

DISCUSSION OF “TECHNOLOGICAL CHANGE,  
LABOR SUPPLY AND GENDER DIFFERENCES IN  
OCCUPATIONAL CHOICE,” BY ELISA KELLER

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## ELISA'S PAPER

- Fascinating and important issue: Gender differences in occupational choice
  - Strong convergence in gender occupational choices (along complexity characterization) between 1970 and 2010
- Hypothesis: return to experience higher in more complex occupations
- Driver: increase in women's market work (via occupation-specific technical change, labor-saving technological progress in home sector, residual occupational wedges)...
- ...contributes to narrowing gender occupational choice gap

## ANALYSIS AND RESULTS

- Construct quantitative model of occupational choice, calibrated to match relevant data, including gender trends
- Perform a decomposition analysis of the main drivers of trends: occupational “wedges”, occupation-specific technical change, and technological progress in household production
- Changes in occupational “wedges” account for the bulk of gender occupational convergence (56 percent of total)
- Technical change in household sector account for 34 percent
- Occupation-specific technical change account for 10 percent

## OVERALL ASSESSMENT

- Nice paper, studies an important episode of convergence in occupational choices across genders
- The challenge is that there are too many moving pieces
- Paper could be improved on the details of implementation to render the quantitative results more convincing
- My suggestion: take smaller steps in the quantitative assessment

## SOME COMMENTS: (1) FACTS

- Gender occupational choices more broadly, convergence patterns in other dimensions, help motivate focus on complexity dimension
- Are there clear trends in occupations more intensive in service industries? Connection with structural change?
- What is happening with occupational choices of males over time? This will serve as useful benchmark
- How do hours vary by occupations by males? Are complex occupations more time intensive for males, does it change over time?
- What is the relationship between hours and occupational choices of males? Can this serve as useful discipline to some of the relevant elasticities?

## (1) FACTS

- While the presentation of facts can be general, the specifics have to be more closely tied to the model considered
- Is gender occupational convergence driven by new cohorts over time or are there occupational switches that contribute to convergence?
- Key connection of market hours and occupational choice. Evidence shows steeper life-cycle wage profiles for complex occupations
- In (static) model this only occurs if people work more in complex occupations, could offer direct evidence on male market hours across occupations, and changes over time

## (2) MODEL

- What is a reasonable model of occupational choice for this analysis?
- For example, full convergence in gender occupational choices by 2010 is puzzling given the substantial remaining differences in wages and hours of work; suggests something more than standard forces may be at work, perhaps gender policies?

## (2) MODEL

- Lots of details, lots of potential moving pieces
- Married couples as main unit of observation whereas in data just married males and females
- Individuals make lifetime occupational decisions—although model is static, no lifecycle considerations—whereas in data anyone at a given point in time
- Married males and females endowed with same skill whereas in the data substantial differences in educational attainment and strong convergence (and overtake!) over time
- Non overlapping earnings profiles whereas in the data there must be substantial overlapping



## (2) MODEL

- I think there is strong value of taking smaller steps: analyze through the lens of basic model the occupational choices of individual males, channels of changes in market hours over time and across genders, and then factors driving hours changes
- What trends in the time series are affecting occupational choices?
- Education and human capital, structural change, technological progress
- Males can provide some discipline on these trends for the period of study

### (3) CALIBRATION/ANALYSIS

- Paper calibrates model to reproduce trends in the data. Not clear why this is a good strategy in this setting
- Several moving parts: shares of occupational output  $a_i$ 's; price of household appliances  $P_d$ ; occupational wedges  $\tau_i$ 's; total factor productivity; distribution of skills
- Other than price of durable capital no direct evidence on these sources. Wedges operate as residuals in a setting with potentially missing trends, difficult to interpret

# CONCLUSIONS

- Very interesting paper, fascinating facts
- As a somewhat outside reader, I would find a more convincing analysis that takes smaller steps towards a set of factors driving gender occupational convergence
- This may require a more detailed analysis of the trend factors driving occupational decisions and changes for males along with a suitable model accommodating these trends
- Then, more gender-specific factors can be analyzed along with the general trends