

MICROECONOMIC DETERMINANTS OF HOUSEHOLD WELFARE IN RUSSIAN SOCIETY

Samandarova Nodira Toir kizi

Teaching assistant at Westminster
International University in Tashkent

Annotation. Central attention of scholars and policymakers has been devoted to measuring the economic wellbeing of the aggregate society by means of households. By conducting household surveys, one might predict the intensity of monetary and fiscal reforms and their ability to affect household final expenditure. This research paper aims at revealing several microeconomic determinants of household expenditure in the Russian society, proposing a model built within the borders of the dataset chosen. Dependent variable, expenditure is chosen as a proxy for a household welfare, as it is a good indicator of permanent income and long-term average wellbeing, while choice of explanatory variables is relied on the opinions of scholars, discussed in the literature review part. I attempt to use the new approach in the case of Russia by following RLMS guidelines to determine the head of the family. As the primary sources, Basic Econometrics (Gujarati et al, 2009) and Introductory Econometrics (Wooldridge, 2016) were utilized.

Key words: per capita expenditure, household consumption, non-consumption expenditure, monetary dimension, living costs, equal allocation, poverty models, economic benefits, income earners, welfare.

МИКРОЭКОНОМИЧЕСКИЕ ДЕТЕРМИНАНТЫ БЛАГОСОСТОЯНИЯ ДОМОХОЗЯЙСТВ В РОССИЙСКОМ ОБЩЕСТВЕ

Аннотация. Основное внимание ученых и политиков было сосредоточено на измерении экономического благосостояния общества в целом с помощью анализа домохозяйств. Проводя обследования домохозяйств, можно предсказать интенсивность монетарных и фискальных реформ, а также их способность влиять на конечные расходы домохозяйств. Целью данной исследовательской работы является выявление нескольких микроэкономических детерминант расходов домохозяйств в российском обществе, с предложением модели, построенной в рамках выбранного набора данных. Зависимой переменной является расход, который выбран в качестве прокси для благосостояния домохозяйства, так как он является хорошим индикатором постоянного дохода и долгосрочного среднего благосостояния. Выбор объясняющих переменных основан на мнениях ученых, обсуждаемых в части обзора литературы. В данной работе предпринимается попытка использования нового подхода для России, с соблюдением рекомендаций RLMS для определения главы семьи. В качестве основных источников были использованы работы "Основы эконометрики" (Гуджарати и др., 2009) и "Введение в эконометрику" (Вулдридж, 2016).

Ключевые слова: расходы на душу населения, потребление домохозяйств, непотребительские расходы, денежное измерение, стоимость жизни, равное распределение, модели бедности, экономические выгоды, получатели дохода, благосостояние.

ROSSIYA JAMIYATIDAGI OILALAR FAROVONLIGINING MIKROIQTISODIY DETERMINANTLARI

Annotatsiya. Olimlar va siyosatchilarning diqqat-e'tibori jamiyatning umumiy iqtisodiy farovonligini o'lchashga qaratilgan bo'lib, bu oilalar tahlili orqali amalga oshiriladi. Oilalar bo'yicha so'rovlar o'tkazish orqali naqd pul va fiskal islohotlarning intensivligini, shuningdek, ularning oilalarning yakuniy xarajatlariga ta'sirini bashorat qilish mumkin. Ushbu tadqiqotning maqsadi Rossiya jamiyatidagi oilalar xarajatlarining bir nechta mikroiqtisodiy determinantlarini aniqlash va tanlangan ma'lumotlar to'plami asosida qurilgan modelni taklif qilishdir. Bog'liq o'zgaruvchi - bu farovonlik proxy sifatida tanlangan xarajat bo'lib, u doimiy daromad va uzoq muddatli o'rtacha farovonlikning yaxshi indikatorini hisoblanadi. Tushuntiruvchi o'zgaruvchilarni tanlash olimlarning fikrlariga asoslangan bo'lib, ular adabiyotlar tahlili bo'limida muhokama qilingan. Ushbu ishda Rossiya uchun yangi yondashuvni qo'llashga harakat qilingan bo'lib, RLMS tavsiyalariga muvofiq oila boshlig'ini aniqlashga e'tibor qaratilgan. Asosiy manbalar sifatida "Ekonometrikaning asoslari" (Gujarati va boshqalar, 2009) va "Ekonometrikaga kirish" (Vuldridj, 2016) asarlari ishlatilgan.

Kalit so'zlar: aholi jon boshiga xarajatlar, uy xo'jaliklarining iste'moli, iste'moldan tashqari xarajatlar, pul o'lchovi, yashash qiymati, teng taqsimlash, qashshoqlik modellari, iqtisodiy foyda, daromad oluvchilar, farovonlik.

INTRODUCTION

Empirical Literature Review

Experts have performed a review on the same question and come up with different conclusions due to various sets of studies or methodology they use. Here are several outcomes of advanced scholars:

Expenditure

Ravallion (2009) focuses on monetary dimension of welfare by adopting natural logarithm of per capita expenditure ($\ln(\text{lexppercap})$) as a regressand in his model. To derive per capita consumption of a household, he divides total consumption expenditure by the number of individuals in the family. Mukherjee and Benson (2011) report that this derivation should assume that the living cost of two or three people is the same as they lived separately and, each member of the household has the equal allocation of items irrespective of gender and age. However, Gounder (2012) argues that the variable proposed by Ravallion is limited with household consumption expenditure, while non-consumption expenditure is also a great determinant of the realized standard of living.

Gender

As household heads are known as main income earners, their characteristics are critical exogenous factors in determining household welfare. Lanjouw (2008) expects male heads to be better-off than their female counterparts. The expectation is proven by

McGregor (2014) that MHHs account for 19% higher per capita expenditure than FHHs, which is also consistent with findings of Adewuyi (2010) in the case of Sierra Leone.

Marital and employment status

Generally, marriage and employment are known as factors that enhance welfare of the household. Lekobane and Seleka (2010) conclude that married HHs attained 17% more per capita expenditure in their families than the households with single heads. The result is the same as Waite (2018) who confirms that marriage adds a potential earner to the family and brings an “array of benefits”. Turning to employment status, HHs engaged in paid employment represented double (51% higher) per capita consumption than those households whose heads are out of paid work in 2009.

Age and household size

AgeHH, AgeHH², Hsize and Hsize² are proposed by Lanjouw in 1995 as crucial variables in determining the wellbeing of families. The coefficients for AgeHH are positive in all surveys, while AgeHH² are negative, which imply human capital theory. The confirmation of studies indicates that as age of HH increases, welfare of the family increases at a decreasing rate, reaches its maximum point and decreases at old age. In contrast, Hsize and Hsize² coefficients are negative and positive respectively due to a propensity to have lower levels of per capita expenditure in larger families (economies of scale). Adewuyi and Akerele (2010) report that AgeHH² is successfully applied in more than 60 models and proved to be concave function of household welfare, while Hsize² is highly associated with dependency ratio and requires further research.

Access to credit

Access to Credit improves the wellbeing of families through smoothing consumption over time; however, the variable is not taken into account in some studies. Kernel distribution outcomes indicate that families with access to credit have 12 percent more per capita expenditure compared to those without access. Bocher (2015) strongly supports that the variable should be taken into account in models dealing with poverty and welfare.

Data Description

The datasets for the analysis are drawn from Russia Longitudinal Monitoring Survey (RLMS) that was conducted by Higher School of Economics in 2013. Initially, household dataset with 1651 variables and 19382 observations is selected to assign household heads, dependent variable and some independent variables (RLMS Dataverse, 2019). The oldest living woman was interviewed in the survey as the person, who knows most about her family. Another peculiarity is that overall, 8707 observations are utilized and all of these individuals are household heads.

The table below demonstrates statistics on dependent variable and the rest dummy and continuous explanatory variables chosen. The number of observations differ among variables due to refusals and no contact, “nobody at home during at least 3 visits”. Refer to *Appendix 1* for the meaning of these variables.

	Lexppca	Gender	Married	Employed	Age	Age ²	Educ	Cred	HHsize	HHsize ²
Mean	9.432	1.284	0.757	0.598	45.27	2360.64	4.69	1.776	2.98	11.53
Median	9.364	1	1	1	43	1849	5	2	3	9
St.dev	0.774	0.451	0.428	0.49	17.62	1771.07	2.134	0.416	1.627	14.02
Minimum	4.66	1	0	0	16	256	1	1	1	1
Maximum	13.475	2	1	1	100	10000	12	2	13	169
Observations	8,180	8,387	8,707	8,707	8,387	8,387	8,351	8,689	8,707	8,707

Table 1. Variable statistics

METHODOLOGY AND MODEL SELECTION

The current research uses cross-sectional data that contains observations and variables at a given point of time (Gujaratti, 2013). As the main aim is to scrutinize and determine household welfare determinants, multiple linear regression analysis with OLS approach is selected to get unbiased estimates relying on survey methods seen above. The expected welfare function is to be estimated as the following:

$$\text{lexppercap} = \beta_0 + \beta_1 \text{genderhh} + \beta_2 \text{married} + \beta_3 \text{employed} + \beta_4 \text{agehh} + \beta_5 \text{agehh}^2 + \beta_6 \text{educhh} + \beta_7 \text{taking_credit} + \beta_8 \text{hh_size} + \beta_9 \text{hhsize}^2 + u$$

RESULTS

All of the coefficients will be interpreted taking into account the condition of *ceteris paribus*, keeping all other things constant.

Log (monthly expenditure per capita)			
<i>Independent variables</i>	<i>Coefficient(β)</i>	<i>St.error</i>	<i>T-statistic</i>
<i>constant</i>	10.9492	0.0901	120.74***
<i>maritStat</i>	0.0663	0.0238	2.78***
<i>empstathh</i>	0.2714	0.0200	13.55***
<i>agehh</i>	0.0105	0.0027	3.83***
<i>agehhsqr</i>	-0.00007	0.00002	2.89***
<i>educhh</i>	0.0513	0.0038	13.43***
<i>taking_credit</i>	-0.5425	0.0200	27.08***
<i>hh_size</i>	-0.2197	0.0173	12.63***

<i>hhsizesqr</i>	0.0121	0.0017	6.79***
gender	-0.1058	0.0199	5.31***
R ²	0.1797		
Number of observations	8129		
F-statistic	197.56		

***p<=0.01

Marital Status, which is significant at 1% implies that a median expenditure per capita is 0.066% higher for married household heads in comparison with unmarried ones. Employment Status turned out to have positive impact on the wellbeing of families with high significance level. A one-year increase in age of family head rises expenditure per capita by 0.01% on average at 1% significance level. P-value of the next dummy variable – taking credit guarantees that households who have an access to credit have 0.54% higher expenditure per capita than those without an access. Lastly, the beta of household size implies that if a household size increases by an additional 1 member, the expenditure per capita decreases by 0.21% on average, and this is statistically significant at 1%.

CONCLUSION

One might conclude from the analysis above that the constructed model turns out to have expected outcomes and fits theories and opinions of scholars relatively including Dong, McGregor, Ravallion etcetera. We find that, on average the wellbeing of Russian households is not too sensitive to changes in various exogenous factors affecting it. Limitations of this study include violations of some abovementioned assumptions and missing observations due to nonresponse bias. Moreover, dependency ratio should also be included, since expenditure per capita may not be the same for each person in the household, including the infants to the old.

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APPENDIX

Summary Statistics of Continuous Variables

<i>lexppercap</i>	Natural logarithm of expenditure per capita
<i>agehh</i>	Age of household head
<i>agehhsqr</i>	Squared age of household head
<i>hh_size</i>	Household size
<i>hhsizesqr</i>	Squared household size

Summary Statistics of Categorical Variables

<i>genderhh</i>	Gender of household head (=1 for male; =2 for female)
<i>educhh</i>	Highest educational level of household head
<i>taking credit</i>	Credit access of household (=1 for access; =2 for no access)

Summary Statistics of Dummy Variables

<i>maritStat</i>	1 if household head is married, = 0 otherwise
<i>empstathh</i>	1 if household head is employed, = 0 unemployed