

Research Proposal

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Unemployment, Time Use and Consumption Patterns in “Advanced” Economies and Emerging Market Economies

Introduction

The International Monetary Fund and the International Labor Organization reported that the financial crisis of 2007–09 led to a sharp increase in unemployment rate (ILO and IMF, 2010). Over 210 million people across the globe are estimated to be unemployed at the moment, an increase of more than 30 million since 2007. Three-quarters of the increase in the number of unemployed people has occurred in the “advanced” economies and the remainder among emerging market economies. Within the advanced countries, the problem is particularly severe in the United States – the epicenter of the Great Recession and the country with the highest increase in the number of unemployed: an increase of 7.5 million unemployed people since 2007.

This fact indicates a terrible waste of human resources and the most important cause of deprivation in modern societies. However, although unemployed workers may be deprived of some sources of income, they are not deprived of their time. They still have available 24 hours a day, with the only difference that they are restricted to allocate their time in activities other than market work. For instance, some unemployed might take advantage of their unemployed period to retrain themselves and improve their marketability and earnings potential, some might dedicate more time on housework and care of other members of the household; some might take more time for resting or enjoying more leisure, maybe, sunbathing at the beach, etc. Presumably, changes in time allocation after falling into unemployment will be carried out simultaneously along with adjustments in the demand for some market goods. I suppose that changes in time allocation and in the demand for some goods will be different for “advanced” economies and emerging market economies.

These considerations regarding the use of time have been considered relevant both at the macro and the micro levels. For instance, regarding national accounting, there have been attempts to improve the welfare measure of a nation by including in the measure of total production some items such as domestic production (housework, care of children or elderly), health status, and the time that the population spend on leisure. Moreover, at least since Benhabib et al. (1991), home production and non-market activities are regarded as important elements of models of the aggregate economy with important implications for the performance of calibrated real business cycle models, for the interpretation of the nature of aggregate fluctuations (Hansen and Wright, 1992, Greenwood et al., 1995), for the estimation of the intertemporal elasticity of substitution (see Rupert et al. 2000), and for accounting for international income differences (see Parente et al. 2000). Although there is a very wide empirical literature regarding the estimation of parameters needed for the calibration of general equilibrium models as far as market activities is concerned, there is much less information on parameters such as the elasticity of substitution between non-market goods and time devoted to non-market activities.

In microeconomic research, as family economics is gaining some momentum and more and better time use surveys are becoming available, there is a growing research interest on other activities than market work, such as the distribution of homework (Alvarez and Miles, 2003), and childcare (Hallberg and Klevmarken, 2003, Ichino and Sanz de Galdeano, 2003), the use of leisure time (Jenkins and Osberg, 2003), demand for formation and training (Fahr, 2003), transportation (Hertkorn and Kracht, 2002), and health care (Ruhm, 2003, Ruhm and Black, 2002).

This research examines the “advanced” economies (for instance the USA, Germany) and the emerging market economies (for instance Russia) in order to investigate how the allocations of time and consumption goods change with unemployment.

The goal of the research is to measure and compare time use and consumption patterns of individuals with different employment status in “advanced” economies and emerging market economies.

Literature Review

Human well-being depends not only on goods, income and market work, but also on other activities such as housework, domestic production, leisure and knowledge acquired, children or other household members care. There are three factors that follow from unemployment: i) the loss of production or income, ii) the increase in home production from the additional time available, and iii) the direct impact of unemployment on individual well-being (Namkee Ahn, Juan F. Jimeno, Arantza Uginos, 2003). The research will focus on the second factor.

The literature on time use, unemployment and consumption consists of three groups:

i) the studies that focus on the loss of income and consumption derived from unemployment, analyzing consumption behavior, testing the permanent income hypothesis and searching for the impact of insurance mechanisms to explain consumption smoothing in the aftermath of several shocks (Dynarski and Gruber, 1997; Browning and Crossley, 1998; Bentolila and Ichino, 2003);

ii) the empirical literature which relate individual characteristics, including employment status, and subjective “happiness” (Clark and Oswald, 1994; Korpi, 1997; Di Tella, MacCulloch and Oswald, 2002, Ruhm, 2003);

iii) the studies that follows Becker’s (1965) theory of household production (Gronau, 1997; Layyard, 2003; Gronau and Hamermesh, 2003, Namkee Ahn, Juan F. Jimeno, Arantza Uginos, 2003). According to the Becker’s theory of household production both consumption goods and time influence on individual’s utility. That’s why the cost of unemployment should be evaluated through the combination of goods and time use to produce the utility-enhancing commodities.

This approach was used by researches in labor economics and other areas. Particularly, Gronau and Hamermesh (2003) presented a first empirical characterization of the combination of time and goods to produce utility-enhancing commodities within households of the USA and Israel and estimated the impact of some demographic characteristics on the relative time intensities of the alternative commodities.

Within the last group Namkee Ahn, Juan F. Jimeno, Arantza Uginos (IZA, 2003) investigates the implication of unemployment with regards to the combination of consumption expenditures and time use within households on the Spanish experience since the early 1980s up to the late 1990s. Given the restrictions on data availability, they relied on regressions using cross-sectional data to compare consumption expenditure levels in different goods and time used in different activities between employed and unemployed individuals in several types of households.

Data and Methodology

To start an empirical analysis of consumption and time use patterns I will use Becker's (1965) theory of household production in order to estimate relevant commodities and identify the set of goods and activities which are used to produce each commodity.

To follow the research goal commodities, time use and expenditures will be grouped into the following categories:

Commodities: 1) Basic Personal Care, 2) Housing, 3) Child Care, 4) Active Leisure, 5) Passive Leisure, 6) Money-saving Activity, 7) Time-saving Expenditure.

Time Use: 1) Sleep, Personal hygiene, Eating, Health care; 2) Purchasing, Cooking, Cleaning, Home maintenance, 3) Child care; 4) Training, Sports, Reading, Job Search, Social services, Gardening, Repairing; 5) Conversation, Spectacles, Resting; 6) House work, Child care, Adult care, Repairing.

Expenditure: 1) Food, Apparels, Health care, Personal hygiene; 2) Rent (real or imputed), House maintenance, House equipment; 3) Education for children, Apparels for children; 4) Training, Sports, Communication and Reading; 5) Alcohol, Tobacco, Tourism, Spectacles; 7) Kindergarten, Restaurant, Domestic service, Air trip.

Ideally, it would be better to have data on both time use and consumption expenditures from the same households to be able to analyze both allocation decisions simultaneously. But in reality it is rarely happened. Most researchers usually use two separate surveys, one for time use and the other for consumption expenditures (Namkee Ahn, Juan F. Jimeno, Arantza Uginos, 2003; Gurley-Calvez, Biehl, Harper, 2009).

I research an emerging market economy on the example of the *Russian Federation*. For this purpose I use data which comes from the 2000-2008 waves of the Russian Longitudinal Monitoring Survey (RLMS) that is conducted by the Carolina Population Center at the University of North Carolina at Chapel Hill. The RLMS is a unique panel survey of Russian households based on the national probability sample. It has been previously used by a number of researchers to analyze income mobility, poverty dynamics and consumption smoothing by Russian households (Lukiyanova and Oshchepkov, 2009). In 2000-2008 the survey was held in each year of the period.

To conduct this part of the project I communicate with Prof. Dr. Yuri Roshin, the head of the Department of Labor and Population Economics, University High School of Economics (Moscow). I will hold an internship for 4 weeks at this Department on March, 2011.

In order to research an “advanced” economy I want to make an empirical analysis on the example of *the United States of America* and *Germany*.

For conducting *the USA* empirical analysis the data on the following surveys will be used:

i) the American Time Use Survey (ATUS). ATUS measures the amount of time people spend doing various activities, such as paid work, childcare, volunteering, and socializing.

ii) the Consumer Expenditure Survey (CE). This program consists of two surveys, the quarterly Interview Survey and the Diary Survey, that provides information on the buying habits of American consumers, including data on their expenditures, income, and consumer unit (families and single consumers) characteristics. The survey data is collected for the Bureau of Labor Statistics by the U.S. Census Bureau.

iii) the Current Population Survey (CPS). CPS is a monthly survey of households conducted by the Bureau of Census for the Bureau of Labor Statistics. It provides a comprehensive body of data on the labor force, employment, unemployment, persons not in the labor force, hours of work, earnings, and other demographic and labor force characteristics.

For the research of the *German* “advanced” economy the European Microdata will be used for the 2000-2008 period. Particularly, I’m interested in European Adult Education Survey (AES), European Union Labour Force Survey (EU-LFS), European Union Statistics on Income and Living Conditions (EU-SILC), Household Budget Survey (HBS). On the website I’ve already investigated the Survey Period, Survey Method, Topics. For the EU-LFS I researched the Data documentation, National questionnaires which were provided by the Eurostat.

For this purpose I contact with Prof. Dr. Christof Wolf, the Scientific Director of the department of Social Monitoring and Social Change, Leibniz Institute for the Social Sciences (GESIS), Germany, and his colleague Dr. Heike Wirth.

References

1. Alvarez, B. and D. Miles (2003): “Gender effect on housework allocation: Evidence from Spanish two-earner couples”, *Journal of Population Economics*, vol. 16, 3.
2. Becker, G. (1965): “A Theory of the Allocation of Time”, *Economic Journal*, 75 (Sept.), 493-517.
3. Benhabib, J., R. Rogerson, and R. Wright (1991): “Homework in Macroeconomics: Household Production and Aggregate Fluctuations”, *Journal of Political Economy*, vol. 99 (6), pp. 1166-1187.

4. Bertrand, Marianne, and Diane Whitmore Schanzenbach. (2009). "Time Use and Food Consumption." *American Economic Review*, 99(2): 170–76.
5. Dynarski, S. and J. Gruber (1997): "Can Families Smooth Variable Earnings?", *Brookings Papers on Economic Activity*, 1, 229-284.
6. Gronau, R. and D. S. Hamermesh (2003): "Time vs. Goods: The Value of Measuring Household Production Technologies", NBER working paper 9650, April.
7. Greenwood, J., R. Rogerson and R. Wright (1995): "Household Production in Real Business Cycle Theory", in T. Cooley, ed., *Frontiers of Business Cycle Theory*, Princeton University Press.
8. Gurley-Calvez, Tami, Amelia Biehl, and Katherine Harper. (2009). "Time-Use Patterns and Women Entrepreneurs." *American Economic Review*, 99(2): 139–44.
9. Hallberg, D. and A. Klevmarcken (2003): "Time for children: A study's of parent time allocation", *Journal of Population Economics*, vol. 16, 205-226.
10. Hansen, G. and R. Wright (1992): "The Labor Market in Real Business Cycle Theory", *Quarterly Review*, Federal Reserve Bank of Minneapolis, spring, pp. 2-12.
11. Hertkorn, G. and M. Kracht (2002): "Analysis of a large scale time use survey with respect to travel demand and regional aspects", mimeo.
12. Ichino, A. and A. Sanz de Galdeano (2003): "Reconciling Motherhood and Work: Evidence from Time Use Data in Three Countries", mimeo.
13. International Labor Office (ILO) and International Monetary Fund (IMF) (2010). "The Challenges of Growth, Employment and Social Cohesion". Joint ILO-IMF conference in cooperation with the office of the Prime Minister of Norway. Discussion document (Oslo, 2010). Available at <http://osloconference2010.org/node/636> [13 Sept. 2010].
14. International Labour Office (ILO) and World Health Organization (WHO) (2009). "The social protection floor: A joint crisis initiative of the UN Chief Executives Board for coordination on the social protection floor" (Geneva, 2009). Available at <http://www.un.org/ga/second/64/socialprotection.pdf> [22 Aug. 2010].
15. Jenkins, S.P. and L. Osberg (2003): "Nobody to play with? The implications of leisure coordination", mimeo.

16. Lukiyanova A., Oshchepkov A. Income mobility in Russia (2000-2005). – Kyiv: EERC, 2009.
17. Netzer, Nick. (2009). "Evolution of Time Preferences and Attitudes toward Risk." *American Economic Review*, 99(3): 937–55.
18. Parente, S.L., R. Rogerson, and R. Wright (2000): “Homework in Development Economics: Household Production and the Wealth of Nations”, *Journal of Political Economy*, vol. 108(4), pp. 680-687.
19. Ramey, Valerie A., and Neville Francis. (2009). "A Century of Work and Leisure." *American Economic Journal: Macroeconomics*, 1(2): 189–224.
20. Ruhm, C.J. (2003): “Healthy living in hard times”, NBER, working paper 9468.
21. Rupert, P., R. Rogerson, and R. Wright (2000): “Homework in Labor Economics: Household Production and Intertemporal Substitution”, *Journal of Monetary Economics*, vol. 46 (3) pp. 557-579.