Testing the "Unitary Model" of Household Labor Supply

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Abstract:
One of the main goals of labor market experts is to conduct comparative studies between existing data and different economic models and to identify the best model for better planning, policymaking and anticipation. In this regard, discovering the behavior and interactions among the members can influence the consumption process, labor force supply and other decisions made by this unit and thus the family's welfare. The change in family lifestyles from single-income to dual-income has altered the established male as the head of the household and housewife pattern.

The extensive changes in technology and women's educational growth, urbanization, rise in household costs, role changes within the household etc… have led to a simultaneous increase in the labor supply for both husband and wife, and therefore examining the behavior of the labor supply of the couple is among the important policymaking issues for the labor market. In most neoclassical microeconomic literature, couples' decision-making behavior in the household is analyzed based on the Unitary Model (UM). This model is known through the early foundational literature by Samuelson (1956) and its later expansion by Becker (1973). In the Unitary Model (UM), the neoclassical economics tool is used to explore labor supply communications, while the household, as a unit, aims to maximize the Social welfare function —the sum of the functions of the members' utility—by restricting Budget constraints. One of the basic needs of any static and dynamic model is to create appropriate conditions for experimental estimation. From this point of view, the Unitary Model (UM) has provided the ability to identify the behavior of household labor supply in most specific hypotheses by introducing testable restrictions. It can be concluded that the summary of the labor supply of the Unitary Model (UM) has two types of main testable restrictions: Income pooling and Symmetry of wage effects (Slutsky properties).

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Using the test of main restrictions of the unitary model, this research endeavors to study the ability of this model in identifying the family labor supply. This would assure the policymakers to implement the neoclassical model in order to determine the current situation and to predict a favorable one.

In this regard and as the first step, the model of the labor supply of dual-income couples who have a non-labor income is estimated by using Household Expenditure and Income Survey Results in Urban and Rural Areas from the year 2013.

The labor supply functions of dual earner couples who have a non – labor income have been estimated based on statistical and econometric methods. They have been estimated based on two subsets of errors in measurement (division bias) and endogeneity with the help of the leaner-semi logarithmic model and considering non-pooling and pooling non-labor income. Considering the endogeneity of wage variable, in both models of the labor supply of dual-earner couples, the estimation has been done based on Generalized Method of Moments(GMM), and to avoid bias in the sampling of the wage variable in the model of female labor supply, the Heckman Two-Step Method (Heckit) has been utilized. In the second step of the study, in order to test the unitary model (UM), the two restrictions namely, income pooling and symmetry wage effects (Slutsky Condition) have been examined.

The results of the studied sample indicate the restriction of Income pooling in the male working hours supply model and the same refuting the restriction for females. This is while the results of the Symmetry of Wage Effects test in both models of couples working hours supply is verified.

Although the results of the Unitary Model Test based on the studied data have indicated important evidences in favor of the Neoclassical Theory and   imply that this theory can be a reliable reference in determining   the couple's behavior in the labor supply, attention to the new model of couple's labor supply in the household based on national data can be considered in future research to improve policy making.

JEL classification: D01, C29, J22

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