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The Relationship between Objective and Subjective Economic Well-being in Post-Soviet Russia

Thesis Summary
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Research problem

Since the second half of the 20th century, the issue of quality of life in Third World countries has become a new priority on the international agenda. The new focus initiated a new wave of researchers who study well-being and poverty measurement. As a result, these studies shaped a new sub-discipline "development economics". At the same time, approaches to defining and measuring well-being were evolving. In particular, a shift from materialist towards post-materialist values that occurred in developed countries caused an urgent need for such transformation[1] and led to growth in social demand for a multidimensional concept of well-being that includes both objective and subjective indicators. Experts and researchers increasingly addressed **the limitations of objective socio-economic indicators used to measure well-being**[2]. The economic-oriented (or, so-named, resource based) measurement approach makes well-being a narrow concept by equating well-being to its separate dimension, namely, material welfare. Such issues as measurement errors[3], vagueness of methodological approaches to deriving socio-economic indicators and their comparability across countries, received increasing attention in the literature. Growing awareness of the need to examine subjective indicators[4] led to the emergence of the economics of happiness as a new sub-discipline in the 1970s and its further development.

Subjective indicators deserve particular attention as a separate component of well-being for the reason that, contrary to popular belief, the changes in subjective well-being do not always reflect the dynamics of objective indicators. This is also true for Post-Soviet Russia. According to the survey data, the public perception of

[1] Novikova, S. S. (2017) Koncept schast'ia v usloviiah poiska novoj paradigmy obshchestvennyh nauk. *Social'naia politika i sociologiia*, 16(3), pp. 137 – 143. (in Russian)

[2] Poduzov, A.A., Kukushkin, D.K. (2004) Individual'noe blagososto ianie i ego izmerenie. *Problemy prognozirovaniia*. 2, pp. 115 – 127. (in Russian)

[3] See, e.g. Mankiw, N.G. and Shapiro, M.D. (1986) News or noise: An analysis of GNP revisions. *Survey of Current Business*, 66, pp. 20–25; Smith, R.J., Weale, M.R. and Satchell, S.E. (1998) Measurement error with accounting constraints: point and interval estimation for latent data with an application to U.K. Gross Domestic Product. *The Review of Economic Studies*, 65(1), pp. 109–134.

[4] Piekalkiewitz, M. (2017) Why do economists study happiness? *The Economic and Labour Relations Review*, 28(3), pp. 361–377.

the economic situation in Russia is positive despite the periods of declining economic performance and slowdown in real wages and a range of consumption indicators[5]. The reverse is also true: growth of real income is not always associated with higher subjective well-being. These discrepancies imply that the economic-oriented approach is excessively narrow. We suggest that economic sociology that considers an individual to be a holder of internal and acquired preferences would be more fruitful for studying factors of subjective well-being. The ability of individual preferences to change under the influence of goods and actions of others[6] is a necessary prerequisite to explain discrepancies between objective economic indicators and subjective economic assessments.

The results known in academic literature as the Easterlin paradox, which states that economic growth does not have any significant effect on happiness in a society in the long term (10 years and longer), have been discussed till now[7]. These results became a trigger for the subsequent discussion on the observed gap between objective and subjective measures of well-being. However, this observation is partially explainable. Happiness and subjective well-being are complex concepts and depend on a bunch of factors[8]. Meanwhile, material prosperity constitutes a relatively small part of variation in subjective well-being.

Therefore, in this thesis, we find it reasonable to examine not subjective well-being, but rather a narrower concept **subjective economic well-being**, in other words, individual perceptions of economic standing. This shift of focus is justified. Intuitively, the relationship between objective **economic** well-being and subjective **economic** well-being is stronger as compared with the association between

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[5] Ekonomicheskaya situaciya: monitoring ocenok. *FOMnibus*. [Online] 2016. Available from: https://fom.ru/Ekonomika/13104 [Accessed 03/01/2020]; Rossiyane o krizise: hudshee – uzhe pozadi? *Vserossijskij centr izucheniya obshchestvennogo mneniya (VCIOM).* 2009. Available from: https://wciom.ru/index.php?id=236&uid=2137 (Accessed 03/01/2020); Ovcharova, L.N. (eds.) (2017) *Naselenie Rossii v 2016 godu: dohody, raskhody i social'noe samochuvstvie. Monitoring NIU VSHE. Itogi goda.* Moskva: NIU VSHE. (in Russian)

[6] Weise, P. (1993) Homo Economicus i Homo Sociologicus: monstry social'nyh nauk. *Thesis*, 3, pp. 115 – 130.

[7] Easterlin, R. (1974) Does economic growth improve the human lot? Some empirical evidence. *Nations and Households in Economic Growth*, 89, pp. 89–125.

[8] Karabchuk, T. and Salnikova, D. (2016) Objective and subjective well-being: a comparative analysis of Central Asian countries, Russia and Belarus. *Sociological Studies, 5*, pp. 96 – 109. (in Russian)

economic well-being and **subjective well-being as a whole**. As it was mentioned earlier, there is evidence that public perceptions of material prosperity do not reflect the ongoing changes in economic well-being, especially in a medium-term and long-term perspective. Therefore, the significant gap between objective and subjective economic well-being is more questionable than the observation known as the Easterlin paradox and defines a research puzzle in a more prominent way.

In this study we address the issue of the association between economic well-being and its assessment by the population. To shed more light on the conditions that shape perceptions of economic well-being, we account for the heterogeneity in the effect of individual factors (by the example of the effect produced by social capital indicators) on subjective economic well-being. Specifically, we test the interaction effect of macroeconomic indicators and social capital by using cross-sectional data including data for Russia. Besides, we examine the relationship between real incomes and subjective indicators of economic well-being in Russia and study how this relationship changes over time by testing the theory of adaptation.

Literature review

Such authors as M. Clarke, E. Diener, D. Gasper, S. Linderberg, J. Ormel, A. Sen, N. Steverink, A. Sumner, R. Veenhoven, J. Vitterso contributed to conceptualizing subjective well-being. Issues in the measurement of well-being were addressed by such researchers as A. Cojocaru, E. Diener, M. Diagne, A. Ferrer-i-Carbonell, D. Kahneman, A. Krueger, M. Hadler, M. Haller, R. Layard, A. Sumner.

In Russia, subjective well-being has been studied by L. Belyaeva, T. Karabchuk, P. Kozyreva, M. Krasilnikova, S. Mareeva, G. Monusova, A. Nemirovskaya, E. Ponarin, G. Tatarova, A. Zudina. In particular, G. Voronin, S. Guriev, M. Krasilnikova, T. Karabchuk, L. Rodionova, N. Tikhonova, E. Zhuravskaya addressed the issue of the relationship between objective economic

indicators and their assessment by population. This list does not include researchers of psychological subjective well-being.

Despite a lengthy discussion on the association between economic well-being and subjective economic assessments in the literature, the scope of the thesis is limited to reviewing theoretical and empirical studies on the subject published since 1974. This year is particularly important, considering that R. Easterlin in his paper of 1974[9] highlighted a gap between economic growth and happiness as a puzzle. The findings of R. Easterlin provoked discussion on the association between objective and subjective measures of well-being[10]. Such authors as C. Graham, M. Hagerty, L. McVey, S. Pettinato, B. Stevenson, M. Switek, R. Veenhoven and J. Wolfers contributed to this discussion.

Numerous authors attempted to explain the gap between objective and subjective well-being. For example, R. Gunatilaka, R. Easterlin, J. Knight, M. McBride, E. Proto, A. Rustichini, A. Stutzer focused on material aspirations in their studies. A. Clark, A. Ferrer-i-Carbonell, G. Firebaugh, L. Festinger, R. Muffels, M. McBride, S. Melzer, C. Senik and A. Stutzer developed the social comparison theory. Such researchers as C. D'Ambrosio, N. Bottan, A. Clark, E. Diener, J. Frick, B. Headey, R. Lucas, R. Muffels, S. Melzer, R. Perez-Truglia, G. Wagner analyzed well-being in a dynamic perspective and contributed to testing and validating the adaptation theory. A. Gelman, M. Zelli, G. Kraaykamp, S. Oishi, M. Pittau, J. Rotzer, F. Sarracino, J. Helliwell tested country-level characteristics (for example, income inequality, GDP per capita, unemployment rate) as moderators of the relationship between objective and subjective well-being.

However, the theoretical mechanisms underlying the type of this relationship in Russia remain understudied. For this reason, we suggest that it is important not only to estimate the relationship between objective and subjective economic well-

[9] Easterlin, R. (1974) Does economic growth improve the human lot? Some empirical evidence. *Nations and Households in Economic Growth*, 89, pp. 89–125.

[10] For more details, see Salnikova, D. (2017) The reasons for conflicting results on the relationship between objective and subjective well-being. *Journal of Economic Sociology*, 18(4), pp. 157 – 174. (in Russian)

being but also to define the conditions that shape subjective economic assessments. In line with this idea, the thesis consists of two parts, which study the indicators of economic well-being at micro and macro levels, respectively. Specifically, the first part of the thesis tests whether macroeconomic factors moderate the relationship between individual characteristics (we focus on social capital at the individual level) and subjective well-being[11]. To test the moderation effect, we conduct a cross-sectional study and examine Russia within the context of post-communist countries. The second part of the thesis focuses on indicators of objective and subjective well-being at the individual level. We study how the relationship between objective and subjective well-being changes over time and test whether the adaptation theory is valid for Russia.

Some researchers have already attempted to test the adaptation theory on Russian data. There is evidence that the relationship between income and life satisfaction has a saturation point which equals 60000 rubles measured at the prices of 2012[12]. The positive effect of income on life satisfaction is weaker for more well-off people. The limitation is that the author uses only cross-sectional data for only one period 2012. The analysis captures different income groups, but does not trace income dynamics. However, the question remains whether the given results can be generalized to a longer time period. A similar concern arises with respect to the study by P. Schyns[13]. The author shows that the effect of income change is significant over a one-year period, but loses its significance over a two-year period. Since this conclusion is based on a limited time coverage (1993 – 1995), there is a need in a deeper analysis to make a difference between a short-term and a long-term effects produced by real incomes. One needs a longer time span to reveal these effects. In the thesis we attempt to overcome the given limitations and contribute to testing the

[11] For more details, see Salnikova, D. (2019) Factors of subjective household economic well-being in transition countries: Friends or institutions in need? *International Journal of Sociology and Social Policy*, 39 (9/10), pp. 695-718.

[12] Rodionova, L. (2014) Paradoks Isterlina v Rossii. *Izvestiya Saratovskogo universiteta. Novaya seriya. Seriya: Ekonomika. Upravlenie. Pravo, 14(2),* pp. 386 – 393. (in Russian)

[13] Shyns, P. (2001) Income and satisfaction in Russia. *Journal of Happiness Studies*, 2(2), pp. 173—204.

adaptation theory by analyzing the panel data with the available time span from 2000 to 2017. These data allow tracking the same individuals over the time in contrast to previous studies that compare individuals from different income groups.

Research aim

Specifying and explaining the relationship between objective and subjective economic well-being in post-Soviet Russia.

Research objectives

1. To identify reasons that account for inconsistency in the evidence on the relationship between objective and subjective well-being across previous studies[14]
2. To define the relationship between macroeconomic indicators and subjective economic assessments in post-communist countries including Russia
3. To test whether macroeconomic indicators moderate the relationship between subjective economic well-being and individual-level factors (with a focus on social capital as an individual-level predictor) in post-communist countries including Russia[15]
4. To test the adaptation theory on Russian data and examine the association between objective and subjective economic well-being in the short and long term[16]

[14] The findings are described in: Salnikova, D. (2017) The reasons for conflicting results on the relationship between objective and subjective well-being. *Journal of Economic Sociology*, 18(4), pp. 157 – 174. (in Russian); Karabchuk, T. and Salnikova, D. (2016) Objective and subjective well-being: a comparative analysis of Central Asian countries, Russia and Belarus. *Sociological Studies, 5*, pp. 96 – 109. (in Russian)

[15] The results of the analysis are given in Salnikova, D. (2019) Factors of subjective household economic well-being in transition countries: Friends or institutions in need? *International Journal of Sociology and Social Policy*, 39 (9/10), pp. 695-718.

[16] The results of the analysis are given in: Poretskova, A., Salnikova, D. (2019) Gender differences as a factor behind the relationship between prices and public perceptions of prices. *Monitoring of Public Opinion: Economic and Social Changes*, 6, pp. 452—466. (in Russian); Karabchuk, T. and Salnikova, D. (2016) Objective and subjective well-being: a comparative analysis of Central Asian countries, Russia and Belarus. *Sociological Studies, 5*, pp. 96 – 109. (in Russian); Salnikova, D. (2019) Self-reported material wealth as an indicator of dynamics in real disposable incomes. In: Kuleshova, A. (eds.) Proceedings of the 9th International Sociological Grushin Conference "Social Engineering: Sociology Changing the World", March 2019. Moscow: AO «VCIOM», pp. 368 – 373. (in Russian)

Scientific novelty

1. The author identified reasons that account for inconsistent findings on the association between objective and subjective economic well-being across previous studies. In particular, it is highlighted that subjective economic well-being depends on each country's specific economic and socio-cultural conditions. To account for this cross-sectional heterogeneity and make the findings comparable across countries, the author contributes to testing country characteristics as moderators of the effect produced by individual-level factors on subjective economic assessments. With respect to available longitudinal studies, the results demonstrate inconsistency due to the adaptation effect, which implies that the findings on the association between objective and subjective economic well-being are dependent on the span of time under consideration[17].

2. It is shown that in post-communist countries including Russia such macroeconomic factors as generosity of welfare policy, the ability of government and central bank to control inflation and growth of GDP per capita are not associated with subjective ranking of household economic well-being.
3. The author tests the alternative crowding-in and crowding-out theories on the sample of post-communist countries including Russia. The findings provide evidence for the significant mutual effect of macroeconomic indicators and social capital measured at the individual level on subjective economic assessments. In line with the crowding-in theory, higher generosity of welfare policy institutions and higher ability of government and central bank to control inflation strengthen the positive effect of social capital on subjective economic well-being.
4. The findings confirm that the adaptation theory is relevant to explaining the association between objective and subjective economic well-being in Russia. The effect of changes in real incomes on subjective economic assessments weakens over time. This observation is true for both an increase and a drop in income.

[17] For more details, see Salnikova, D. (2017) The reasons for conflicting results on the relationship between objective and subjective well-being. *Journal of Economic Sociology*, 18(4), pp. 157 – 174. (in Russian)

5. The author reveals significant differences in the adaptation effect among different social groups stratified by gender, education and income. It is shown that, all other variables being equal, males, people with higher education and higher income in Russia tend to adapt faster to changes in real incomes.

Validation of the research results

1. The author applied insights from the empirical analysis to teaching «Panel data: Analysis and Applications for the Social Sciences» and «Multivariate Statistical Analysis» (these courses are taught at the Faculty of Social Sciences of the National Research University Higher School of Economics).
2. The findings of the thesis were presented by the author at three international conferences and a research seminar held at the Chair of Methods of Empirical Social Research at the Otto-Friedrich University of Bamberg. In addition to this, the author gave a lecture "Exploring the nature of well-being: subjective assessments versus a product of social conditions" at the Public Opinion Foundation (Moscow, Russia).
3. The findings of the thesis were used during the implementation of the research project "Factors Accounting for Differences between Consumer Price Dynamics and its Perception by Population: Evidence from Moscow and Krasnodar Krai" funded by the Russian Foundation for Basic Research.

Theoretical framework and hypotheses

The current study contributes to testing the adaptation effect. As a whole, the adaptation theory[18] posits that individuals adapt to consumption. In other words, the marginal utility from consuming each additional unit diminishes gradually, and, as a result, subjective well-being decreases as well. To explain the moderation effect

[18] See, e.g. Bottan, N. and Perez-Truglia R. (2011) Deconstructing the hedonic treadmill: is happiness autoregressive? *Journal of Behavioral and Experimental Economics*, 40(3), pp. 224–236; Clark, A., Frijters, P. and Shields, M. (2008) Relative income, happiness, and utility: An explanation for the Easterlin Paradox and other puzzles. *Journal of Economic Literature*, 46(1), pp. 95-144; Frederick, S. and Loewenstein G. (1999) 'Hedonic adaptation', in Kahneman, D., Diener, E. and Schwarz N. (eds.) *Well-Being: The Foundations of Hedonic Psychology.* New York: Russell Sage Foundation, pp. 302–329.

of macroeconomic indicators[19] on the association between subjective economic well-being and individual-level predictors (we examine social capital at the individual level) we addressed the crowding-in and crowding-out theories. The former states that social capital resources and macroeconomic indicators of well-being mutually strengthen each other[20]. According to the latter, strong social capital offsets poor macroeconomic performance[21].

The thesis focuses on the cognitive dimension of subjective well-being, which suggests that people assess their well-being on the basis of their criteria of "the worst life – the best life"[22]. This dimension is in line with the theoretical framework of the thesis based on relative income theories[23]. The affective component of subjective well-being falls outside the scope of this study since affective well-being is the subject of psychological studies[24]. A bunch of nonsystematic random factors contribute to affective well-being, which leads to comparability and measurement problems.

[19] Salnikova, D. (2019) Factors of subjective household economic well-being in transition countries: Friends or institutions in need? *International Journal of Sociology and Social Policy*, 39 (9/10), pp. 695-718.

[20] Brewer, K, Oh, H. and Sharma, S. (2014) "Crowding in" or "crowding out"? An examination of the impact of the welfare state on generalized social trust. *International Journal of Social Welfare*, 23(1), pp. 61 – 68; Gesthuizen, M., Scheepers, P. and Visser, M. (2018) The crowding in hypothesis revisited: new insights into the impact of social protection expenditure on informal social capital. *European Societies*, 20 (2), pp. 257 – 280.

[21] Arts, W. and van Oorschot, W. (2005) The social capital of European welfare states: the crowding out hypothesis revisited. *Journal of European Social Policy*, 15(5), pp. 5 – 26; Brewer, K, Oh, H. and Sharma, S. (2014) "Crowding in" or "crowding out"? An examination of the impact of the welfare state on generalized social trust. *International Journal of Social Welfare*, 23 (1), pp. 61 – 68; Ostrom, E. (2000) Crowding out citizenship. *Scandinavian Political Studies*, 23(1), pp. 3 – 16.

[22] Veenhoven, R. (2008) 'Sociological theories of subjective well-being', in Eid, M. and Larsen, R.J. (eds.) *The science of subjective well-being.* New York/London: The Guilford Press, pp. 44 – 62.

[23] For more details, see Ferrer-i-Carbonell, A. (2005) Income and well-being: an empirical analysis of the comparison income effect. *Journal of Public Economics*, 89(5/6), pp. 997-1019; Di Tella, R., Haisken-De New, J. and MacCulloch, R. (2010) Happiness adaptation to income and to status in an individual panel. *Journal of Economic Behavior & Organization.* 76(3), pp. 834–852; Paul, S. and Guilbert, D. (2013) Income-happiness paradox in Australia: Testing the theories of adaptation and social comparison. *Economic Modelling*, 30, pp. 900–910.

[24] Bradburn, N. (1969) *The structure of psychological well-being.* Chicago: Aldine; Ryff, C. D. (1989) Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), pp. 1069-1081.

In the thesis we test the following hypotheses:

H1. In post-communist countries including Russia there is no significant relationship between macroeconomic factors and subjective economic well-being.

H2. In post-communist countries including Russia macroeconomic factors moderate the relationship between subjective economic well-being and social capital.

H2.1 In post-communist countries including Russia the positive effect of social capital on subjective economic well-being is weaker under more generous social programs and more effective anti-inflation policy.

H3. In Russia the adaptation effect takes place: subjective economic well-being does not depend on real incomes, but rather on relative income (dynamic changes in income).

The third hypothesis (H3) is in line with previous studies on developed countries which demonstrate that the adaptation theory is relevant to explaining the relationship between subjective and objective economic well-being[25]. We do not have any reasons to suggest that post-communist countries follow a different pattern. There is still no consensus on the type of mutual effect produced by macroeconomic indicators and social capital, so we formulate the first and the second hypotheses (H1, H2, and, in particular, H2.1) on the basis of specificities in social capital and formal institutions in post-communist countries[26].

Methodology

The empirical part of the thesis consists of two parts. A further text presents data, indicators and methods for each of them.

[25] See, e.g Burchardt, T. (2005) Are one man's rags another man's riches? Identifying adaptive expectations using panel data. *Social Indicators Research*, 74(1), pp. 57 – 102; Di Tella, R., Haisken-De New, J. and MacCulloch, R. (2010) Happiness adaptation to income and to status in an individual panel. *Journal of Economic Behavior & Organization*.,76(3), pp. 834–852.

[26] For justification, see Salnikova, D. (2019) Factors of subjective household economic well-being in transition countries: Friends or institutions in need? *International Journal of Sociology and Social Policy*, 39 (9/10), pp. 695-718.

Part 1. Factors of subjective economic well-being in post-communist countries

1.1. Data sources

This part of the analyses estimates the effect of macroeconomic factors on subjective economic well-being in post-communist countries. The analyses are based on the research project “Life in Transition”. This survey has been conducted by the World Bank and the European Bank for Reconstruction and Development since 2006. In the thesis we use the second wave of the survey held in 2010 (this wave aimed to give evidence on how the global economic crisis has affected individual and household well-being). The third wave held in 2016 is not used since this survey asks the questions about the economic crisis and its impact on household well-being only in Greece. The first wave of the Life in Transition survey held in 2006 is inappropriate due to a lack of social capital measures.

The dataset prepared for the first empirical part of the thesis is a cross-sectional sample for 2010 that includes 28,065 observations (28,065 individuals from 29 countries, in particular, Russia). In addition to micro-level survey data, the dataset includes macro-level indicators taken from the Bertelsmann Transformation Index Project and the World Bank.

1.2. Key indicators

The question “Please imagine a ten-step ladder where on the bottom, the first step, stand the poorest 10% people in our country, and on the highest step, the tenth, stand the richest 10% of people in our country. On which step of the ten is your household today?” (ladder ranking) is used as a dependent variable. This indicator reflects how a household head assesses his or her household economic status in relation to others. As predictors of subjective economic well-being, we test social capital indicators, namely, trust in family, trust in friends and acquaintances, trust in “most people” and the number of support sources (people whom one could ask for

help if he or she needed it)[27]. To test the hypotheses about the effect of macroeconomic factors on subjective household well-being, two country-level indicators were selected: "Social safety nets" that reflects the generosity of welfare programs and "Inflation policy" that reflects the ability of formal institutions to control inflation. The data on both of them come from the the Bertelsmann Transformation Index Project. At the household level we control for age and gender of a head of a household, the number of children in a household and a settlement type (specifically, we account for a metropolitan city, urban and rural areas). We suggest that these variables do not create an additional source of endogeneity. At the country level regression models control for growth of GDP (annual %).

1.3. Methods

According to the findings of the previous studies[28], subjective economic well-being varies significantly across individuals and across countries. To account for different sources of variation, we estimate mixed-effects regression models. The key idea of these models is to estimate the average effect produced by explanatory variables in the entire population and to define the the variance of the corresponding effect across the second-level units, i.e. countries. In the thesis we estimate whether macroeconomic indicators ("Social safety nets" and "Inflation policy" indicators) have a significant effect on subjective ranking of household on the ladder of economic standing in post-communist countries. Regression models also include interaction variables to define whether the relationship between social capital and subjective economic well-being depends on objective macroeconomic indicators. To test the robustness of our results, we applied fixed-effects regression analysis as an

[27] For justification of social capital as one of the key individual-level predictors, see: Salnikova, D. (2019) Factors of subjective household economic well-being in transition countries: Friends or institutions in need? *International Journal of Sociology and Social Policy*, 39 (9/10), pp. 695-718.

[28] Biswas-Diener, R., Diener, E. and Vitterso, J. (2005) Most people are pretty happy, but there is cultural variation: The Inughuit, the Amish, and the Maasai. *Journal of Happiness Studies*, 6, pp. 205–226; Headey, B. and Wearing, A. (1992) *Understanding happiness: A theory of subjective well-being*. Melbourne, Victoria, Australia: Longman Cheshire; Lucas, R. E., Clark, A. E., Georgellis, Y. and Diener, E. (2003) Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology*, 84(3), pp. 527–539.

alternative way to model country heterogeneity. It is possible to deal with the dependent variable as if it was an interval one because its scale has 10 categories, which is enough to run linear regression models. However, as a robustness check, we additionally run logistic models.

Part 2. Testing the adaptation theory: evidence from Russia

2.1. Data sources

The second part of the thesis focuses on the association between real incomes and individual perception of economic standing in Russia. While the first part of the thesis provides a cross-sectional analysis, the second one examines how the relationship between objective and subjective economic well-being changes over time. We analyze panel data from the Russia Longitudinal Monitoring Survey – HSE (RLMS – HSE) in regard to the effect of changes in real incomes on subjective well-being of people in Russia. The time span under study is from 2000 to 2017. The reasons why we choose this survey as a data source are as follows:

- The panel design of the RLMS – HSE makes it possible to track the same individuals and households over time. To test whether the adaptation theory is good at explaining the link between objective and subjective indicators of economic well-being in Russia, we need information on the dynamics of real incomes and individual perception of economic standing.
- The RLMS – HSE provides data on alternative measures of subjective well-being, which can be used for robustness checks.
- The RLMS – HSE provides data at the individual level, as well as at the level of households, which makes it possible to account for both individual income and family income distribution.

The final dataset for the second part of the empirical analyses includes 102,562 observations (individuals). The data cover respondents aged 16 and older. First, 16 years is the minimum age for employment in Russia. Second, younger people tend to evaluate their well-being on the basis of affective factors rather than

cognitive components[29], which makes relative income theories not applicable to the youngest group of respondents.

2.2. Key indicators

To measure subjective economic well-being, we use the level of satisfaction with one's own economic conditions at the present time. This indicator is the outcome variable in regression models. The indicators of objective economic well-being used as key explanatory variables are as follows: the total amount of money that an individual personally received in the last 30 days and the total amount of money that a household received in the last 30 days divided by a number of household members. To make the income per capita values comparable across time, we deflated the variable by regional consumption price index (CPI) with 2017 chosen as a reference year. We are aware that these indicators contain a subjective component since the RLMS – HSE provides self-reported income measures, which is a limitation of our study. Additionally, control variables are used: time periods (dummy variables for the survey waves), regional effects (dummy variables for regions), gender (a dummy variable: 1 stands for males, while females are a reference category), age (interval variable in years), age squared (in years squared) to account for the nonlinear effect of age on subjective well-being[30], higher education (a dummy variable: 1 – higher education, 0 – otherwise), type of settlement (a set of dummy variables for cities, regional center cities, urban villages (PGT) and a rural type of settlement), employment status (a dummy variable: 1 stands for the employed, 0 – the unemployed) and marital status (a dummy variable: 1 stands for married, in particular, unmarried couples living together, 0 – otherwise).

[29] Sumner, L.W. (1996) *Welfare, happiness, and ethics.* Oxford: Claredon Press.

[30] Blanchflower, D.G. and Oswald, A.J. (2006) Is well-being U-shaped over the life cycle? *Social Science and Medicine*, 66(8), pp. 1733–1749.

2.3. Methods

To prevent the results from selection bias, we preliminarily tested whether employment status has an effect on the probability of missing values in the income variables. No significant effect was detected. To test whether the adaptation theory can explain the relationship between subjective and objective economic well-being in Russia, we run a series of dynamic regression models. These models include real incomes at the current time period and their lagged values (for earlier years). This specification can be used to estimate the effect of changes in real income over the time. It might be the case that household characteristics (for example, a household structure, a total income earned by all family members) have an impact on individual financial satisfaction.[31]. With this regard, the dataset can be divided into 3 levels with time periods nested in individuals, and individuals nested in larger units of analysis – households. Therefore, for robustness checks we estimate mixed-effects regression models that account for the dependence between people within a household. Since the outcome variable a categorical scale (5 categories), we fit ordinal logistic models to the data.

Statements to be defended

1) In post-communist countries including Russia, macroeconomic factors do not have a significant effect on subjective economic assessments. Such factors as generosity of welfare policy, the ability of government and central bank to control inflation and growth of GDP per capita are not related to subjective ranking of household economic standing.
2) In post-communist countries including Russia, macroeconomic indicators moderate the relationship between individual subjective economic well-being and social capital. Higher generosity of welfare policy institutions and higher ability of government and central bank to control inflation strengthen the

[31] Bradbury, B. (2004) Consumption and the within-household income distribution: Outcomes from an Australian "Natural Experiment". *CESinfo Economic Studies*, 50(3), pp. 501 – 540.

positive effect of trust in family and trust in friends and acquaintances on subjective economic assessments.

3) In Russia, it is the dynamics of real income rather than absolute income that contributes to individual perceptions of one's own economic circumstances. Individuals tend to compare their current economic conditions with their economic standing in earlier time periods. All other variables being equal, an increase in real incomes has a positive effect on satisfaction with one's own economic conditions and individual perceptions of economic standing measured by the ladder ranking question. Symmetrically, drops in real incomes lead to decreasing subjective economic well-being.
4) The adaptation theory explains how the relationship between objective and subjective economic well-being changes over time in Russia. This relationship turns out to be non-linear, specifically, the effect produced by real incomes decreases in magnitude over time. In Russia, subjective economic well-being fully adapts to changes in real incomes, which takes 5 years on average.
5) In Russia there are significant differences in the adaptation effect among different social groups stratified by gender, education and income. All other variables being equal, males, people with higher education and higher income tend to adapt faster to changes in real incomes.

Results

1. Reasons for inconsistency in results of previous studies on the factors subjective well-being

As a part of the thesis, we reviewed empirical research on the relationship between objective and subjective well-being and identified a number of reasons that account for inconsistency in the evidence across these studies[32]. One of such reasons

[32] For more details, see Salnikova, D. (2017) The reasons for conflicting results on the relationship between objective and subjective well-being. *Journal of Economic Sociology*, 18(4), pp. 157 – 174. (in Russian); Karabchuk, T. and Salnikova, D. (2016) Objective and subjective well-being: a comparative analysis of Central Asian countries, Russia and Belarus. *Sociological Studies, 5*, pp. 96 – 109.

is the dependence of factors that shape subjective economic well-being on country characteristics, which is in line with the sociological theory of social embeddedness[33]. This dependence of subjective well-being on each country's specific economic and socio-cultural conditions highlights the importance of justification for choosing an appropriate approach to dealing with cross-sectional heterogeneity (across countries/regions). Mixed-effects modelling and latent curve growth modelling of individual differences are among these approaches. Specifically, particular attention should be given to testing of country-level characteristics as moderators of the relationship between subjective economic well-being and individual-level characteristics. In other words, it is of interest whether the significance of individual-level factors varies across countries.

A number of authors[34] also examine how subjective well-being and its factors vary over time. The reason for inconsistency within this group of studies is that the effect produced by objective economic indicators is not the same, but varies over time due to the adaptation effect. Therefore, the findings depend on a time span used in research. It is important to make a difference between a short-term and a long-term effects of economic indicators on subjective well-being.

Additionally, there are other reasons that account for inconsistency in results of previous empirical studies on subjective well-being and its factors. Researchers may use different peer groups while testing social comparison theories. There is evidence of time, age and cohort effects being confounded[35]. Besides, there is a number of methodological limitations, in particular, difficulties in measurement of

[33]Helliwell, J., Barrington-Leigh, C., Harris, A. and Huang H. (2010) 'International evidence on the social context of well-being', in Diener, E., Kahneman, D. and Helliwell, J. (eds.) *International differences in well-being.* New York: Oxford University Press, pp. 291 – 327; Tov, W. and Diener, E. (2000) 'Culture and subjective well-being', in Diener, E. and Suh, E.M. (eds.) *Culture and subjective well-being.* Cambridge, MA: MIT Press, pp. 9 – 41.

[34] See, e.g. Bottan, N. and Perez-Truglia, R. (2011) Deconstructing the hedonic treadmill: is happiness autoregressive? *Journal of Behavioral and Experimental Economics*, 40(3), pp. 224 – 236; Diener, E. and Fujita, F. (2005) Life satisfaction set point: stability and change. *Journal of Personality and Social Psychology*, 88(1), pp. 158–164.

[35]Yang, Y. (2008) Social inequalities in happiness in the United States, 1972 to 2004: An Age-Period-Cohort analysis. *American Sociological Review*, 73(2), pp. 204 – 226.

latent factors such as a share of shadow economy lead to biased results and make the comparability difficult across countries and over time.

We took into consideration the sources of inconsistency while preparing the empirical part of the thesis. Specifically, to get a better understanding of conditions that shape subjective economic well-being, the first part of the analysis tests country-level characteristics as moderators. The second part tests the adaptation effect as a mechanism that can explain how the relationship between objective and subjective economic well-being changes over time.

2. Macroeconomic indicators as factors of subjective economic well-being

The cross-sectional analysis on the sample of post-communist countries including Russia demonstrates that macroeconomic factors do not have a significant effect on subjective economic well-being[36]. In line with the first hypothesis (H1), our findings show that such factors as generosity of welfare policy ("Social safety nets"), the ability of government and central bank to control inflation and growth of GDP per capita are not related to subjective ranking of household economic standing. This important finding ties well with previous studies wherein a significant gap between objective economic indicators and perception of economic well-being by individuals was revealed[37].

At the same time, we revealed that social indicators (in this study we focus on social capital indicators) have a robust significant positive effect on subjective ranking of household economic standing. It is shown that, all other variables being equal, people who have more trust in family and trust in their friends and acquaintances tend to place their households higher on the ladder of economic standing. Another important finding is that the effect of social capital indicators varies across countries. In this respect, such indicators as trust in most people and the number of support sources demonstrate the highest heterogeneity in the effect

[36] Salnikova, D. (2019) Factors of subjective household economic well-being in transition countries: Friends or institutions in need? *International Journal of Sociology and Social Policy*, 39 (9/10), pp. 695-718.

[37] Gimpelson, V. and Treisman, D. (2018) Misperceiving inequality. *Economics and Politics*, 30(1), pp. 27 – 54.

produced on subjective economic well-being. Specifically, in Poland, Slovakia, Slovenia and the Czech Republic the corresponding effect is significantly more positive than the average for the whole sample. In its turn, in Belarus, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Ukraine trust in most people and the number of support sources do not have any significant effect on subjective economic well-being. The evidence for these differences provoked further interest in identifying country characteristics that moderate the relationship between individual-level characteristics (in the thesis we focus on social capital) and subjective economic well-being. As a result, in the thesis we test the mutual effect of macroeconomic indicators and social capital.

Despite the evidence of low explanatory power of the country-level characteristics, macroeconomic indicators turn out to be significant moderators of the relationship between individual-level factors (namely, social capital) and subjective ranking of household on the ladder of economic standing. This observation confirms our second hypothesis (H2). Higher generosity of welfare policy institutions and higher ability of government and central bank to control inflation strengthen the positive effect of trust in family and trust in friends and acquaintances on subjective economic well-being. This result is in line with the crowding-in theory and contradicts our hypothesis (H2.1) about the offsetting effect of social capital. There are several mechanisms that can explain this finding. One of them is based on the fact that welfare policy institutions shape public attitudes to redistribution. The implementation of generous welfare policies fosters social interactions and forms a normative culture of high solidarity within a society and high interpersonal trust[38]. The other explanatory mechanism focuses on the micro-level perspective[39]. Participating in informal social activities involves some financial

[38] Arts, W. and van Oorschot, W. (2005) The social capital of European welfare states: the crowding out hypothesis revisited. *Journal of European Social Policy*, 15(5), pp. 5 – 26; Gelissen, J., van Oorschot, W. and Roosma, F. (2013) The Multidimensionality of welfare state attitudes: a European cross-national study. *Social Indicators Research*, 113(1), pp. 235 – 255.

[39] Gesthuizen, M., Scheepers, P. and Visser, M. (2018) The crowding in hypothesis revisited: new insights into the impact of social protection expenditure on informal social capital. *European Societies*, 20(2), pp. 257 –280.

costs. It is argued that states' decision to increase support (e.g. to increase social expenditure or to mitigate threat of inflation) by covering basic needs of the disadvantaged positively contributes to the likelihood that people have informal social capital[40].

At the same time there is no evidence for the moderation effect between macroeconomic factors, on the one side, and trust in most people and the number of support sources, on the other. One of possible explanations for the insignificant moderation effect observed in the thesis is the confounded social capital effects. Trust in most people and the number of support sources capture the effect of heterogeneous networks. It is also demonstrated that the radius of "most people" varies significantly across countries[41].

The findings about a weak relationship between objective and subjective well-being imply that well-being cannot be reduced to one dimension and highlight a need in developing multidimensional indices of well-being. Additionally, these findings suggest that it is rather difficult to predict behavioral responses of individuals to changes in country-level economic indicators. The conclusion about a significant mutual effect of macroeconomic factors and social capital allows to consider attempts to explain a gap size between subjective and objective indicators as a fruitful area for further research.

3. Testing the adaptation theory: evidence from Russia

The second part of the analyses investigates whether the adaptation theory can explain the relationship between subjective well-being and real incomes in Russia[42].

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[40] Van der Meer, T., Scheepers, P. and Te Grotenhuis, M. (2008) 'Does the state affect the informal connections between its citizens? New institutionalist explanations of social participation in everyday life', in Meulemann, H. (eds.) *Social capital in Europe: similarity of countries and diversity of people? Multilevel analyses of the European Social Survey.* Leiden: Brill. pp. 41 – 72.

[41] Delhey, J., Newton, K. and Welzel, C. (2011) How general is trust in 'most' people? Solving the radius of trust problem. *American Sociological Review*, 7(5), pp. 786 – 807.

[42] The results of the analysis are given in: Poretskova, A., Salnikova, D. (2019) Gender differences as a factor behind the relationship between prices and public perceptions of prices. *Monitoring of Public Opinion: Economic and Social Changes*, 6, pp. 452—466. (in Russian); Karabchuk, T. and Salnikova, D. (2016) Objective and subjective well-being: a comparative analysis of Central Asian countries, Russia and Belarus. *Sociological Studies, 5,* pp. 96 – 109. (in Russian); Salnikova, D. (2019) Self-reported material wealth as an indicator of dynamics in real disposable incomes.

The results evidence that real incomes have a significant positive effect on the level of satisfaction with personal economic conditions. This observation is true both for personal income and household income per capita. The result is also robust to changes in operationalization of subjective well-being: an increase in real incomes contributes positively to growth of economic satisfaction and individual perception of economic standing measured by the ladder ranking question[43].

The analysis of Russian data confirms that subjective well-being is subject to adaptation, which supports the third hypothesis (H3). It is the dynamics of real income rather than absolute income that contributes to subjective well-being. Individuals tend to compare their current economic conditions with their economic standing in previous years. The estimates of dynamic regression models demonstrate that the effect of income decreases in magnitude over time. This is line with the idea that the marginal utility of consumption decreases, which leads to a drop in economic satisfaction. Another explanation for this result suggested in the literature states that changes in material aspirations are proportional to changes in an individual's earnings[44].

In the long-run, indicators of subjective economic well-being remain relatively stable over time. Short-term changes in subjective economic assessments appear to be more pronounced. Additionally, we took into account the autoregressive component in subjective economic well-being by modelling serial correlation of the dependent variable. These auxiliary models include lagged values of the dependent variable as a predictor. The results confirm that both satisfaction with personal economic conditions and individual perception of economic standing measured by the ladder ranking question have a significant autoregressive component: their current values depend on values of a given variable in earlier time periods. The

In: Kuleshova, A. (eds.) Proceedings of the 9th International Sociological Grushin Conference "Social Engineering: Sociology Changing the World", March 2019. Moscow: AO «VCIOM», pp. 368 – 373. (in Russian)

[43] The original RLMS – HSE question is "And now, please imagine a nine-step ladder where on the bottom, the first step, stand the poorest people, and on the highest step, the ninth, stand the rich. On which step of the nine steps are you personally standing today?"

[44] Easterlin, R. (2001) Income and happiness: towards a unified theory. *The Economic Journal*, 111(473), pp. 465 – 484.

analyses show that the indicators of subjective well-being fully adapt to changes in real incomes, which takes 5 years on average. Specifically, the level of subjective economic well-being returns to its starting point[45] after short-term shocks. In the long-run – namely, the period longer than 5 years – no significant relationship between real incomes and economic satisfaction is observed.

The coefficient estimates for the predictors, in particular, control variables, remain robust to including the lagged variable of real incomes. The only exception was the coefficient estimate for the explanatory variable "gender of an individual". These changes in this estimate could imply that males and females might respond to changes in real incomes in a different way. To account for this suggestion, we tested the adaptation theory separately on the two subsamples divided by gender. The analysis reveals significant gender differences in the adaptation process. For males, the effect of household income per capita in the last 30 days on subjective well-being fades away in 2 years. The female subsample demonstrates that adaptation has a long-term effect and lasts at least for over 5 years. We also revealed significant differences in the adaptation effect among education and income groups. All other variables being equal, people with higher education and higher income tend to adapt faster to changes in real incomes. The relationship between personal income in the last 30 days and satisfaction with one's own economic conditions follows a similar pattern in terms of differences in the adaptation effect among social groups.

From a practical perspective, the findings may be useful in predicting the level of subjective economic well-being. The analyses indicate that, in the long run, absolute real income is weakly associated with subjective economic well-being. To assess how people respond to changes in income, it is necessary to account for social factors and differences in the adaptation process among social groups.

Our results evidence that living in a rural settlement increases the odds of being satisfied with one's own economic conditions. This observation indirectly supports the social comparison effect. We suggest that people living in rural areas

[45] Diener, E. and Fujita, F. (2005) Life satisfaction set point: stability and change. *Journal of Personality and Social Psychology*, 88(1), pp. 158–164.

by comparing themselves to someone worse off tend to rank their economic standing higher than those who live in urban areas. Following the logic described above, living in high-inequality metropolitan cities decreases the level of economic satisfaction. We did not aim to test the effect of social comparison in the thesis, however, to reduce bias in coefficient estimates for the key predictor variables, we controlled for a median income by the type of settlement. The coefficient estimate for this control variable approached the borderline of significance, which means that we cannot draw unequivocal conclusions concerning the importance of social comparison effect in Russia without a more thorough analysis, in particular by specifying peer groups.

The results of the thesis indicate some limitations of economic theories in explaining the origin and sources of variation in subjective well-being. Our analyses suggest that it is more fruitful to apply the economic sociological perspective. In particular, the finding about the mutual effect of social capital and macroeconomic indicators on individual subjective well-being, as well as the revealed differences in the adaptation effect to changes in real income among different social groups, highlight that economic sociology is of particular relevance to studies of subjective well-being.

Publications:

Salnikova, D. (2019). Factors of subjective household economic well-being in transition countries: Friends or institutions in need? *International Journal of Sociology and Social Policy*, 39 (9/10), pp. 695-718.

Poretskova, A., Salnikova, D. (2019) Gender differences as a factor behind the relationship between prices and public perceptions of prices. *Monitoring of Public Opinion: Economic and Social Changes*, 6, pp. 452—466. (in Russian)

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