

Discussion of  
“Where Have All the Workers Gone?”  
(Krueger 2017)

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# Summary

- Impressively thorough paper, lots of new and interesting results.
- Makes several useful contributions:
  1. Provides trend-adjusted LFP decomposition results. This accounts for recent changes in aggregate LFP and can also be used to forecast changes in LFP coming from demographics and extrapolating group-specific trends.
  2. Emphasizes that LFP has evolved differently for different groups (and likely for different reasons). There is no “grand unifying theory” for LFP trends across groups.
  3. Provides some new preliminary/suggestive evidence on the role of pain medication and physical barriers to work in affecting LFP for prime-age men.

# Outline

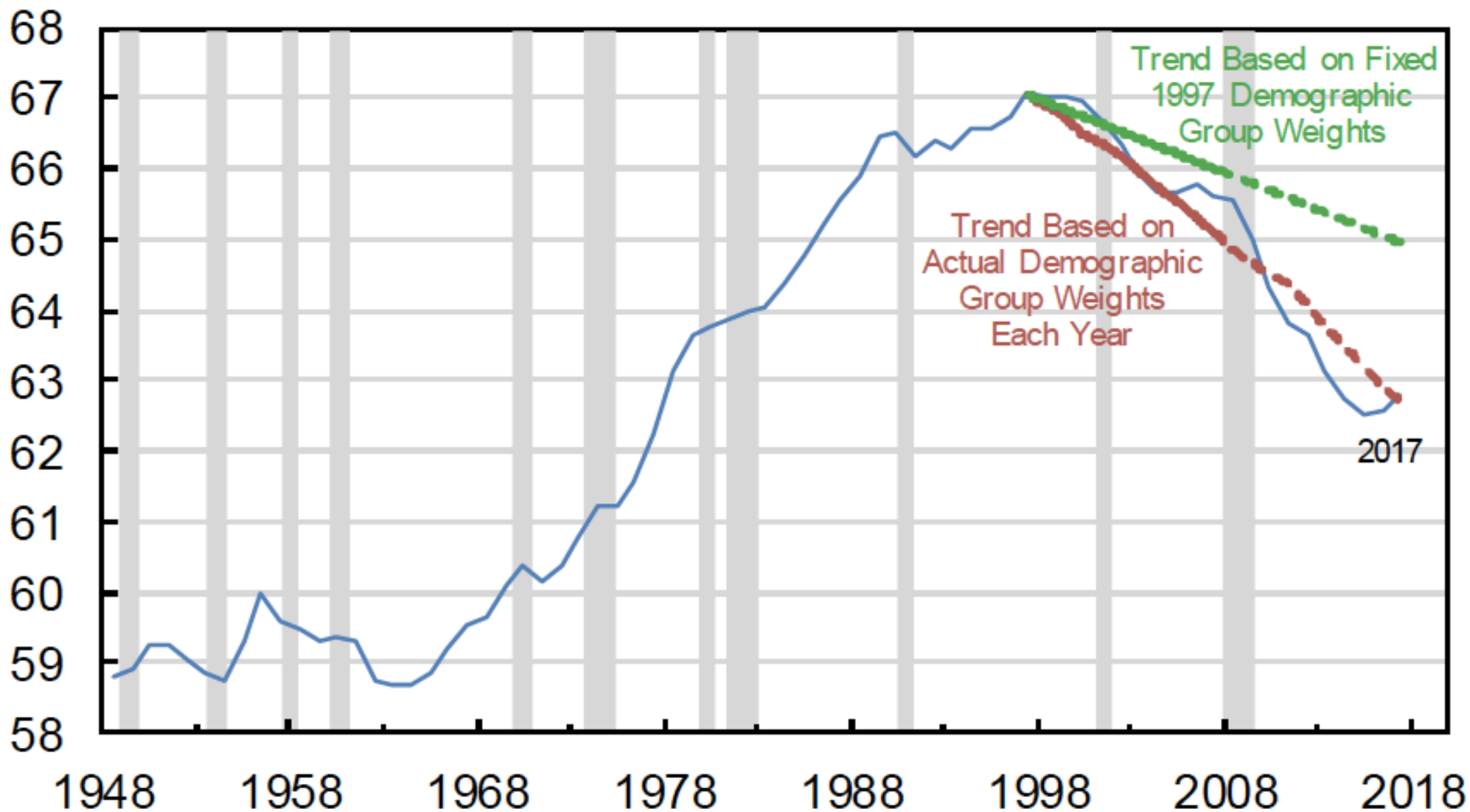
- Trend-adjusted decomposition
- Health-related barriers to work
- Female LFP

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# Trend-adjusted decomposition

Percent (Annual Average)



## Trend-adjusted decomposition

- This is my “new favorite decomposition”. Separately shows the importance of changes in demographics as well as the role of ongoing secular trends. May be good for forecasting.
- Where do the group-specific trends come from? Paper notes that Abraham and Kearney (2017) and CEA (2016) conclude there is a large role for skill-biased labor demand shifts. I agree with this.
- Many recent papers have studied some of the sources of these shifts: China trade (Autor, Dorn, and Hanson 2013), Automation of “routine” jobs (Autor and Dorn 2013), Direct replacement by robots (Acemoglu and Restrepo 2017).
- Does this part of the paper help resolve debate regarding the role of structural/cyclical factors? (e.g., Rothstein 2017; Charles, Hurst, and Notowidigdo 2016)

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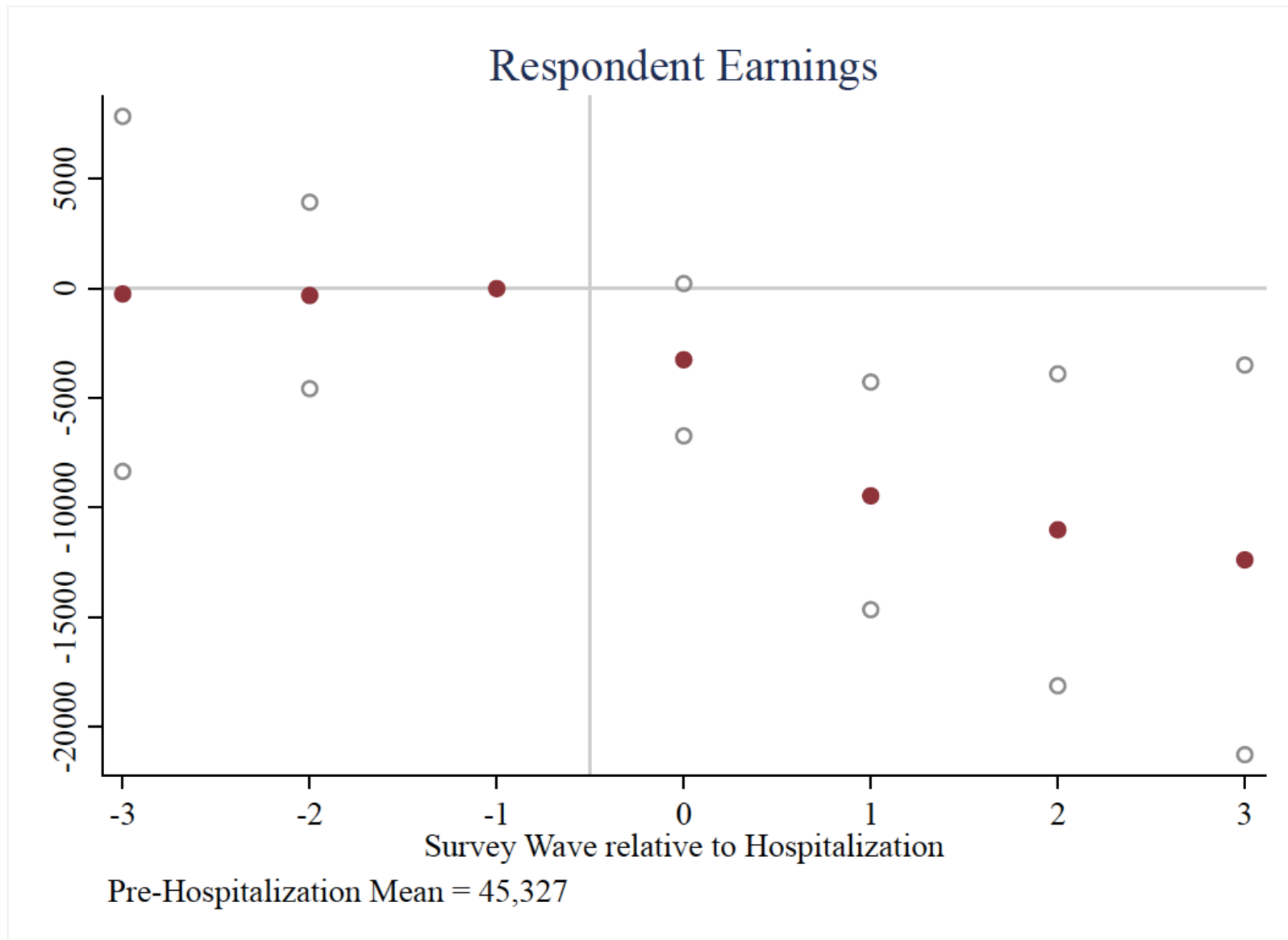


## Health-related barriers and pain medication

- Possible causal chain: “health shocks” lead to pain (and pain medications), which in turn reduce labor supply.
- Obvious reverse causality concern (e.g., job displacement causes drug abuse). Good first stab at dealing with this concern.
- This paper reports fascinating results using new survey data and spatial data on opioid prescriptions. Panel results look intriguing and fairly robust. Results suggest a direct effect of opioids on LFP (i.e., opioids not simply a proxy for pain-related work limitations).
- Paper discusses retirement briefly, but not in the context of the health-related barriers. These might be related!
- Broadly related to my own recent work using hospitalizations as “health shocks”: we find persistent declines in income, earnings, hours, and LFP.

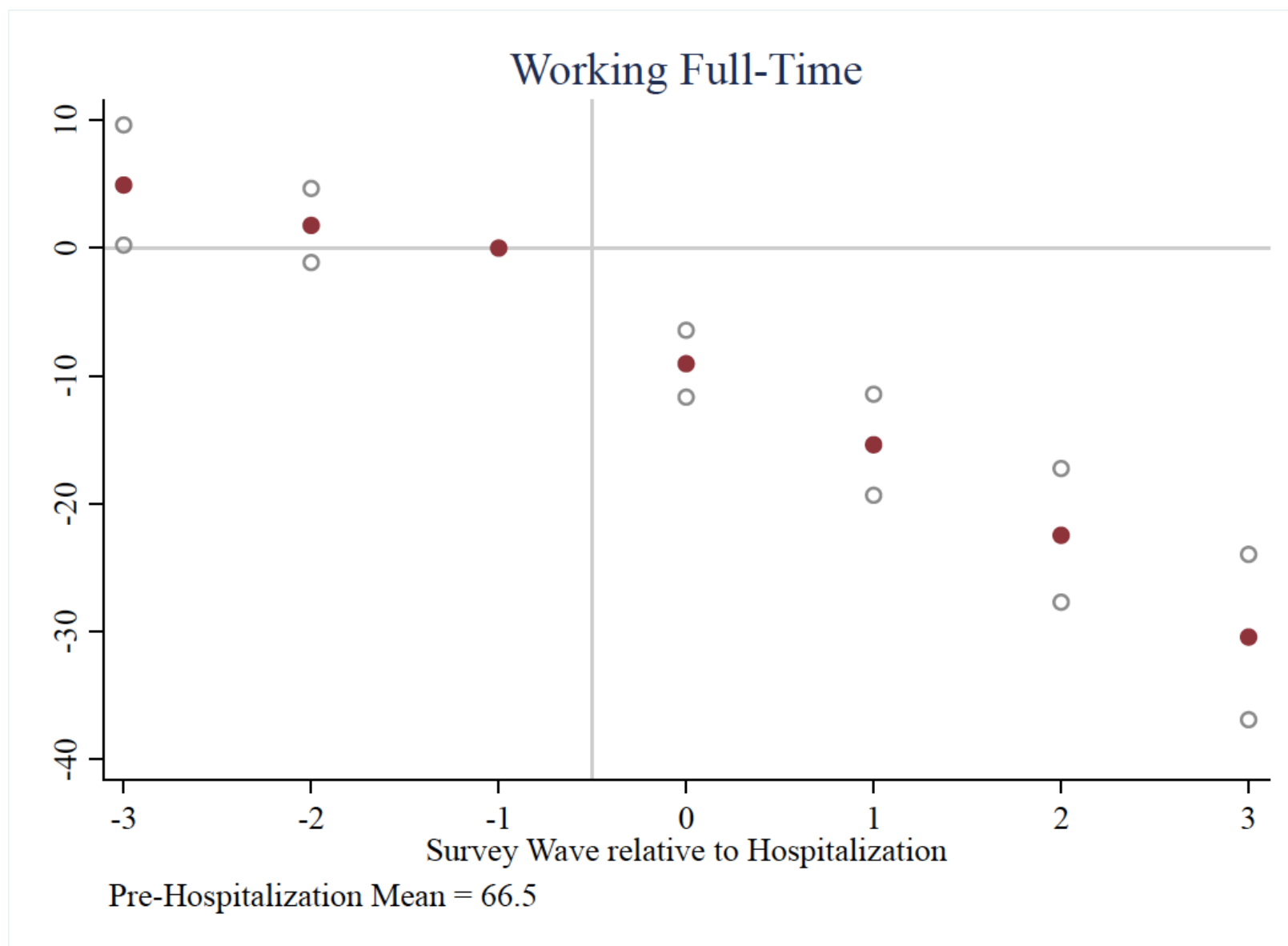
# Hospitalizations and labor market outcomes

Dobkin et al. (2017) study effect of hospital admissions on out-of-pocket spending, labor market outcomes, and consumer finances.



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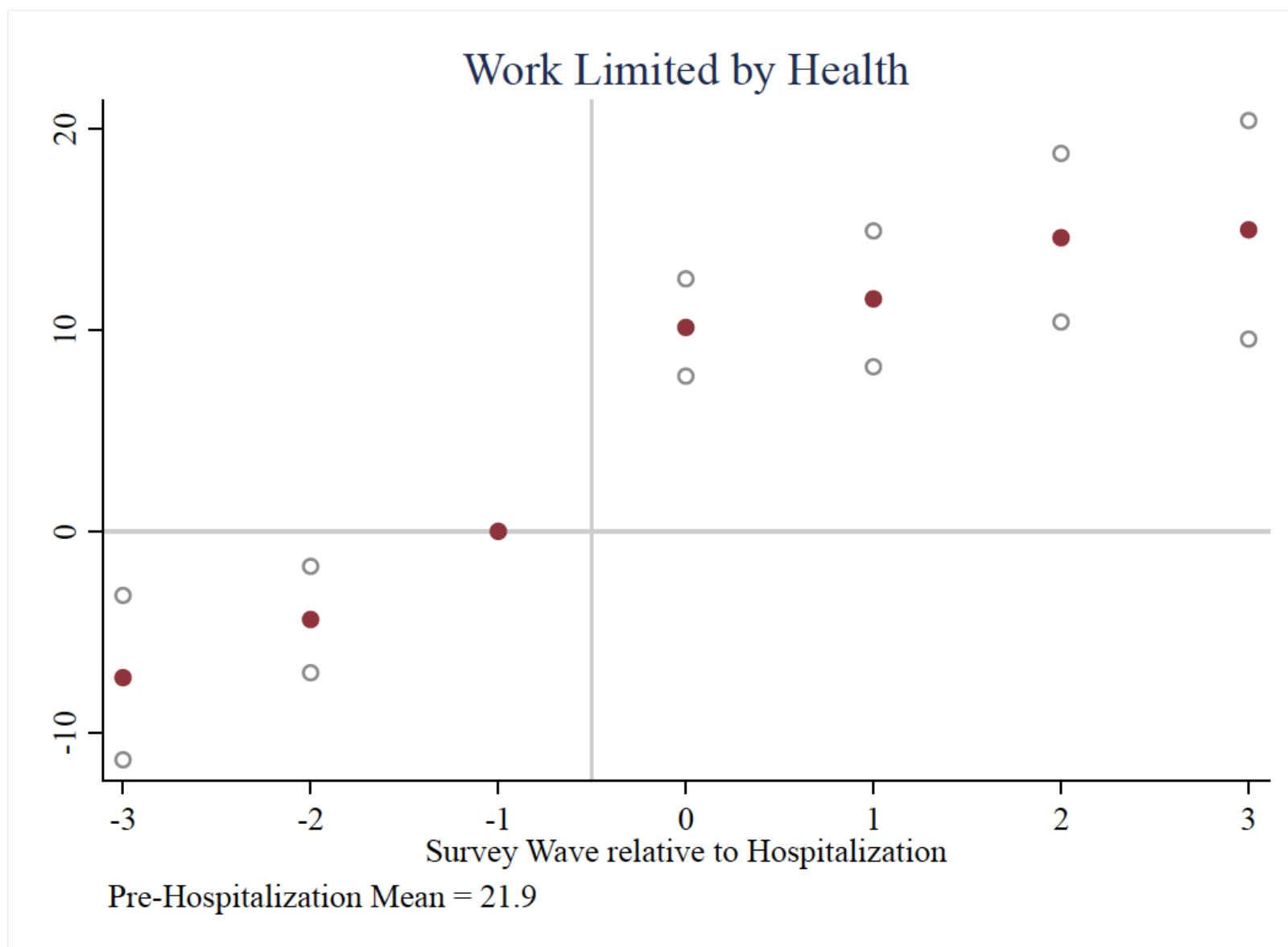
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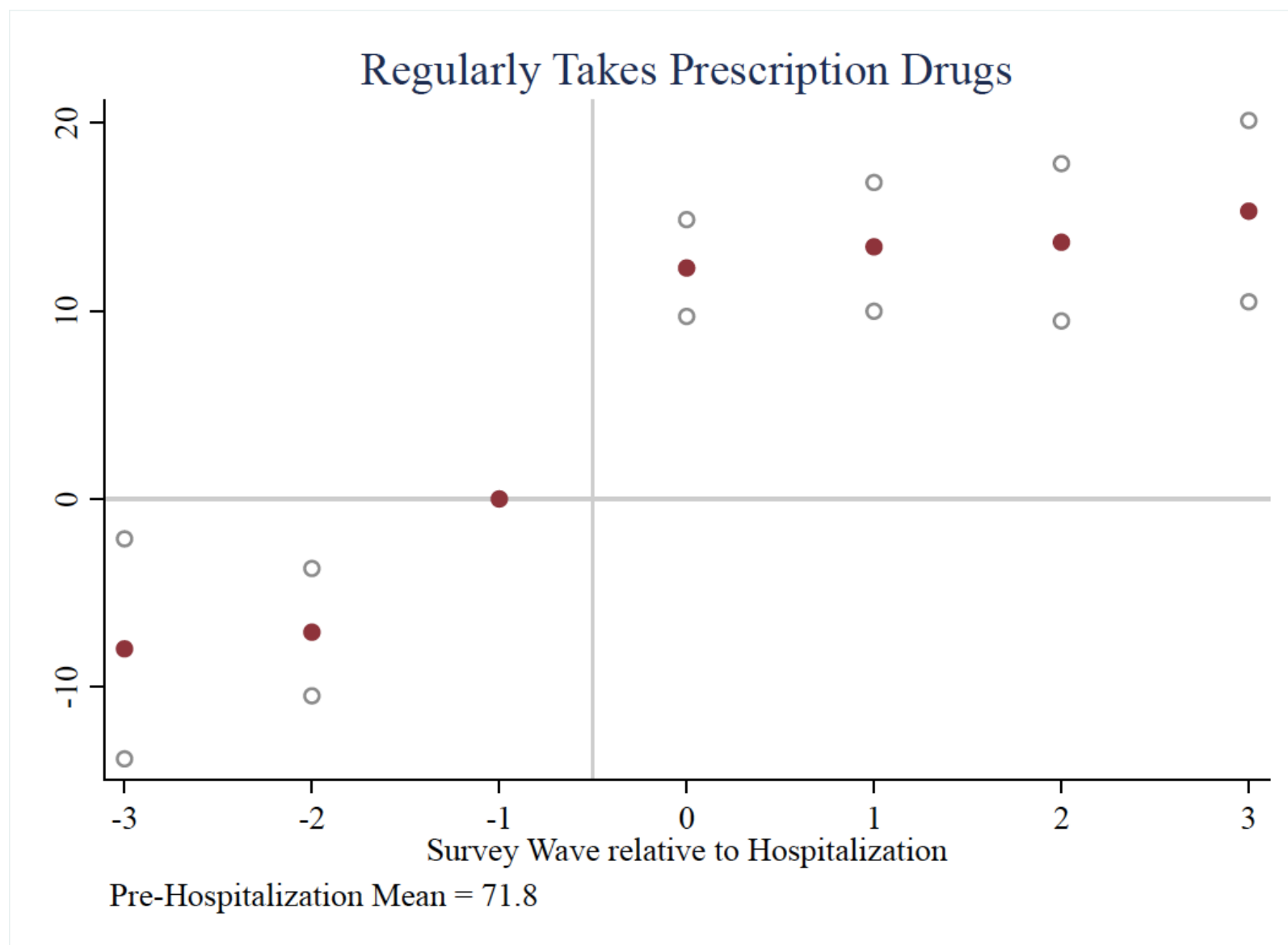
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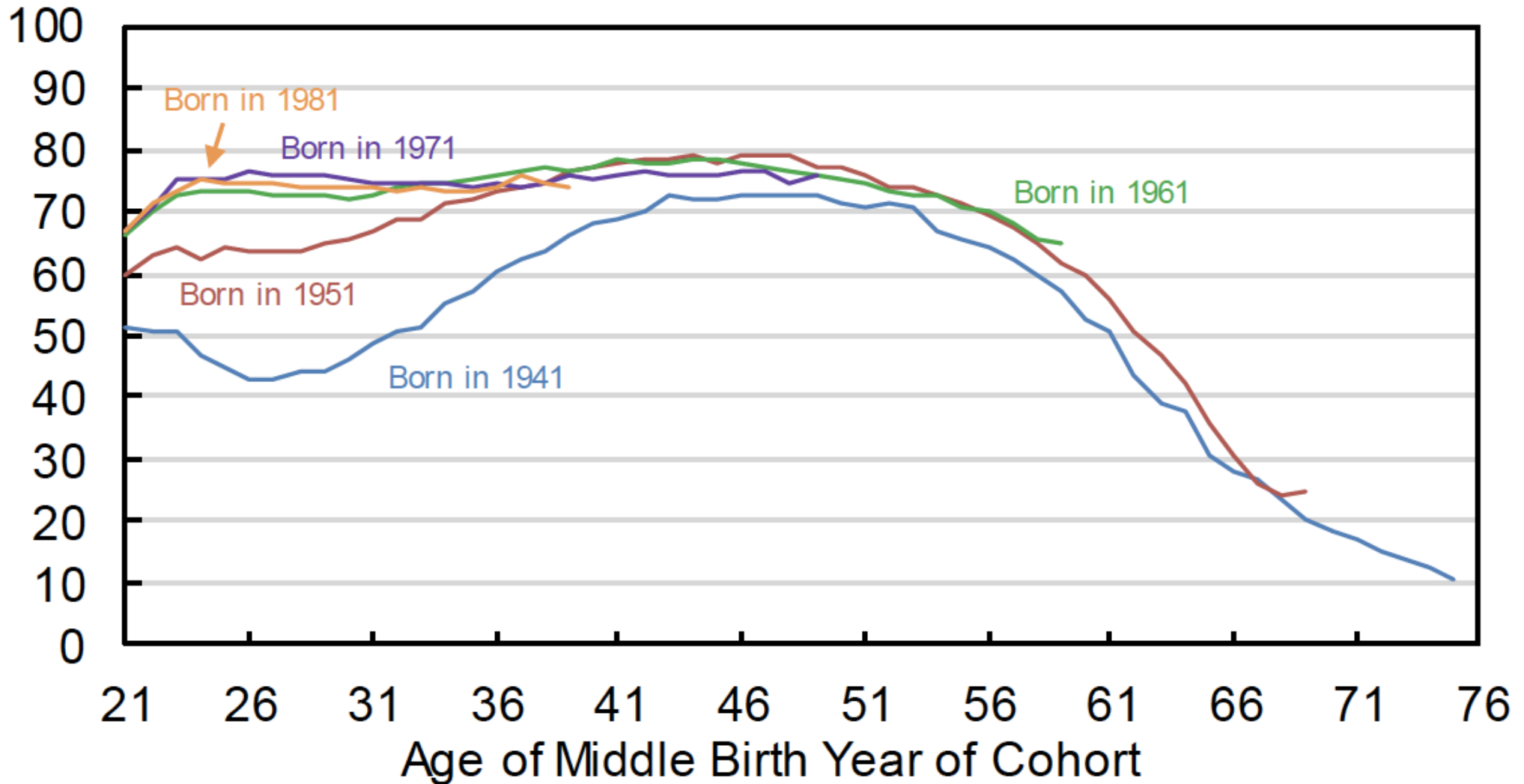
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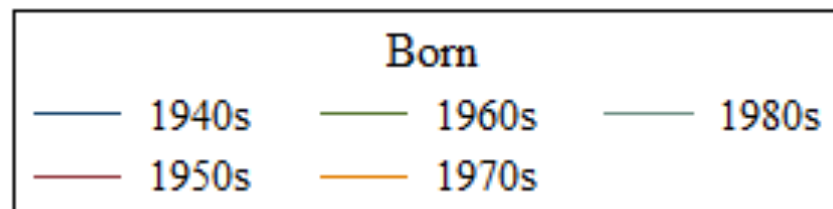
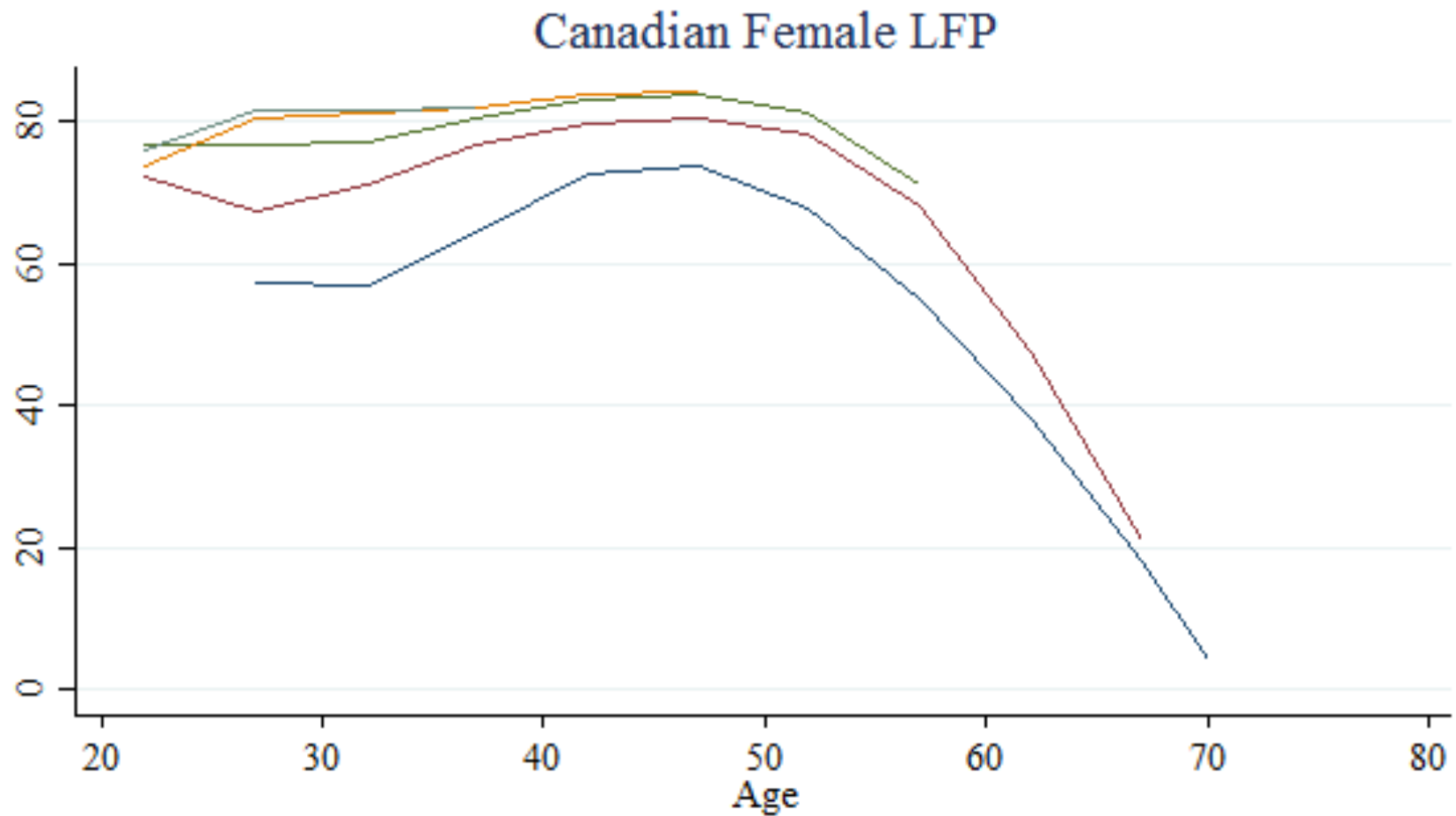


# Extending comparison of US vs. Canada

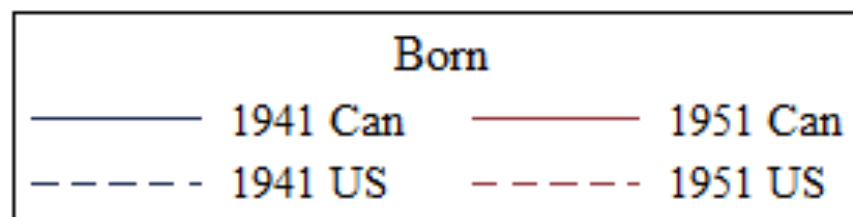
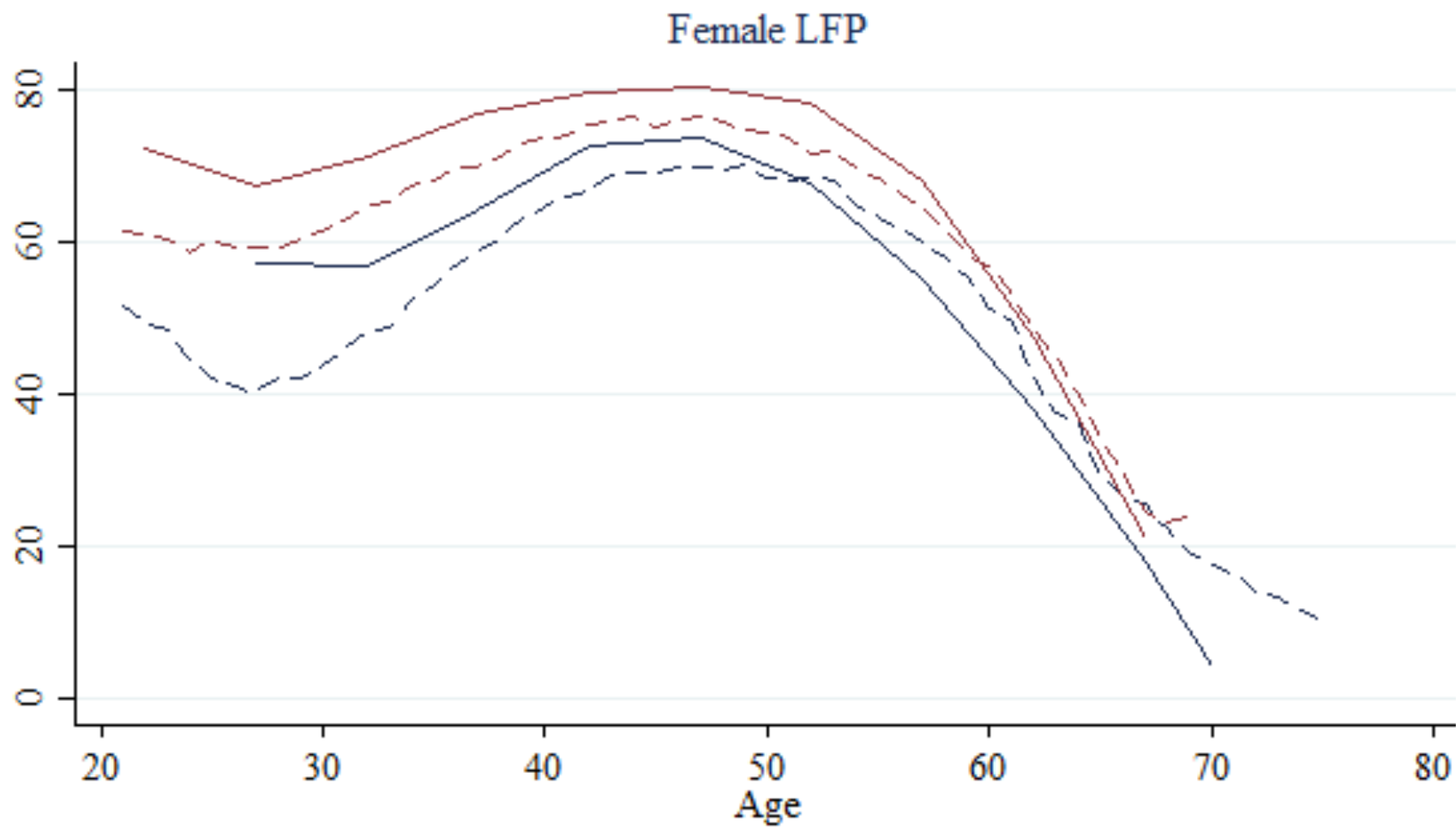
## Percent of Population of Each Cohort



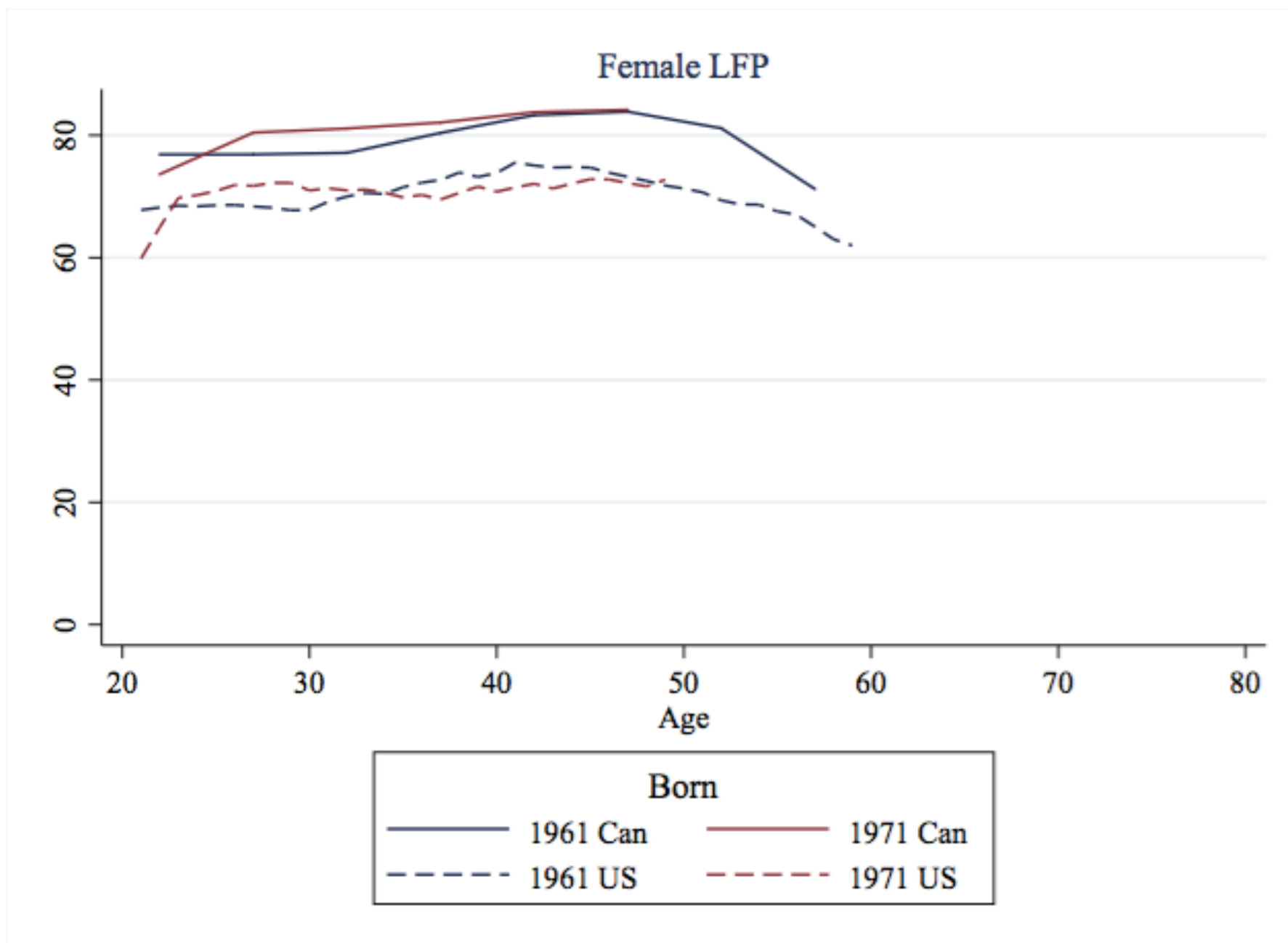
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# Cross-country comparisons of female LFP

The U.S. is falling behind many other high-income countries with respect to prime-age female employment (Blau and Kahn 2013).

Table 1: Male and Female Labor Force Participation Rates,  
Individuals Age 25-54, 1990 and 2010

Country	Men		Women	
	1990	2010	1990	2010
United States	93.4	89.3	74.0	75.2
Non-US Average	94.0	92.5	67.1	79.5

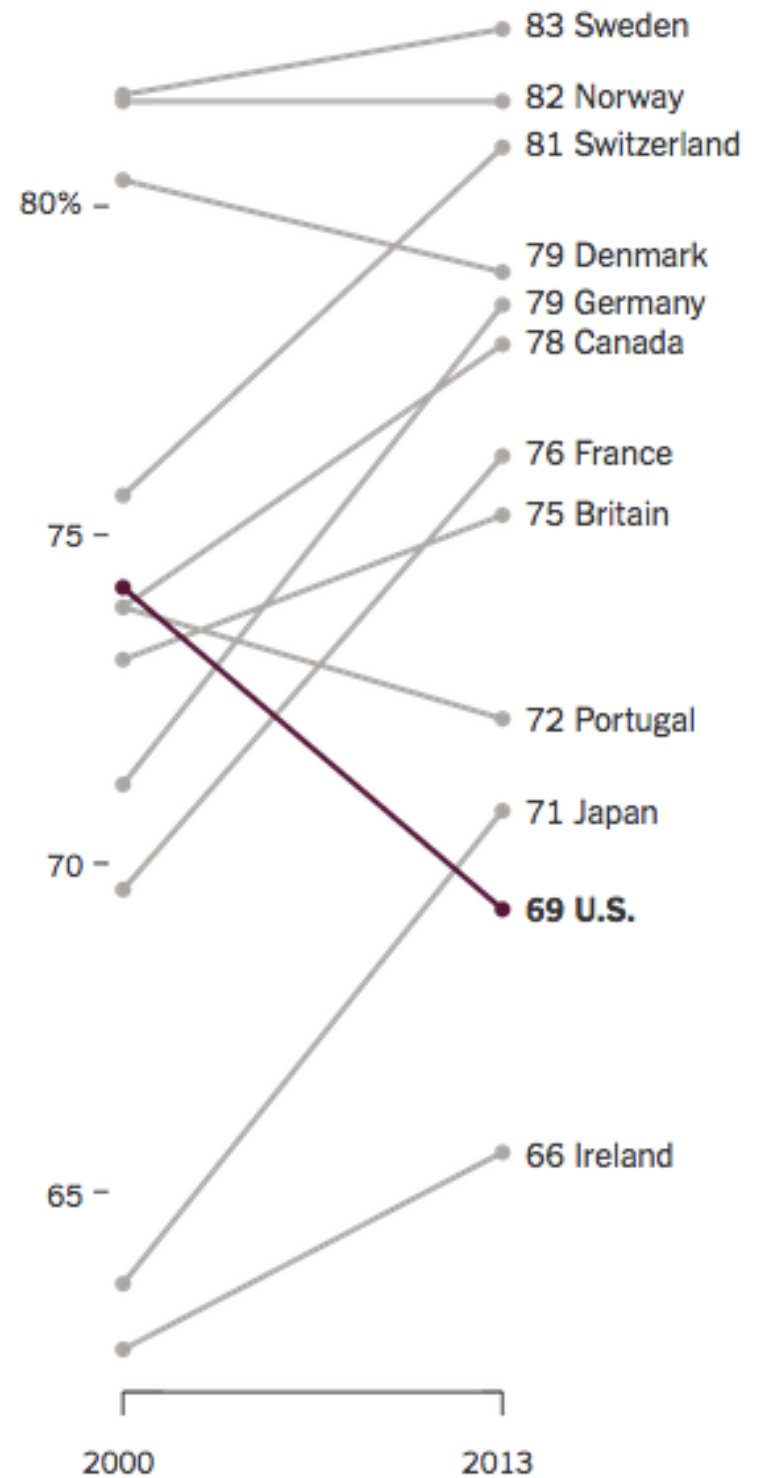
Alan Manning:

“more papers on minimum wages than could possibly be justified by the importance of the subject.”

“too few papers on the female labour market given the importance and neglect of the subject.”

## Percentage of women, ages 25–54, who are employed

Source: Organization for Economic Cooperation and Development

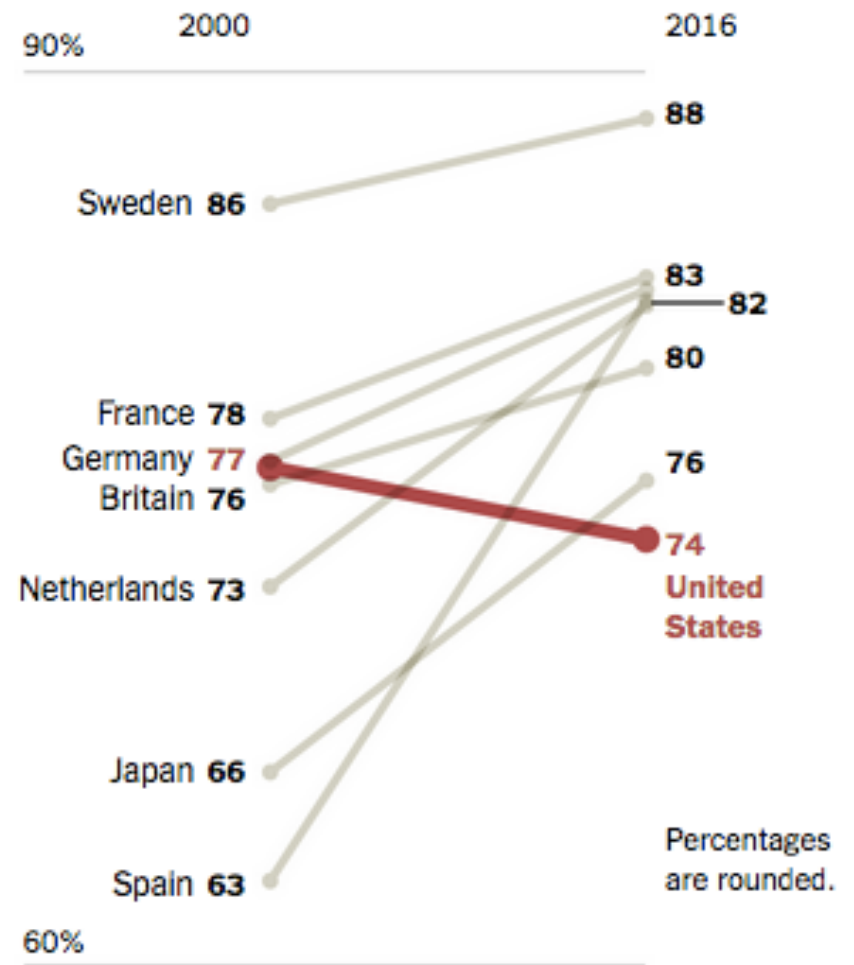


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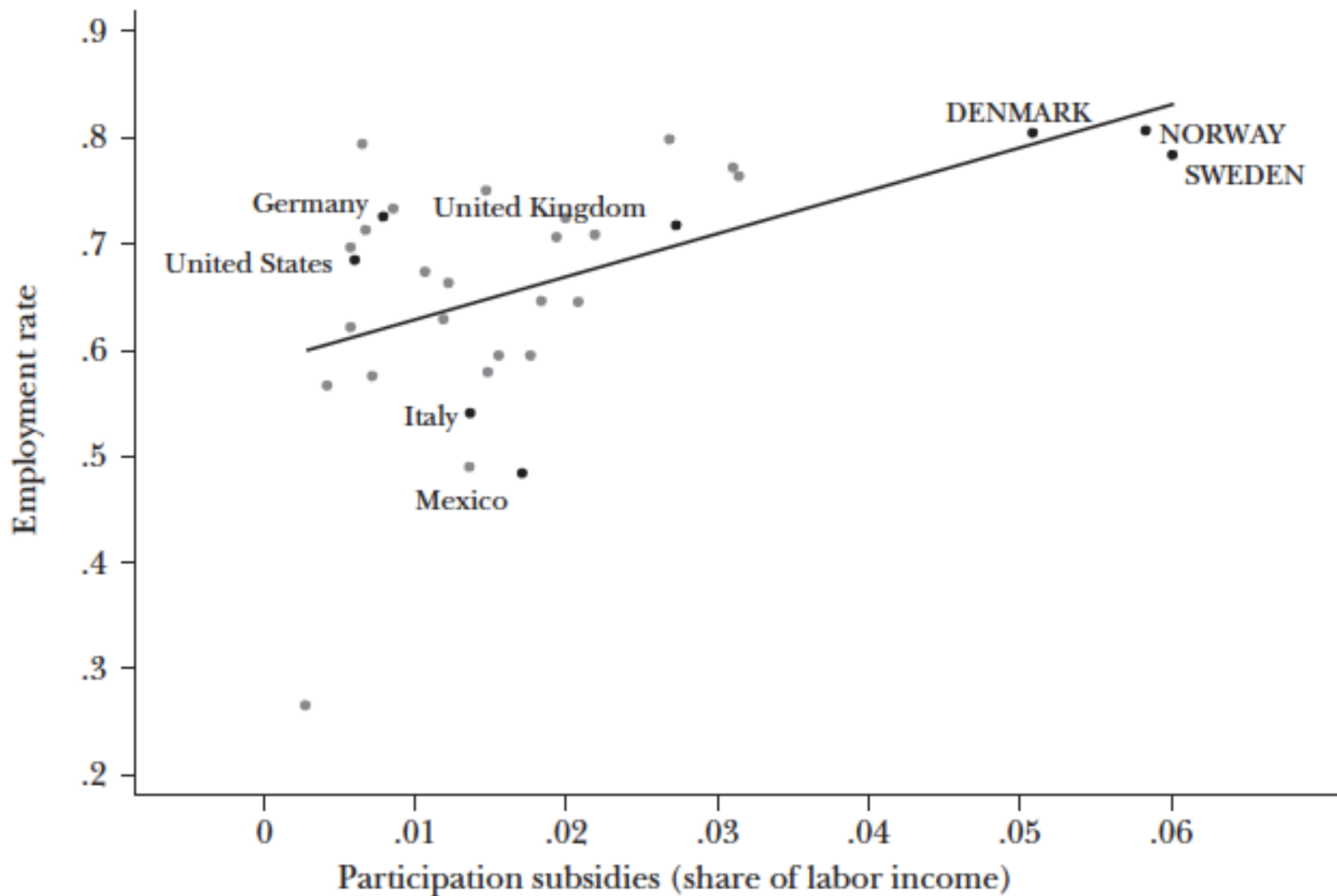
## America the Outlier

Labor force participation rate of women ages 25–54 — the prime working years — in selected industrial economies since 2000.



# Cross-country evidence (Kleven JEP 2014)

B: Female Employment Rate versus Participation Subsidies





## Where have all the (female) workers gone?

- If other countries can provide (rough) counterfactual female LFP under alternative policies, then this suggests that the U.S. should look to other countries for ways to “reverse” female LFP trends.
- My own “non-expert view”: household tax reform and child care and elderly care expansions are promising policies to boost female LFP. See, e.g., Kearney and Turner (2013) “Giving Secondary Earners a Tax Break”.

# Conclusions

- LFP of different groups trending differently, likely for different reasons. Requires lots of attention on multiple fronts: schooling, health-related barriers, adverse labor demand shocks, gender gaps.
- Paper provides some preliminary (and startling!) evidence on the important potential role for health-related barriers to work. Consistent with large effect of adverse health shocks on labor market outcomes. May also be additional negative effect coming from indirect effect of health shocks on use of opioids.
- Female LFP in the U.S. is moving away from other high-income countries. Why has this happened?

# Conclusions

- Researchers should consider new empirical models to disentangle relative importance of demand shifts and supply shifts on aggregate and group-specific LFP. Canonical models seem to be better at dealing with wage inequality than LFP.
- I believe that random utility discrete choice models may be useful, building on work done in Industrial Organization and International Trade (see, e.g., Kroft et al. 2017). The “outside option” in this case is not participating in the labor market, and the discrete choices are occupations and/or industries. Can then study sectoral re-allocation alongside aggregate changes in LFP.

Thanks!

# References

- Acemoglu and Restrepo. 2017. “Robots and Jobs: Evidence from US Labor Markets,” Working Paper.
- Autor and Dorn. 2013. “The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market,” *American Economic Review*.
- Autor et al. 2013. “Local Labor Market Effects of Import Competition in the United States,” *American Economic Review*.
- Charles et al. 2017. “Housing Booms, Manufacturing Decline, and Labor Market Outcomes,” *Economic Journal* (forthcoming).
- Dobkin et al. 2017. “The Economic Consequences of Hospital Admissions”, *American Economic Review* (forthcoming).
- Kleven. 2014. “How Can Scandinavians Tax So Much?” *Journal of Economic Perspectives*.
- Kroft et al. 2017. “Quantifying the Welfare Gains of Variety: A Sufficient Statistics Approach,” Working Paper.
- Rothstein. 2017. “The Great Recession and its Aftermath: What Role for Structural Changes?” *RSF: The Russell Sage Foundation Journal of the Social Sciences*.