

## **An Analysis of Household welfare and Consumption in Poland, France and Turkey using data on the value of domestic production and earnings from informal work**

Individuals may have compensated for their welfare losses during the global recession of 2007-2009 (the Great Recession) by reallocating their time use in activities such as home production, informal working or leisure. As Alpman and Gardes (2016) show, the time component has partially absorbed the Great Recession's negative welfare impact. According to their findings, when the decrease in the rate of consumption of market goods is equal to the increase in the rate of time allocated to non-market activities, the time component absorbed roughly 68.75% of the recession's negative impact on consumers' well-beings in the US. Their result confirms the idea that looking only to the variations of individuals' monetary incomes would yield an incomplete picture of individuals' welfare losses. The underlying cause of an inaccurate calculation of welfare mainly comes from the fact that non-market work time is ignored by researchers due to the lack of available data as well as methodology to capture how individuals partially compensated for the loss of their income during the recession.

The domestic production research briefly aims to measure households' production of goods and services through the unpaid work of their members. The main reason is that, if household production is omitted, the economic welfare of the population does not include all goods and services and is therefore incomplete. Accordingly, Mincer (1963) was the first to propose broadening the economic model to include unpaid work in addition to paid work and leisure. Two years later, Becker (1965) suggested the economic model of time allocation theory in accordance with the suppositions of traditional theory, which enabled him to define the domestic production as the productive element of unpaid household activities. In this respect, the investigation of time allocation decisions among market work, household activities and leisure lies at the core of analysis of domestic activities. As a matter of fact, the size of the home sector is quite large (home production equals two-thirds of a household's total money income on average according to Gronau (1980)) and the extended income, which includes the value of home production, is more equally distributed than the monetary income.

The explicit research question shaping this study is **whether welfare losses during the Great Recession (2007-2009), induced by a shortage of income and lower market work hours, were compensated for by the increase in the time allocated to home production**. A satisfactory answer requires analysis of the evolution of the substitution between time and monetary resources over the business cycle, and of its consequences on the value of time and on the consumers' well-being. Such an analysis requires an estimate of the monetary value of non-market income and/or consumption. This later determines the different uses of time and flows of purchased goods which are combined together (Gronau and Hamermesh 2006); the scale of marketization in the household production (Jaumotte 2003; Freeman et al. 2005); the degree of compensation for market work with household work (Burda and Hamermesh 2009); and so on.

The main topics of the research are:

- Measurement of the effect of the Great Recession on the inequality of monetary incomes (or total expenditures) and full income.
- Estimation of the elasticities of substitution between monetary expenditures and time use for domestic production.
- Estimation of an enlarged GDP.

The measure of inequality in economic resources among the population necessitates the development of a comprehensive calculation of time use productivity by estimating **full income** (market and non-market income) or **full consumption** (market and non-market goods) per hour of work (both paid and unpaid).

Enlargements of GDP implies considering the added value of the activity made by households in informal markets, the production of public goods and services, and the value of the domestic production by households.