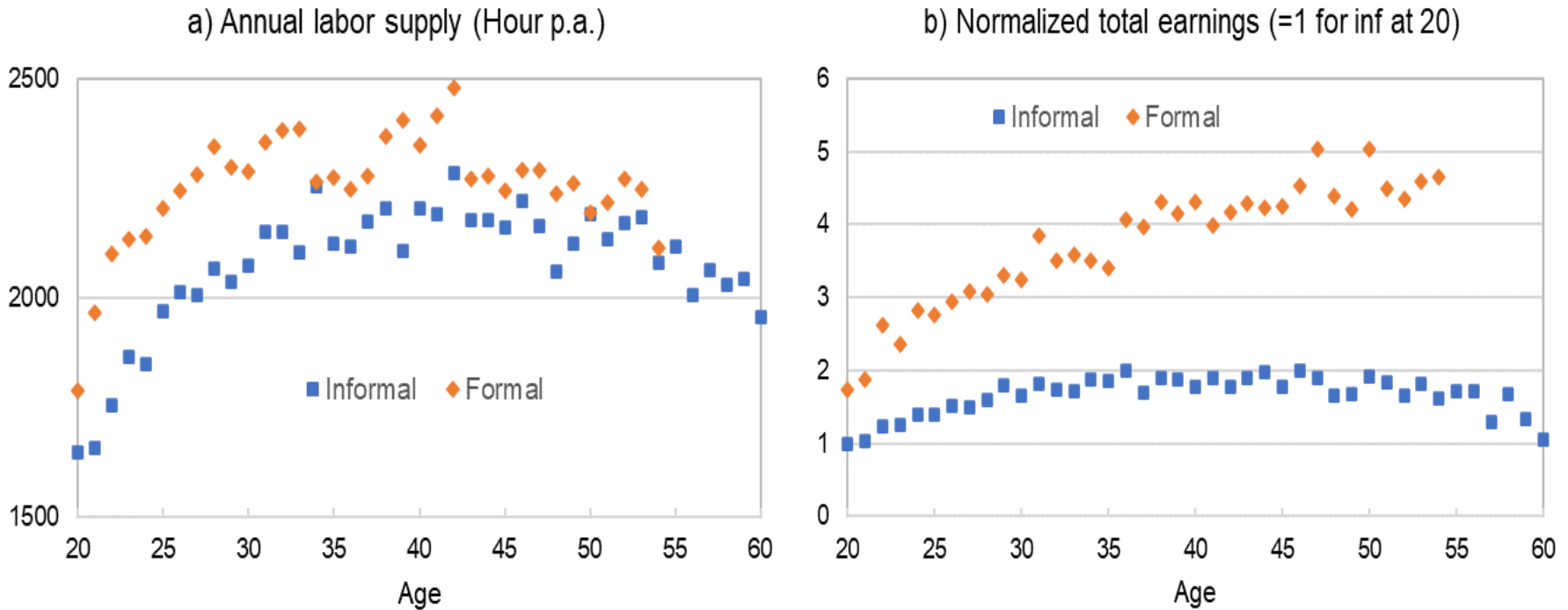
**Table 2: Composition of employment (males vs. females)**

Employment type <sup>a</sup>	Overall <sup>b</sup> (males)	Overall <sup>b</sup> (females)
Formal	22.6%	21.7%
Informal	77.4%	78.3%
No. of observations <sup>c</sup>	26553	14666

**Notes :** <sup>a</sup>See Section 2.2 for the informal employment definition used; <sup>b</sup>Derived from all three waves - IFLS in 2000, 2007 and 2014 for (i) males only and (ii) males and females under "combined"; <sup>c</sup>Number of observations across all three waves.

As shown, informal employment is higher for females, but not that much<sup>[6]</sup>

# IFLS: Hours worked & earnings (males)



As shown, informal workers work on average fewer (and irregular<sup>[7]</sup>) hours and earn significantly less than formal

# Sectoral transitions (Males only, IFLS)

...were by **2014** working in...

formal sector      informal sector      not working

Those working in **informal** sector in 2007...

...and aged 40-44

7%	76%	17%
3%	83%	14%

...and aged 50-54

Informal => formal transition is low and decline with age<sup>[7]</sup>

Those working in **formal** sector in 2007...

...and aged 40-44

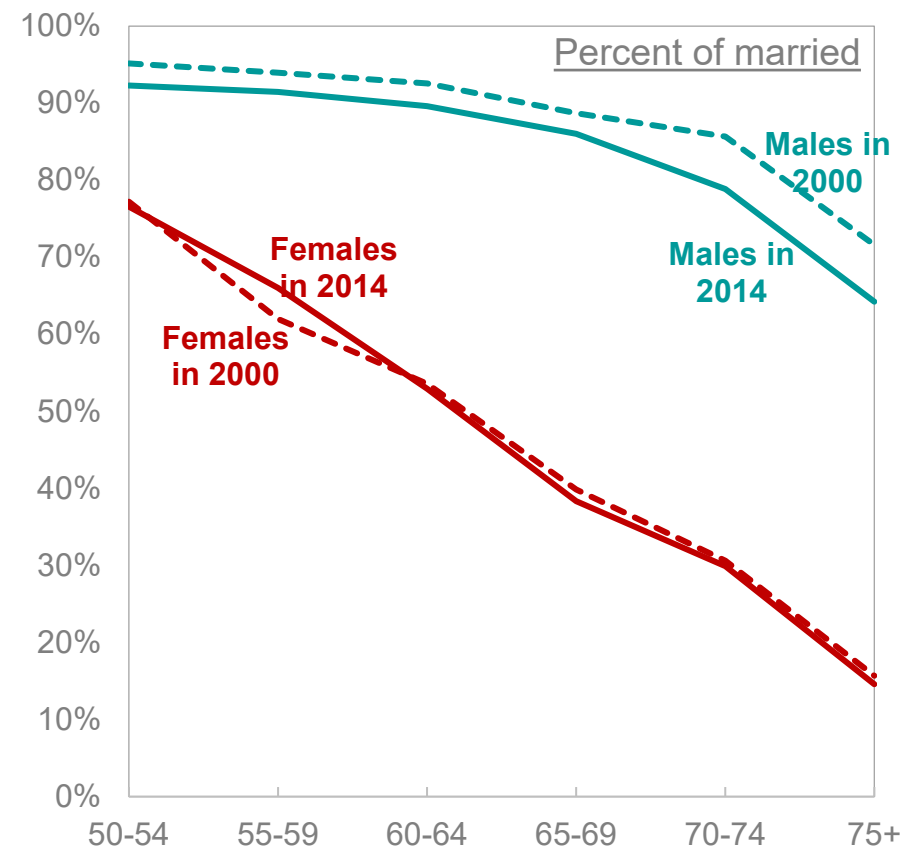
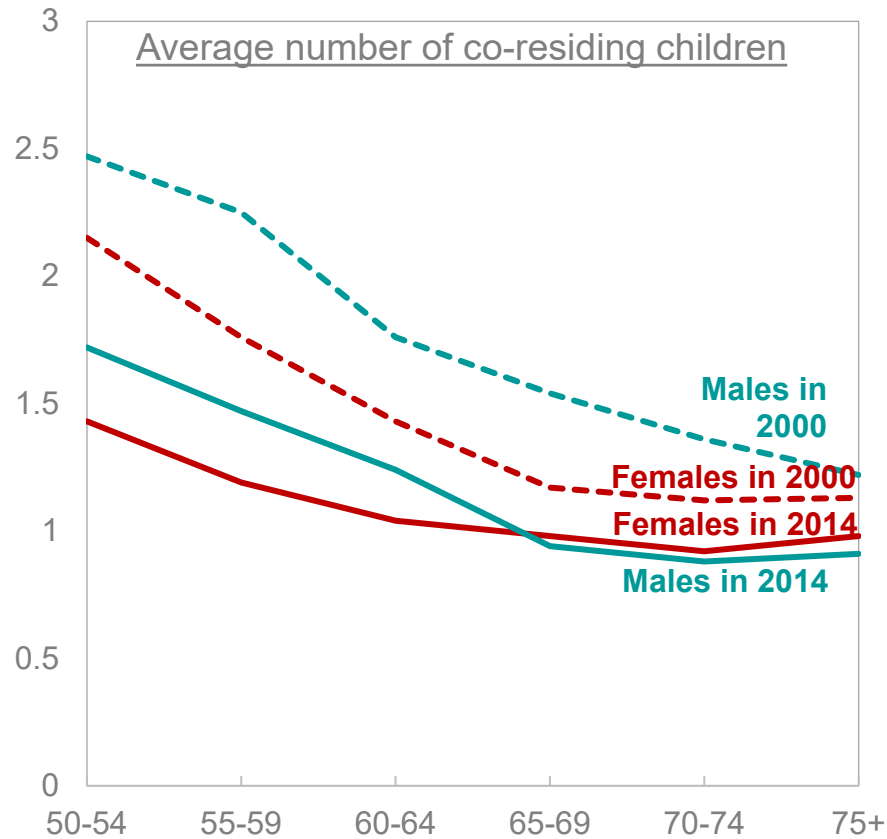
69%	27%	4%
27%	58%	16%

...and aged 50-54

Older formal sector workers tend to become informal (small sample)

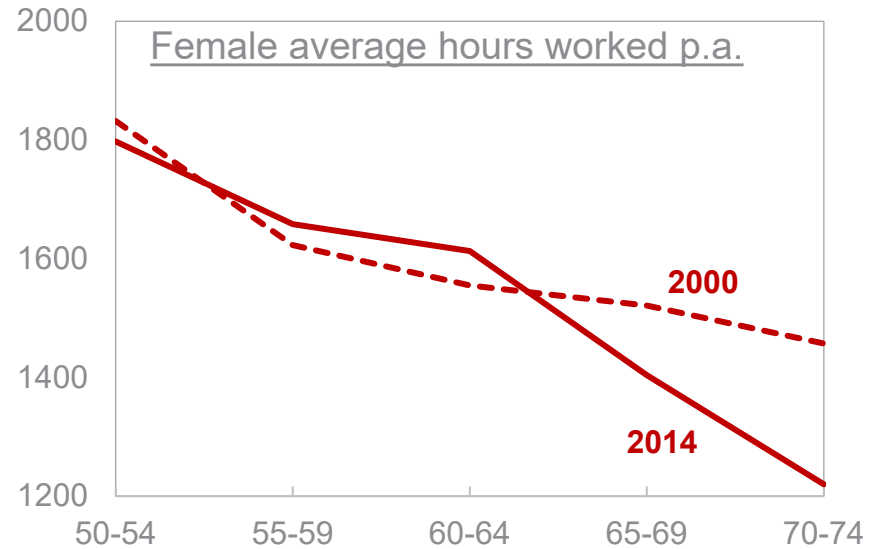
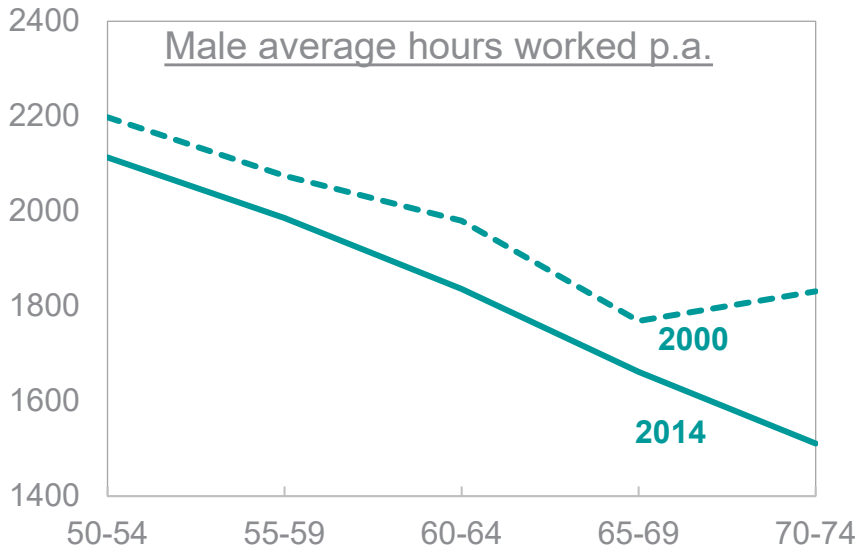
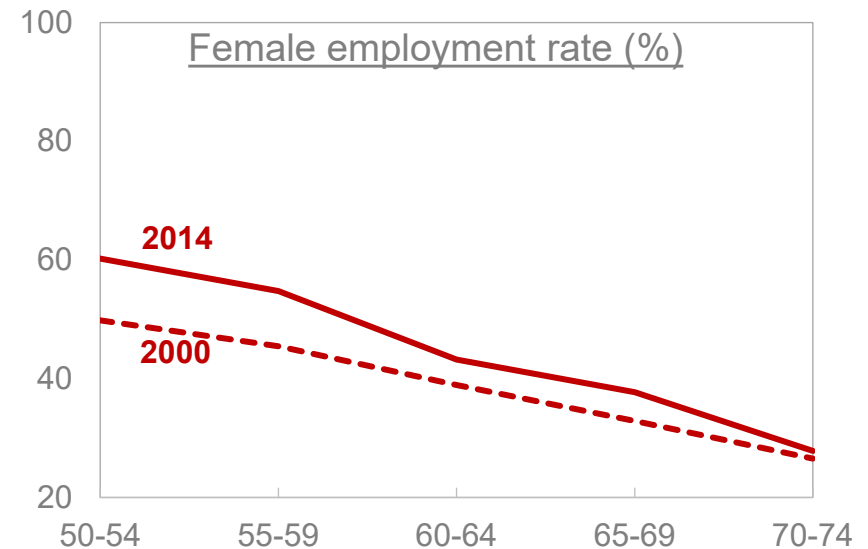
Formal workers' transition significant but not by their choice<sup>[7]</sup>

# IFLS older people: Living arrangements

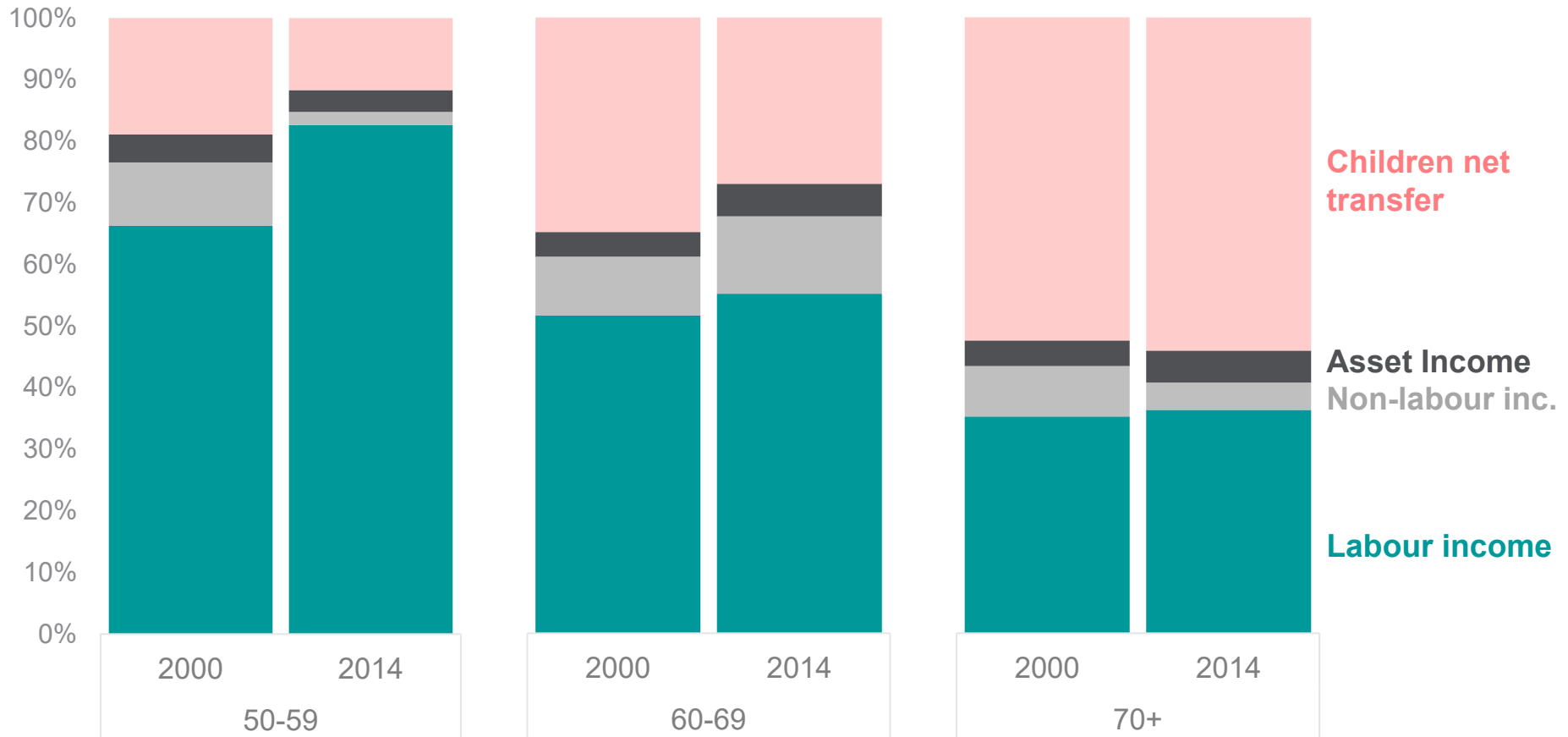


Compared to developed countries, both no. of co-residing children and % of married high, but shown declining (2000 vs. 2014)

# IFLS older people: Employment



# IFLS older people: Income sources





# Summary

- Countries with rapid population ageing, large informal sectors, and under-developed social security systems are of most policy concern
- Data can help in guiding policy. Understanding employment patterns and income sources is an important start
- Modelling based on real world data can generate insights into policy impacts
  - Changes to policy: Social pension; Pension access age
  - Changes to environment: e.g., Increasing formalization
  - And the interactions between policy and economy

# Ongoing/future work

## IFLS data work on

- Asset holdings over the lifecycle, including housing
- Micro-demographics (e.g., fertility differentials)
- Self-employment (family business, informal sector activities)

## Modeling work on:

- **Pension reform (and informality)** – Kudrna et al. (2021) for Indonesia<sup>[8]</sup>, Poonpolkul et al. (2022) for Thailand<sup>[9]</sup>, UNSW PhD project by Huyen Hoang for Vietnam
- **Fertility, human capital and private transfers** (using IFLS) - UNSW PhD project by Trang Le
- **Rural Urban Migration in China** (with Yue Hua)

# Notes (& references)

[1] Kudrna G., T. Le, and J. Piggott, (2022), “[Macro-Demographics and Ageing in Emerging Asia: The Case of Indonesia](#)”, Journal of Population Ageing.

[2] Recently documented by Kudrna, G., P. O’Keefe and J. Piggott (2022), “[Pension Policy in Emerging Asian Economies with Population Ageing: What Do We Know, Where Should We Go?](#)”, forthcoming in Bloom, D., Sousa-Poza, A., Sunde, U. (ed.), Handbook on the Economics of Population Ageing, Routledge.

[3] Macro-demographics derived from United Nations (UN) (2019), [World population prospects: The 2019 revision](#), Department of Economic and Social Affairs, Population Dynamics.

[4] For details see Strauss, J., F. Witoelar, and B. Sikoki, (2016), “[The Fifth Wave of the Indonesia Family Life Survey \(IFLS5\): Overview and Field Report](#)”, March 2016. WR-1143/1-NIA/NICHD.

[5] Similar (but broader) definition used by International Labour Organization (2018), [Women and men in the informal economy: A statistical picture](#).

# Notes (con't)

[6] Also shown by e.g. Cameron, L. (2019), "[Social protection programs for women in developing countries](#)". IZA World of Labor.

[7] For details see Kudrna, G., T. Le and J. Piggott (2020), "[Review Report on Demographics, Labour Force and Older People in Indonesia](#)", CEPAR working paper 2020/27.

[8] Kudrna G., J. Piggott, and P. Poonpolkul, (2021), "[Extending Pension Policy in Emerging Asia: An Overlapping-Generations Model Analysis for Indonesia](#)", CEPAR Working Paper 2021/33.

[9] Poonpolkul, P., P. Porapakkarm, & N. Wasi, (2022), "[Aging, Inadequacy and Fiscal Constraint: The Case of Thailand](#)", (No. 182). Puey Ungphakorn Institute for Economic Research.



Email [g.kudrna@unsw.edu.au](mailto:g.kudrna@unsw.edu.au)

Web [sites.google.com/site/georgekudrna](https://sites.google.com/site/georgekudrna)