Rethinking the Welfare State

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ABTRACT

Motivation. Consider the following facts. First, with dramatic changes in the household and family structure during the last couple of decades, today's households are very far from traditional breadwinner husband and housekeeper wife paradigm. Second, typical households face significant uninsurable risk and social insurance expenditures are substantial. As household income inequality has been rising, there is a renewed interest in role of social insurance policies and programs. We refer in this project to these policies as the *welfare state*. Third, the structure of families (who is married with whom) and female labor supply behavior can play an important role for income inequality. According to Hyslop (2001), changes in marital sorting can account for about 25% of the rise of income inequality between 1979 and 1985 in the U.S. while changes in female labor supply contribute to another 20% of the rise. Blundell, Pistaferri and Saporta-Eksten (2016) estimate a large role of household labor supply as insurance against wage shocks. Finally, there are significant differences in the extent of marital status and assortative mating, coupled with systematic differences in female labor participation and the wage gender across educational groups and age.

Despite this background, we are unaware of systematic attempts to study the welfare state and reforms to it in environments that allow for heterogeneous two-earner households that face uninsurable risk, an explicit consideration of labor supply responses in extensive and intensive margins, and a rich description of marital status of population (who is married with whom). We fill this void in this paper.

What we do. We first document systematically how inequality varies over the life cycle for individuals *and* married households in terms of earnings, hourly wages and consumption. We find that (i) earnings (hourly wages) dispersion for all males increases non-trivially over the life-cycle as is well known; (ii) for females, married or single, we *do not observe* an increase in earnings (hourly wage) dispersion over

the life cycle; (iii) earnings dispersion increases non-trivially over the life-cycle for all households, but the level of dispersion is *much lower* for married households; (iv) consumption dispersion increases over the life-cycle but *much less* than the increase in household earnings dispersion; (v) the wage-gender gap increases over the life cycle.

We then use these facts to discipline a life-cycle economy with heterogeneous one and two-earner households who face idiosyncratic wage risk, and with a rich description of the actual tax and transfer schemes in the United States. We provide answers to three central questions: What are the roles of public policy and household decisions in shaping economic inequality? What is the extent of insurance under incomplete markets when two-earner households and participation decisions are explicitly considered? What are the effects of policy reforms?

Specifically, we develop a life-cycle economy populated by married and single households, who differ at birth in terms of their educational attainment, the number of children attached to them and the timing of their arrival. Individual wages (hourly earnings) have three components: a rental rate, efficiency units that vary with age and idiosyncratic shocks. Each male individual starts his life with a given level of education and each education level is associated with a given life-cycle profile of efficiency units. Females also start their life with a given education level. Their efficiency units, however, evolve endogenously as they enter and exit to the labor market. If a female chooses not to work, her efficiency units depreciate at a rate that depends on their educational level. Idiosyncratic shocks to wages are persistent, with gender-specific parameters. The key feature of the wage process is that within a married couple household, innovations to shocks are *correlated* between spouses.

Married couples and single females have children that appear exogenously along their life cycle. Children are costly; if a female with a child decides to work, the household has to pay child care expenses that vary with the age of the child. Married couples also face utility cost of joint work. Each period, agents decide how much to consume, how much to save, and how much to work, if at all. In particular, females might decide not to participate in the labor market as they balance dynamic costs and benefits of participation: costly childbearing, utility costs, and skill depreciation due to non participation.

Policy Analysis. We evaluate the effects of public policy in our model environment at three different levels. First, we quantify the value of key income maintenance programs relative to versions of our environment where primary and/or secondary earners cannot adjust their labor supply decisions. Second, we evaluate the aggregate and welfare implications associated to expansions/reductions of these programs. The upshot is that if female labor supply behavior provides a significant level of insurance for the household, then it is less likely that traditional social insurance will be very important. On the other hand, policies that make female labor supply less costly can be as important as the traditional welfare programs.

Finally, we assess the implications of a major policy reform in our economy, a *negative income tax*, where the associated transfers to households are conditioned by the number of children attached to them. In preliminary exercises, we found large and asymmetric output and welfare effects: while a low level of transfers leads to large output gains and a significant number of winners, some households experience welfare losses that are substantial leading to lower ex-ante welfare at birth. As the level of the transfer increases, tax rates increase as well, leading to larger ex-ante welfare at birth but also to a *lower support* for the expansion for the program.