2019

IARIW-HSE

Special IARIW-HSE Conference "Experiences and Future Challenges in Measuring Income and Wealth in CIS Countries and Eastern Europe" Moscow, Russia, September 17-18, 2019

Gender Differences in Well Being: An Evaluation of CIS Countries

Surajit Deb

Paper Prepared for the IARIW-HSE Conference
Moscow, Russia, September 17-18, 2019
Session 6A: Well-being
Time: 10:15 – 12:15, September 18

29/08/2019

Gender Differences in Well Being: An Evaluation of CIS Countries

Surajit Deb
Aryabhatta College, University of Delhi, India
Email: debsurajit@gmail.com

Abstract

The transition from planned to market economies has brought substantial changes in the lives of both women and men in the CIS region. It is claimed that the women's status has continued to decline in the post-Soviet countries due to persisting gender inequalities in income, economic opportunities, political representation and distribution of unpaid care work. This paper examines the differences in well-being on the four standard pillars of gender disparity, viz., health and survival, educational attainment, economic participation and political empowerment for twelve CIS countries. It is revealed that the progress in health dimension remained the worst for both the male and female population, while the performances in labor market outcomes remained poorer only for the male in the CIS. The composite well-being scores denote that Russia, Ukraine and Kazakhstan occupied the top three ranks in both the male and female ranking. On the contrary, Tajikistan, Armenia and Azerbaijan signified the bottom three countries in male well-being, while Armenia, Belarus and Georgia denoted the same in the female well-being ranking. Overall, there is no evidence of gender inequality in the well-being scores of health, education or employment dimensions, and it is only in the area of government representation that the women seem to be lagging behind the men in the CIS region. (Words: 212)

Keyword: Well-Being, Gender Inequality, Transition Economies, Aggregate Development Indices, Comparative Study of CIS Countries.

JEL: I30, J16, P20, C43, O57.

Paper for the Special IARIW-HSE Conference on Experiences and Challenges in Measuring Income and Wealth in Eastern Europe and CIS Countries, National Research University, Higher School of Economics (HSE), Moscow, Russia, September 17-18, 2019.
Session: 3A: Well-being: Wednesday, September 18, Morning.

Gender Differences in Well Being: An Evaluation of CIS Countries

1. Introduction:

It is commonly held that the economic, social and political problems in the countries of Commonwealth of Independent States (CIS) or Russian Commonwealth have not been fully overcome after the dissolution of Soviet Union and formation of new states. Presently, the living standards in most of the CIS countries remain low with high unemployment rates and limited economic opportunities, which have made the region as important transit areas of irregular migration to member states of the European Union. The development experience across the region has remained diverse and the Human Development Index for the former Soviet Union countries showed wide variations (Brainerd 2010, Rodionova and Gordevva 2010). In addition, countries in the region remained prone to natural disasters or political crises that led to the loss of lives and displacement of mainly women and children. The recent Life in Transition Survey (LiTS-3) of the European Bank for Reconstruction and Development (EBRD) has indicated that the evolution from the planned to market economies has led to several changes in the well-being of both women and men in the CIS region (EBRD 2016). It may be noted that the former Soviet Union had fewer men than women and even today the CIS region stands out from the rest of the world by remaining predominantly female. It is argued in the context of CIS countries that gender equality remained as one of the key legacies of the socialist past before the dissolution of the former Soviet Union. The transition experience after the collapse of the Soviet Union has however resulted in an adverse economic and social transformation that changed the gender balance of the region. Today, there remain systematic inequalities between women and men in income, economic opportunities, political representation and public decision-making and the distribution of domestic and care work in the CIS countries (Rokicka 2008, UNICEF 2009, UNDP 2015, UN Economic Commission for Europe 2016, Khitarishvili 2016, 2018, ILO 2017). Further, the women of this region also experience violence and discrimination on a daily basis, while girl children of the region remain exposed to commercial sexual exploitation (UNDP 2017a and 2017b).

While women represent almost half of the population in CIS countries, the life quality or well-being of the female should not lag behind the male. The aggregate wellbeing indicators may reveal about the magnitude the overall deprivation, but do not pronounce on the gender details of facts. The limited data on women and no systematic possibility to disaggregate most data by gender has made gender disaggregation of well-being difficult. The previous attempts that have provided analysis with respect to the gender inequality of CIS countries recognized both positive indicators and persistent challenges. There also remain gaps in the available statistics for carrying out gender equality analysis in accordance with the Sustainable Development Goals (SDG). A study by United Nations Economic Commission for Europe (UNECE 1999) claimed that the transition countries of the CIS region could gain substantially from the participation of women in the evolution of market economies and democratic societies. World Bank (2011) further indicated that changes in economic growth rates did not lead to gender balance in the region. In this background, this paper is devoted to examining the gender differences in well-being by developing an empirical framework for describing the inequalities across different countries in the CIS region. Our analysis proceeds in two steps; we first develop an empirical framework for describing the inequalities across countries, and subsequently examine the patterns of gender differences within each country in the CIS.

The question of profiling well-being in terms of gender is very crucial since the existing literature indicates that the gender equality targets of the SDG poses a persistent challenge for the CIS countries. This study is therefore devoted to verify the notion of gender differences in the progresses made on well-being in the CIS. To elaborate a little, we use appropriate indicators to construct composite indices to undertake comparison of achievements in each of the four standard dimensions of gender gaps, viz., health and survival, educational attainment, economic participation or opportunity and political empowerment. The aggregate index on each dimension is separately constructed for the male and females groups in 12 nations of the CIS region, viz., Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Turkmenistan, Tajikistan, Ukraine and Uzbekistan. The principal component method is employed to determine the set of weights and derive the composite index. We subsequently use these cross-sectional data to measure the differences between the male and female scores in each of the four dimensions across different countries. The rest of the paper proceeds in the following

sequence. We first discuss the literature on the gender disaggregation of well-being (section 2). Section 3 provides an account of the well-being and gender issues in the CIS countries. We subsequently construct the multiple indicators based dimensional indices for different countries, thus section 4 discusses the methodology of principal component method that is employed for deriving the composite indices. The description of the indicators and their data base used in the construction of each of the indices are discussed in section 5. The analyses of our results are included in section 6. The final section interprets the findings and infers policy implications.

2. Gender Disaggregation of Well Being:

Well-being remains as a subjective, multidimensional concept that defines a given level of physical, material and social welfare. Although, the concept of well-being is widely used, there is no commonly agreed definition and further the various notions of well-being, viz., quality of life, happiness and life satisfaction are often used interchangeably in the literature (OECD 2013). Considering the multi-dimensional approach into the concept of well-being, academicians and think-tanks have identified several dimensions for understanding and measuring people's well-being. These dimensions may include material living conditions and economic well-being that determine people's quality of life. The economic well-being may indicate the ability of individuals to meet their basic needs, viz., food, education, health care, amenities and living conditions. Therefore, the quality of life is often defined by a set of monetary and non-monetary attributes of individuals, which determines the opportunities and life qualities of people. The key concept relating to economic wellbeing however involves economic resources and livelihood opportunities, which may not be guaranteed by the market conditions. Therefore, public policies those ensure equal opportunities and equitable distribution of income and economic growth remains very crucial to the notion of well-being. In other words, societies with a fair distribution of economic resources are more likely to have better health, education, labor market outcomes and equal government representation.

Kabeer (1996) argued that the conventional well-being measures are capable of capturing the male experience; but may remain inconclusive about the women's experience of the same. The gender aspects of the notion of well-being have however remained a relatively under-

researched area, mainly due to the complexities of data collection and analysis. The national statistical system in most countries only includes limited gender-disaggregated data and little information on women. Further, the national surveys may not provide detailed gender disaggregated data on individual topics such as health, education, employment, living standards and business. World Bank (2012) observed that although women have made substantial gains in rights, education, health, access to jobs and livelihoods, many women still continue to struggle in their daily lives with gender-based disadvantages. The issues on gender dimensions of well-being also remain very relevant for the policy makers due to their concerns on gender budgeting or welfare implications on women and children. According to World Bank (2012), there are persistent gender gaps in many indicators of wellbeing that includes health and mortality rates, education, earnings, control over economic resources, access to employment, time use, and power in the public sphere. Gender inequalities have subsequently remained on the development agenda and a number of composite indices, viz., Gender Development Index (GDI), Gender Empowerment Measure (GEM), Global Gender Gap Index (GGGI), Gender Equity Index (GEI), Gender Status Index (GSI) remains available to measure the extent of gender inequalities at the country level in different methodological ways. Subsequently, McGillivray and Pillarisetti (2006), Klassen (2007) looked at issues of adjusting the indicators for gender disparities in the analysis of well-being. It may be noted that the basic difference in women's access to opportunities, asset ownership or labor market participation is often institutionalized through laws and social norms in some cases. Therefore, the elements of gender differences that generally favor men in many societies could have an important bearing on the gender disaggregated well-being indicators. Our motivation for the gender disaggregation of well-being in this study is to inquire the extent to which the country rankings of male well-being indices differ from that of the females in the CIS.

3. Well-Being and Gender Issues in CIS Region:

Gender inequality is experienced differently across countries and regions. In many of the CIS region countries, gender equality persisted as one of the key legacies of the socialist past. It may be noted that the centralized social protection system became ineffective after the collapse of the

Soviet economy. In most of the cases, the reformulated system featured the introduction of privatization, insurance mechanisms and decentralized grant-making, instead of the state funding on social infrastructures. In this context, Dugarova (2016) observed that the principle of universally providing assistance had mostly been substituted by the means-tested support targeting in many of the CIS region countries. Further, the reorganization of their national welfare systems included the decentralization of health and education, introduction of privatization and elimination of subsidies. According to Svejnar (2002), the contemporary social indicators suggested that average living standards during the transition years declined in Russia and the other CIS nations.

It is well-recognized that investments in health and education add to the human capital endowment that shapes the ability of men and women to reach their full potential. It is in fact claimed that the return on health and educational investments could be impressive for the low-income and transition economies that cannot finance such investments on their own and thus depend on the donor funding. An analysis of country comparison reveals that that the public expenditures on health, measured as percent of GDP remained very low in the CIS-7 countries (Georgia, Armenia, Tajikistan, Azerbaijan, Uzbekistan, Moldova and the Kyrgyz Republic). Historically, the governments remained responsible for the health systems with health care expenditures financed from general revenues. As resources became scarce over time, health and educational investments have become insufficient. The lack of public resources is reflected in the decreasing quality of health care and increased out-of-pocket expenditures and the collapse of the public health activities. It is also evident that countries like Armenia, Georgia, Kyrgyz Republic and Moldova made substantial health system reforms, while Uzbekistan, Tajikistan, and Azerbaijan registered very little or no advances in health reforms. It is important to note that a rapid deterioration in all the crucial health indicators, viz., mortality rates, life expectancy and fertility rates has been experienced in all the CIS countries since 1989. At the same time, CIS countries also experienced striking demographic changes to register overall decrease in its population since the ‘nineties (Nikitina 2000). This decrease, which has been contributed by factors like rapid reduction in birth rates, increase in adult mortality and rising migration flows, however, has not been uniform across the CIS region.

Education remained as a basic human right in the former Soviet Union, where intensive efforts were made to improve the access and quality of education. The education system was organized in a highly centralized system with total access and post-educational employment opportunities. A distinctive feature of the system, which remained valid even today, is that a higher educational attainment rates amongst women that contributed to the higher proportions of females in the labor force in many CIS countries. However, the gender difference in CIS economies are frequently highlighted by focusing on the wage disparity, whereby it is argued that women in the public sector face gender pay gaps and glass ceilings in most of the CIS countries. In fact, Khitarishvili (2018) claimed that gender pay gaps in the countries of the FSU remain sizable and in fact higher than other countries at similar levels of development. On the contrary, women's political participation in most of the CIS countries was secured through quotas in their socialist past. However, the shift toward democracy did not led to the increase in women's participation in the parliaments. The study by UNDP (2017a) found that most of the decision-makers in public administration for the Eastern Europe and Central Asian region are men.

The development experience across the transition economies of CIS has been diverse. Russia has remained as a labor migrant recipient country as people from Tajikistan, Uzbekistan, and Kyrgyzstan travel to Russia in search for work and improve their life quality with employment. According to analysts, the labor migration across CIS countries has been influenced by elements of mass repatriation, refugee flows or internally displaced persons or temporary labor migration in the region (Zayonchkovskaya 2002, Abazov 2009, Ivakhnyuk 2009, Chudinovskikh and Denisenko 2014, Tarasyev, et al 2016). It is also argued that the large-scale immigration to Russia has played a critical role in shaping its society and the economy. Thus, while the Russian economy has benefited from the inflow of young work-force, the sending regions stand to gain from the remittances of migrants. Experts, who have examined issues of gender balance for the CIS countries argue that the challenges are low educational attainment, labor market participation and participation in political decision making (Rokicka, 2008, World Bank 2011). The comparative country statistics have demonstrated that there are differences in the types of inequality faced by women in different countries of the CIS on account of access to education and health, or women's economic empowerment and political

representation. According to the World Economic Forum's Global Gender Gap Index (2018) that examines the gap between male and female in four key categories – economic participation and opportunity, educational attainment, health and survival, and political empowerment – Russia is ranked 75th among 149 countries, that stands below Belarus (28), Kazakhstan (60), Moldova (35) or Ukraine (65). On the other hand, countries like Azerbaijan (97), Armenia (98), Georgia (99) and Tajikistan (123) secured ranking at the bottom. The recent reports of UNDP (2017a and 2017b) have indicated that there remains systematic inequalities between women and men in income, economic opportunities, political representation and public decision-making and the distribution of domestic and care work in the CIS countries. Since the previous analyses have identified several challenges to meet the SDG's gender equality targets, the issue of profiling the CIS countries in terms of gender disparity remains important.

4. Methodology:

A major methodological requirement in respect of composite indices occurs in the respect of choice of indicators and selection of appropriate weights. A variety of statistical techniques can be distinguished in the literature that deals with the determination of suitable weighting scheme in specific cases. The derivation of single composite index out of various indicators bears the crucial concern that some of the development (or deprivation) indicators may be inter-linked, and thereby display a high statistical correlation. For instance, studies on gender disparity often found that girl child of illiterate mothers are also malnourished, which would point towards a correlation between the education and health indicators. It is well accepted that the use of equal weights among indicators could encounter the potential problems for the index robustness in case two or more indicators are correlated. In the present case, the correlation table for four dimensions is provided separately for the male and female population, respectively in Appendix Tables 1 to 2. The presence of correlation among the health and education dimension is evident for both the male and female class. When we consider the individual indicators within a particular dimension, the correlation coefficients turned out to be high particularly within the health, education and employment dimensions.[1] Since the use of PCS weights are considered

[1] Since these data are already in the public domain, we do not report the results on correlation matrix.

superior in cases where indicator values are correlated, this paper develops the composite indices by employing the PCA based weights.

This paper develops builds separate wellbeing indices for the male and female population in each of the relevant dimensions, viz., health, education, labor market outcomes and government representation by using appropriate indicators. The principle of PCA lies in finding weights to be given to each of the concerned dimensions, where weights maximize the sum of the squares of correlation of the dimension with the composite index. Suppose that y_1 is a principal component of $x_1, x_2, x_3, \ldots, x_p$, such that: $y_1 = a_{11}x_1 + a_{12}x_2 + \ldots + a_{1p}x_p$. Then the variance of y_1 is maximized given the constraint that the sum of the squared weights of $x_1, x_2, x_3, \ldots x_p$ is equal to one. The PCA determines the weight vector ($a_{11}, a_{12}, \ldots a_{1p}$) by selecting higher weights for those series that vary a lot so that they influence the composite index relatively more. Once the weights are chosen, the first principle component would indicate the dominant pattern of variance in the indicators. The second principal component (y_2) similarly finds out a second a weight vector ($a_{21}, a_{22}, \ldots a_{2p}$) such that the variance is maximized subject to the constraints that it is uncorrelated with the first principal component. This signifies that y_2 has the next largest sum of squared correlations with the original variables, and the variances of the subsequent principal components would be smaller. The analysis also produces an estimate of how much variance in the x's is explained by each principal components.

One problem of using PCA in indexing is to decide on how many components to retain. It can be noticed in the applied literature that using the first principal component has remained the standard practice. To capture the total system variability of the original variables, we could use all the components, but if the first components accounts for a large proportion of the variability (around 70-80%), it implies that there is one dominant component in the underlying variables. In the present analysis we use the first principal component since it explains about 81% of the variance in the data in most cases. In PCA, each of the principal components are described by the pair of *eigen-value* and *eigen-vector*, where each *eigen-value* describe the amount of variance explained by each principal component and the factor-loadings are the coordinates of the *eigen-vector*. The factor-loadings measure the importance of each dimension in accounting for the variability in the particular principal component. The *eigen-vectors* provide the weights to

compute the uncorrelated principal components, and the principal component scores are then worked out as linear combinations of normalized original variables with the factor-loadings as weights.

The construction of the multi-dimensional social development index by using the PCA determined weights requires the application of a series of sequential steps. As our first step, we convert some of the negative indicators into positive indicators. Since the concept of well-being is connected to development, the negative indicators such as, infant mortality rate, adult mortality rate, extent of unemployment and absolute poverty rate are converted to positive statistics by taking the inverse of the respective values. Second, it is important that before we perform the PCA each of the individual indicators must have been normalized and made scale-free. The normalization of data is important given that the indicators are measured in different units and also display widely different means as well as relatively large standard deviations. It is therefore necessary to convert them in some standard comparable units such that the initial scale chosen for measuring them do not bias the results. Thus, each of these raw indicators is mapped onto a unit-free scale by subtracting the lowest value of the particular indicator among states from each of the state's value under that indicator, and then dividing by the indicator-range among states, viz., $(x_{np}-x_{npmin}) \div (x_{npmax}-x_{npmin})$. Subsequently, we work out the dimension specific well-being index for each gender from the relevant variables on each of the four dimensions by employing the method of normal or single stage PCA. The multi-dimensional well-being indices are similarly derived by applying the second stage PCA on the four well-being dimensions. The above method of using the principal component appears to be a better than the method of using simple average of original variables that may have high-degrees of correlation present.

5. Indicators and Data:

The well-being indices are developed for twelve CIS region countries on four pillars, viz., 1) health, 2) education, 3) labor market outcome and 4) government representation, which cover fifteen indicators. The details on various indicators employed under each dimension that are

finally used in the construction of gendered well-being scores along with the account of their data source are discussed below. We have used five indicators under the dimension of health, which are a) Number of Live Births, b) Infant Mortality Rate (Per 100,000 Relevant Population), c) Life Expectancy at Birth, d) Adult Mortality Rate (Per 1000 People), and e) Number of Newly Registered Persons with Disabilities. The annual number of live births is defined as the number of live births taking place in a certain country or area during a year. This data can be obtained from three sources: civil registration systems, sample surveys or censuses, although the civil registration system is considered the best source of information on the number of live births. In most of the countries, it is estimated by applying the reported crude birth rate on the mid-year population. This data has been collected from the Monitoring the Situations of Children & Women in Europe & Central Asia (TransMonEE 2015). The TransMonEE is a research programme that is managed by the United Nations Innocenti Research Centre to systematically monitor indicators of child well-being and other economic and social determinants in the transition economies. [2] The infant mortality rate is used as a measure of human infant deaths in a group younger than one year of age and is considered an important indicator of the overall physical health of a community. It is generally defined as the number of deaths under one year of age occurring among the live births in a given geographical area during a given year, per 1,000 live births occurring among the population of the given geographical area during the same year. This data at the country level have been gathered from TransMonEE (2015). The life expectancy at birth is defined as how long, on average, a newborn can expect to live, if current death rates do not change. It reflects the overall mortality level of a population and describes the mortality pattern that prevails across all age groups in a given year – children and adolescents, adults and the elderly. The life expectancy at birth is one of the most frequently used health status indicators for gender equality comparisons. The gains in life expectancy can be attributed to rising living standards, better education and access to health services. This data have been collected from the Human Development Report website of the United Nations Development Programme (UNDP

[2] UNICEF started a research programme called “Impact of Transition”, later came to be known as TransMonEE to assess the consequences of unprecedented social transformation in the transition economies for children. The programme evolved over years and transformed from a programme to monitor transition (Transition Monitoring in Eastern Europe) to a programme to monitor the children’s situation facing inequities as guaranteed by the Convention on the Child Rights (Transformative Monitoring for Enhanced Equity).

2017). The adult mortality rate represents the probability that a 15 year old person will die before reaching his or her 60th birthday if subjected to age-specific mortality rates between those ages for the specified year. The level of adult mortality is increasingly becoming an important well-being indicator considering the growing number of ageing population and death burden from non-communicable diseases. The adult mortality rates for males are generally found to be higher than that of the females in all regions and every country. It is estimated by using the current life table mortality rates current cohort of 15 year old population. This data is also collected from (UNDP 2017). The persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others. The National Statistical Offices involved in the TransMonEE Project started developing data related to children with disabilities on the basis of common definition of disability since 2013. We have compiled these data TransMonEE (2015).

We consider four indicators within the educational dimension, which are: a) Enrolment in Primary (ISCED 1) Education, b) Population (25 Plus) with some Secondary Education, c) Mean Years of Schooling, and d) Enrolment in Tertiary (ISCED 5) Education. The International Standard Classification of Education (ISCED) of the United Nations Educational, Scientific and Cultural Organization (UNESCO) provides the statistical framework for assembling, compiling and analyzing educational statistics both within countries and internationally. The primary education (at ISCED level 1) provides students the fundamental skills in reading, writing and mathematics and establishes the foundation for learning and understanding core areas of knowledge. Typically, there is one main teacher responsible for a group of pupils and the age of entry is between 5 to 7 years. The primary education typically lasts until age 10 to 12 and upon completion, children may continue their education at ISCED level 2 (lower secondary education). These data are provided by TransMonEE (2015). The population (25 plus) with some secondary education captures the percentage of the population aged 25 and older that reached at least a secondary level of education. On the other hand, the mean years of schooling is a calculation of the average number of years of education received by people of age 25 and above in their lifetime based on education attainment levels of the population converted into years of schooling based on theoretical duration of each level of education attended. These two data

series are gathered from UNDP (2017). The short-cycle tertiary education (ISCED 5) is designed to provide professional knowledge, skills and competencies, prepare students to enter the labor market. The entry into ISCED level 5 programmes requires successful completion of ISCED level 3 or 4 with access to tertiary education and completion of ISCED 5 may also provide an entry to other tertiary education programmes. This data is sourced from TransMonEE (2015).

We have employed five variables to measure the gender aspects of well-being in the dimension of employment, viz., a) labor force participation rate (15 Plus), b) annual average monthly wage (USD), c) registered unemployed persons (age 20-24), d) share of employment in non-agriculture, and e) absolute poverty rate. The labor force participation rate measures an economy's active labor force and is the sum of all employed workers divided by the working age population. It refers to the number of people who are either employed or are actively looking for work. These data have been gathered from UNDP (2017). The average wages are generally obtained by dividing the national-accounts-based total wage bill by the average number of employees in the economy, which is then multiplied by the ratio of the average usual weekly hours per full-time employee to the average usually weekly hours for all employees. For our purpose, this data has been sourced from TransMonEE (2015) database. The magnitude of registered unemployment with the employment services remain as very common reference for the labor market policies at the national level. These estimates capture the number of people who are registered as unemployed and available for work and thus entitled to receive any benefits. These data have been collected from TransMonEE (2015). The share of women in wage employment in the non-agricultural sector is expressed as a percentage of female workers in total wage employment in the non-agricultural sector. This indicator measures the degree to which labor markets are open to women in industry and services sectors. We have gathered these data from UNDP (2017) data source. The poverty rate denotes to the ratio of the number of people whose income falls below the poverty line. The absolute poverty refers to a situation when household income is below a certain level, which makes it impossible for the person or family to meet basic needs of life including food, shelter, safe drinking water, education, healthcare, etc. The requirement of tis data have been met from the TransMonEE (2015) database. Finally, the proportion of seats held by women and men in the national parliament have been used as the only indicator for the government representation dimension.

We have used the data from the UNDP (2017) data base. The twelve CIS countries that are covered in our analysis are: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Turkmenistan, Tajikistan, Ukraine and Uzbekistan. Table 1 provides a listing of all the fifteen indicators under four dimensions along with their reference years.

6. Results:

The presentation of results are divided into four different focus areas, viz., i) male and female well-being in individual dimensions, ii) dimensional ranking of well-being for male and female population, iii) comparison of male and female well-being in individual dimensions, and iv) country ranking of composite indices of male and female well-being.

6.1 Male and Female Well-Being:

The individual country's positions in all the four constituent well-being dimensions are provided in Figure 1 and 2, respectively for the male and female populations. Thus, Figure 1 captures the scores of male population for each of the twelve CIS region countries in all the four development dimensions, viz., health, education, employment and parliament representation. It can be observed that all the twelve CIS countries recorded positive scores in the dimensions of education and parliament representation. However, nine and eight countries out of the sample of twelve countries failed to register a positive score in the dimensions of health and employment, respectively. Thus, Kazakhstan, Russia and Ukraine remained the only three countries that recorded positive health scores for the male population. Similarly, Belarus, Kazakhstan, Russia and Ukraine happened to be the only nations, where positive scores for the male in employment dimension is witnessed. The female scores in the four development dimensions are subsequently provided for the same CIS region in Figure 2, which reveals positive scores in the dimensions of education, employment and parliament representation for all the twelve countries. As regards the dimension of health, seven out of the sample of twelve countries registered negative scores for the females. Thus, Kazakhstan, Russia, Turkmenistan, Ukraine and Uzbekistan turned out to be the countries that recorded positive health scores for the female population. A comparison of Figure 1 and 2 apparently suggests that the well-being for the female remained superior to that of

the males in the employment dimension, as the observed scores remained superior in larger number of countries. It is also apparent that the country performances continued to be unequal across the four development dimensions for both the male and female population, and further the discrepancies were significant in the health and employment dimensions. In sum, Russia and Kazakhstan can be observed to have performed better in various dimensions as compared to other CIS region countries.

(Insert Figure 1 and 2)

6.2 Dimensional Ranking of Well-Being:

In Figure 3 through 6, we provide the country ranking of male and female wellbeing side-by-side in the dimensions of health, educational attainment, employment and government representation. The ranking of health scores, which are built over five indicators, are separately provided for the male and female population of individual countries in Figure 3. It is again disclosed that only three and five countries indicated positive scores in the dimension of health for the male and female population, respectively in the CIS region. The nations of Russia, Ukraine and Kazakhstan belonged to the top three ranks, while Armenia, Tajikistan and Azerbaijan occupied the lowest three positions in the male health ranking. The individual nation's female health scores that are provided in the same figure, indicates that the top and bottom positions remained almost comparable as in the male health ranking. Thus, while the top ranking remains the same, the bottom positions are occupied by Armenia, Georgia and Azerbaijan. The country-wise educational scores that are built over four indicators are provided in Figure 4, where positive scores can be noticed for both the male and female counterparts in all the twelve countries. The top positions in male educational scores are captured by Russia, Ukraine and Uzbekistan, while Moldova, Armenia and Turkmenistan represented the lowest three ranks. In the case of female educational scores, the top positions are occupied by Russia, Kazakhstan and Uzbekistan, while Turkmenistan, Moldova and Armenia remained in the lowest three ranks.

(Insert Figure 3 and 4)

The ranking of scores in labor market outcomes (or employment), which are built over five indicators, are provided in Figure 5 for the male and female population of CIS countries. It

is observed that only four countries reveal positive scores for the male as against all positive scores for the female population in our sample. Thus, Kazakhstan, Moldova and Belarus belonged to the top three ranks, while Tajikistan, Kyrgyzstan and Uzbekistan occupied the lowest three positions in the male labor market ranking. The individual nation's female scores denoted that the top positions are captured by Kazakhstan, Belarus and Azerbaijan, while the bottom positions are occupied by Tajikistan, Kyrgyzstan and Moldova. The ranking of countries according to the parliament representation score provides a somewhat different order for both the male and female population. Further, one can notice positive scores for both the male and female counterparts in all the twelve countries. However, the topmost position in male scores is now occupied by Ukraine, Georgia and Russia, while Belarus, Turkmenistan and Moldova represent the bottom three ranks (Figure 6). On the other hand, Belarus, Turkmenistan and Moldova remained in the top position in the female parliament representation score, with Ukraine, Georgia and Russia implied the lowest three ranks.

(Insert Figure 5 and 6)

6.3 Comparison of Male and Female Well-Being:

We subsequently examine the inequality between male and female wellbeing scores in each dimension for the twelve CIS region countries. Thus, Figure 7 through Figure 10 provides the comparative scores of male vis-à-vis female wellbeing for each country in the dimension of health, educational attainment, employment and government representation, respectively. Figure 7 infers that Russia stands out among all the countries in terms of its performances in the health dimension for both the male and female population. Although, some distinct male-female inequality is evident for Tajikistan, Uzbekistan, Russia, Turkmenistan and Azerbaijan, there is no clear indication to suggest that the male performances were better in the CIS region. In fact, the well-being in health remained stronger for female in nine out of twelve countries. It is only in the countries of Belarus, Georgia and Moldova that the male scores performed better than female scores in this dimension. Correspondingly, when we focus on the dimension of education, the male and female well-being scores for Russia and Kazakhstan remained prominent in the entire CIS region. Some major divergences between the male-female educational scores are also observed for the countries of Kazakhstan and Ukraine. The group well-being scores however

remained superior for the male in seven out of twelve countries in the sample, leaving aside Azerbaijan, Russia, Tajikistan, Ukraine and Uzbekistan.

(Insert Figure 7 and 8)

As the gender gap in the world of work is concerned, the male-female differences remained very sharp in almost all the CIS region countries, particularly for Kazakhstan, Azerbaijan, Georgia, Uzbekistan, Belarus and Turkmenistan. However, while the gender gap in the labor market has remained as the most pressing global challenge, the CIS region countries indicated better wellbeing scores for the females, thereby disproving any discrimination against women. Finally, the parliament representation scores indicated some major variances between the male-female population for Belarus, Ukraine, Georgia, Russia, Uzbekistan and Azerbaijan. Further, the indication of gender inequality in terms of lower women's participation in government is suggested for all nine out of twelve countries, except for Belarus, Turkmenistan and Moldova. Overall, there is no evidence of gender inequality in the well-being scores of health, education or employment dimensions, and it is only in the area of government representation that the women of the CIS region seem to be lagging behind the men.

(Insert Figure 9 and 10)

6.4 Country Ranking of Composite Indices:

Figure 11 ranks all the countries separately for the male and female population on the basis of their aggregate wellbeing scores build over four dimensions covering fifteen indicators. It is revealing that the composite score of only six and four countries for the male and female, respectively, remained in the positive range in the sample. Alternatively, the composite scores of six countries for the male and eight countries for the female remained in the negative range. Thus, the countries of Russia, Ukraine and Kazakhstan occupied the top three ranks in both the male and female ranking. On the other hand, while Tajikistan, Armenia and Azerbaijan signified the bottom three countries in the male well-being, Armenia, Belarus and Georgia denoted the bottom three countries in the female well-being ranking.

(Insert Figure 11)

7. Policy Implications:

Gender parity remains a foremost human right concern and is also seen as a determinant of economic growth and development in the SDG. It may be noted that each of the break-away CIS countries from the former Soviet Union followed a distinctive transition course and therefore the progress remain diverse both in terms of the people's well-being or gender disparity indicators. The analysis of available data on the status of women and men in the CIS countries has identified positive trends in some indicators but certain long-standing gender imbalances in others. The low health attainments, labor market participation and political representation of women are often proclaimed as the major gender challenges in the CIS. The CIS member states are taking decisions to amend the gender strategies and adopting plans to meet the SDG agendas. According to the UNDP's Gender Inequality Index, nearly all transition countries have made progress toward gender equality since 2000 but only a few of them are close to achieving gender parity at all levels. The latest gender parity ranking of the World Economic Forum (2018) revealed that women in Belarus have equal opportunity with men in economic participation (6th place globally), however, the overall ranking remains 28th due to the low scores in education and political empowerment dimensions. Kazakhstan and Ukraine experiences a widening of its gender gap in women's work participation, while Kyrgyz Republic remains stable in most indicators. The Russian Federation (75) covered up its gender gap in secondary education and also marked improvements in wage equality and women's share of legislators. Azerbaijan (97) and Armenia (98) registered improvements in education but remained among the worst-performing countries globally on the health sub-index. While these two countries remain at the bottom of the ranking, Tajikistan (123) takes the lowest rank in regional table.

Gender equality ensures that men and women are equal so that it does not shape the live experiences, and therefore imply fewer gaps in well-being between males and females. The objective of the present paper was to examine the gender differences in the progresses made on well-being in the CIS region. For this, we constructed composite indices from appropriate indicators on four standard dimensions of gender gaps, viz., health and survival, educational attainment, economic participation or opportunity and political empowerment. It is revealed that the progress in the health dimension remained worst for both the male and female population in the CIS. On the contrary, the performances in the labor market outcomes remained poorer only

for the male, but not for the male population. It is also indicated that Russia, Ukraine and Uzbekistan remained the best performers for both the male and female population of CIS region in the dimensions of health, education and parliament representation, but not in the labor market. However, the females in the same three countries lagged behind the males on parliament representation. Countries like Armenia, Tajikistan, Azerbaijan, and Kyrgyzstan remained the worst performers in almost all the development dimensions. It is suggested that Russia, Kazakhstan, Ukraine and Uzbekistan stand out in terms of their performances in maximum number of development dimensions. The composite well-being scores also denote that the performances of countries like Armenia, Tajikistan, Azerbaijan and Belarus remained low for both the male and female population. Overall, there is no evidence of gender inequality in the well-being scores of health, education or employment dimensions, and it is only in the area of government representation that the women of the CIS region seem to be lagging behind the men.

The transition process from planned to market economies has brought substantial changes in the CIS region. It is sometimes argued that poverty, emerging from adverse consequence of the transformation process or inequality, emerging from uneven income distribution, continues to persist in most of today's CIS region countries (Simai 2006, Slay 2009). In this context, one possible weakness of this study could be that it considers only the common dimensions of well-being and leaves out the aspects of poverty, unpaid work and migration into the analysis.

Bibliography

Abazov, R. 2009. Current Trends of Migration in the Commonwealth of Independent States, Human Development Reports Research Paper 2009/36, United Nations Development Programme. CIS-83

Battalova, A.R and I.A. Abdullin. 2014. Socioeconomic Processes in the CIS Countries, Mediterranean Journal of Social Sciences, 5(24), November.

Brainerd, Elizabeth. 2010. Human Development in Eastern Europe and the CIS since 1990, Human Development Research Paper 2010/16, United Nations Development Programme.

Chudinovskikh O., Denisenko M. 2014. Population Mobility in the Commonwealth of Independent States: Whither Common Migration Policy? CARIM-East Research Report. CMR Working Papers No. 74 (132). Warsaw: Centre of Migration Research, University of Warsaw.

Dugarova, E. 2016. Implementing SDG 1: Poverty Eradication through Family Support Policies and Social Protection Measures in Transition Countries. Paper prepared for Expert Group Meeting: Family Policies and the 2030 Agenda, United Nations Department of Economic and Social Affairs, New York: United Nations. http://www.un.org/esa/socdev/family/docs/egm16/EsunaDugarova.pdf

European Bank for Reconstruction and Development (EBRD). 2016. Life in Transition, (LiTS- European Bank for Reconstruction and Development: London. (Available in: www.litsonline-ebrd.com).

International Labor Organization. 2017. Gender and Youth Employment in the Commonwealth of Independent States: Trends and Key Challenges, The Decent Work Technical Support Team and the ILO Office for Eastern Europe and Central Asia, ILO: Moscow.

Ivakhnyuk, Irina. 2009. Russian Migration Policy and Its Impact on Human Development, Human Development Reports Research Paper 2009/14, United Nations Development Programme. CIS-58

Kabeer, N. 1996. Agency, Well-being & Inequality: Reflections on the Gender Dimensions of Poverty, IDS Bulletin 27(1):11 – 21, January, https://doi.org/10.1111/j.1759-5436.1996.mp27001002.x.

Khitarishvili, T. 2016. Gender Dimensions of Inequality in the Countries of Central Asia, South Caucasus, and Western CIS, Working Paper No. 858, Levy Economics Institute of Bard College: New York, (Available in: http://www.levyinstitute.org).

Khitarishvili, T. 2018. Gender Pay Gaps in the Former Soviet Union: A Review of the Evidence, Working Paper, No. 899, Levy Economics Institute of Bard College: New York.

Klasen, Stephan. 2007. Gender-related Indicators of Well-being. In M. McGillivray (ed.), Human Well-Being, Palgrave United Nations University, 2007.

McGillivray, Mark and Pillarisetti, J. R. 2006. Adjusting Human Well-being Indices for Gender Disparity: Insightful empirically? In Mark McGillivray and Matthew Clarke (2009, Edited). Understanding Human Well-being, Tokyo: United Nations University Press.

Menchini, L. and Sheila Marnie (2007), Demographic Challenges and the Implications for Children in CEE/CIS, Innocenti Working Paper No. 2007-01, UNICEF Innocenti Research Centre, Florence.

Nikitina, S. V. 2000. Population Decline and Population Ageing in the Russian Federation, UN/POP/PRA/2000/13, Population Division, Department of Economic and Social Affairs, New York: United Nations. CIS-82

Organization for Economic Cooperation and Development. 2013. OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth, OECD Publishing: Paris. (Available in: https://doi.org/10.1787/9789264194830-en).

Rodionova, I. and A. Gordevva (2010). Human Development Index and Information of Society in CIS, Bulletin of Geography, Socio-Economic Series No. 13/2010, DOI: http://dx.doi.org/10.2478/v10089-010-0006-1.

Rokicka, Magdalena. 2008. "Gender Gap in the CIS Region," CASE Network Studies and Analyses 0376, CASE-Center for Social and Economic Research.

Simai, M. 2006. Poverty and Inequality in Eastern Europe and the CIS Transition Economies, DESA Working Paper No. 17, ST/ESA/2006/DWP/17, February 2006, United Nations Department of Economic and Social Affairs: New York (Available in: http://www.un.org/esa/desa/papers).

Slay, Ben (2009). Poverty, Inequality, and Social Policy Reform in the Former Soviet Union, Regional Bureau for Europe and CIS, United Nations Development Programme,, New York, (Available in: http://europeandcis.undp.org/).

Svejnar, Jan, 2002. Transition Economies: Performance and Challenges. Journal of Economic Perspectives, 16 (1), pages 3–28, Winter.

Tarasyev, A; Cao, G; and Rovenskaya, E. 2016. Migration Flows and Effects in the CIS Countries—Dynamic Modeling, pp. 799-814, Modern Economy, Vol.7, 2016, http://dx.doi.org/10.4236/me.2016.77082.

The United Nations Children's Fund. 1999. Women in Transition, The MONEE Project Regional Monitoring Report 6, UNICEF: Florence. (Available in: www.unicef-irc.org).

The United Nations Children's Fund. 2013. Education Equity Now, UNICEF Regional Office for CEE/CIS, United Nations Children's Fund (UNICEF, Geneva, (Available in: www.unicef.org/ceecis).

The United Nations Children's Fund. 2015. Social Protection for Child Rights and Well Being, Regional Office for CEE/CIS, United Nations Children's Fund (UNICEF, Geneva, (Available in: www.unicef.org/ceecis).

United Nations Development Programme. 2015. Closing the Gap: An Overview of UNDP Results in gender Equality in Europe and the CIS, United Nations Development Programme, Regional Bureau for Europe and the CIS: Istanbul, (Available in: http://www.eurasia.undp.org).

United Nations Development Programme. 2017a. Gender Equality in Public Administration: Snapshot of Eastern Europe and Central Asia, Regional Bureau for Europe and the CIS, UNDP: Istanbul.

United Nations Development Programme. 2017b. Gender Equality and Women's Empowerment in Europe and Central Asia, http://www.eurasia.undp.org.

United Nations Economic Commission for Europe. 2009. Mainstreaming Gender into Economic Policies: Trends and Challenges for Central Asian and Caucasian Countries, United Nations Research Report 2009, United Nations Development Account Project on Strengthening Social Inclusion, Gender Equality and Health Promotion in the Millennium Development Goals (2006-2009). (Available in: www.unece.org/.../Gender/.../UNECE_2009_UNDA_Mainstreaming%20gender%20e...).

United Nations Economic Commission for Europe. 2016. Status of Women and Men in the CIS Countries, Working Paper 4, 1-3 June 2016, United Nations Economic Commission for Europe: Lithuania. (Available in: www.unece.org/fileadmin/DAM/.../documents/.../2016/.../WP4_CISStat_ENG.).

World Bank. 2011. Emerging Europe and Central Asia - Opportunities for Men and Women, Report No. 65189, Washington, DC: World Bank. (Available in: https://openknowledge.worldbank.org/handle/10986/2820).

World Bank. 2012. World Development Report 2012, Gender Equality and Development , Washington D.C.: World Bank.

World Economic Forum (2018): The Global Gender Gap Report, WEF: Geneva, www.weforum.org

Zayonchkovskaya, Zhanna. 2002. Recent Migration Trends in the Commonwealth of Independent States, International Social Science Journal, 52 (165), September, pp. 343-355. CIS-57

Table 1: Dimensions and Indicators of Well Being, Male and Female.

Dimensions/Indicator	***Data Base***
Dimension: Health	
Number of Live Births	Monitoring the Situations of Children& Women in Europe & Central Asia TransMonEE (2015).
Infant Mortality Rate (Per 100,000 Relevant Population)	TransMonEE (2015).
Life Expectancy at Birth	UNDP (2017).
Adult Mortality Rate (Per 1000 People)	UNDP (2017).
Number of Newly Registered Persons with Disabilities	TransMonEE (2015).
Dimension: Education	
Enrolment in Primary (ISCED 1) Education	TransMonEE (2015).
Population (25 Plus) with some Secondary Education	UNDP (2017).
Mean Years of Schooling	UNDP (2017).
Enrolment in Tertiary (ISCED 5) Education	TransMonEE (2015).
Dimension: Employment	
Labor Force Participation Rate (15 Plus)	UNDP (2017).
Annual Average Monthly Wage (USD)	TransMonEE (2015).
Registered Unemployed Persons (Age 20-24)	TransMonEE (2015).
Share of Employment in Non-Agriculture	UNDP (2017).
Absolute Poverty Rate	TransMonEE (2015).
Dimension: Parliament Representation	
Share of Seats in Parliament	UNDP (2017).

Data Source: UNDP (2017) from http://hdr.undp.org/en/data, and TransMonEE (2015) from http://transmonee.org.

Figure 1: Male Wellbeing of CIS Region in Individual Dimensions.

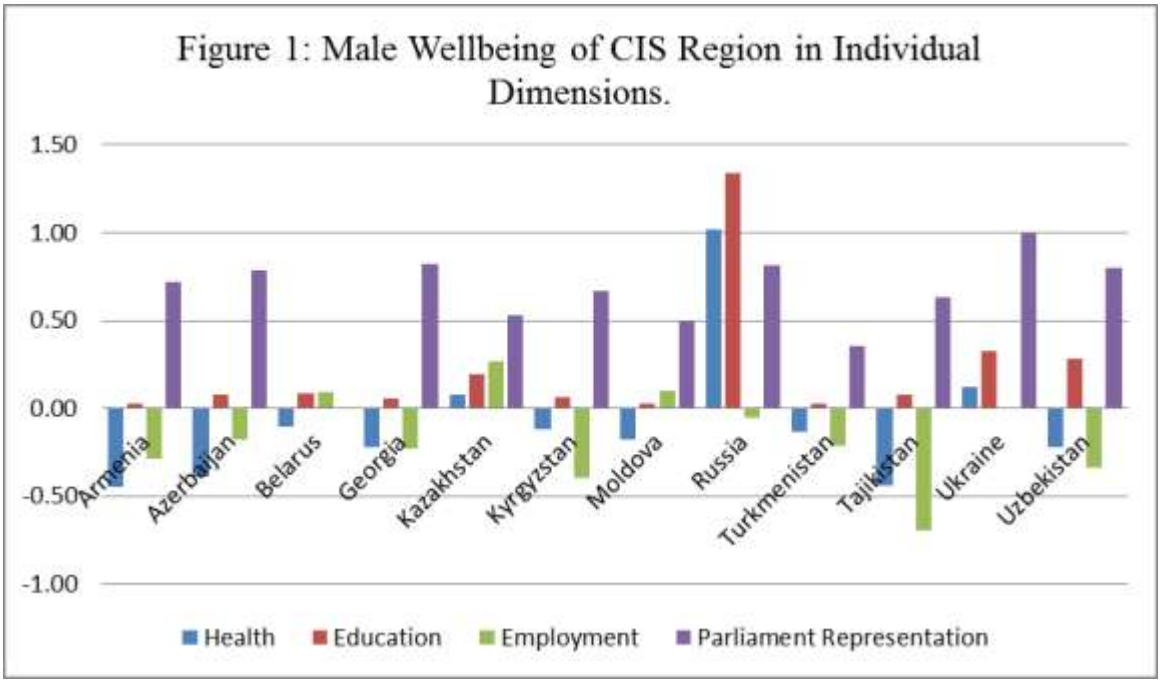
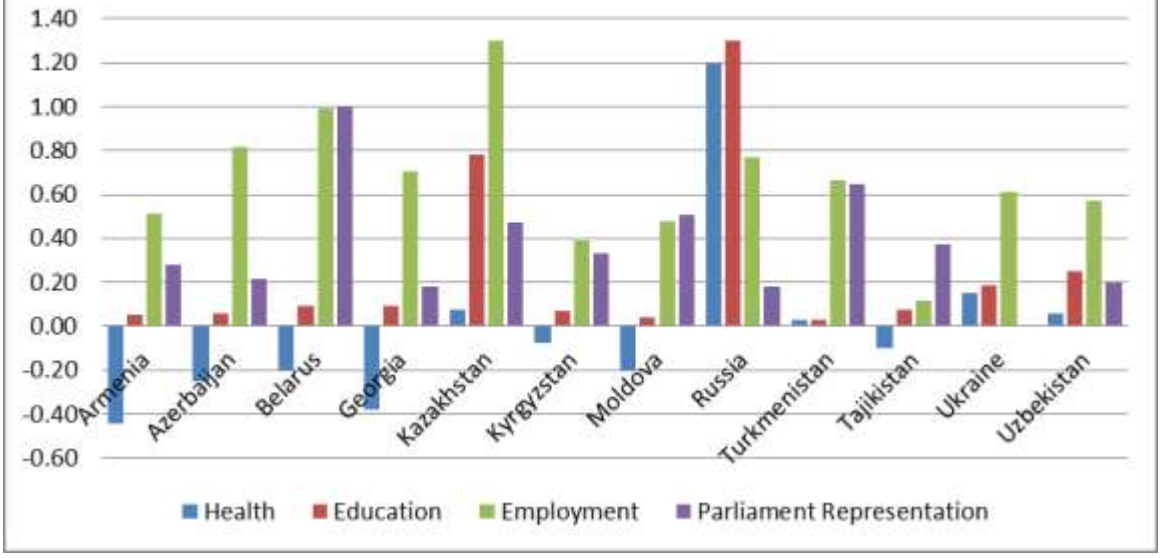


Figure 2: Female Well-being of CIS Region in Individual Dimensions.



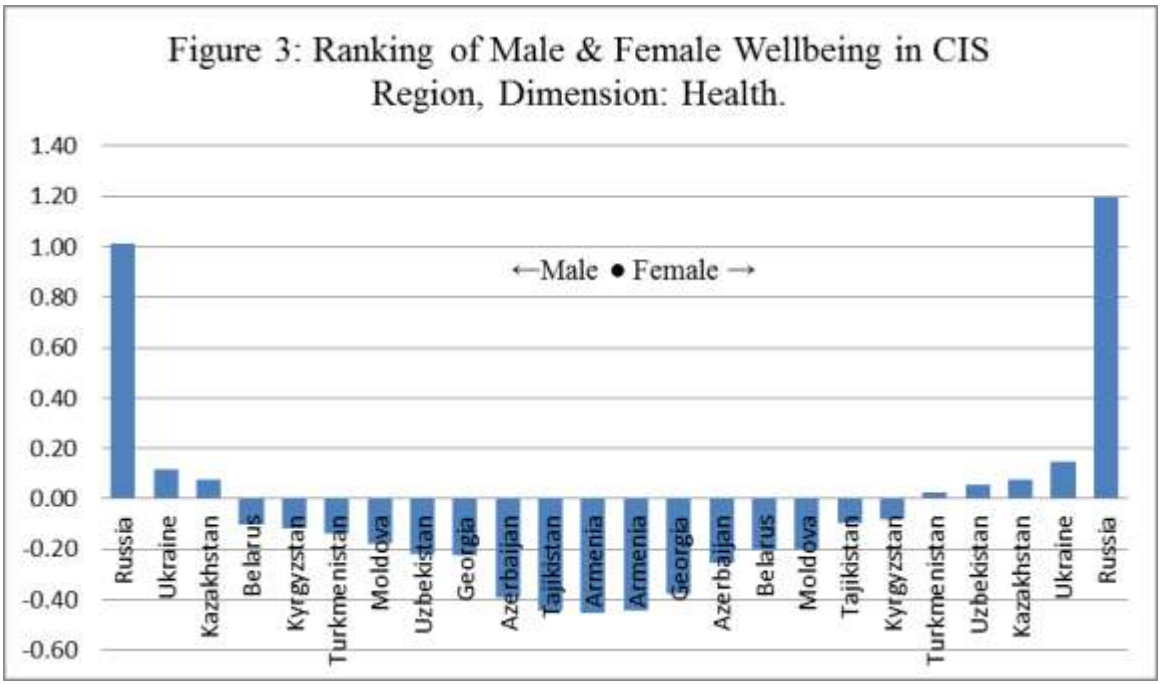


Figure 3: Ranking of Male & Female Wellbeing in CIS Region, Dimension: Health.
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
-0.20
-0.40
-0.60
←Male ● Female →
Russia
Ukraine
Kazakhstan
Belarus
Kyrgyzstan
Turkmenistan
Moldova
Uzbekistan
Georgia
Azerbaijan
Tajikistan
Armenia
Armenia
Georgia
Azerbaijan
Belarus
Moldova
Tajikistan
Kyrgyzstan
Turkmenistan
Uzbekistan
Kazakhstan
Ukraine
Russia

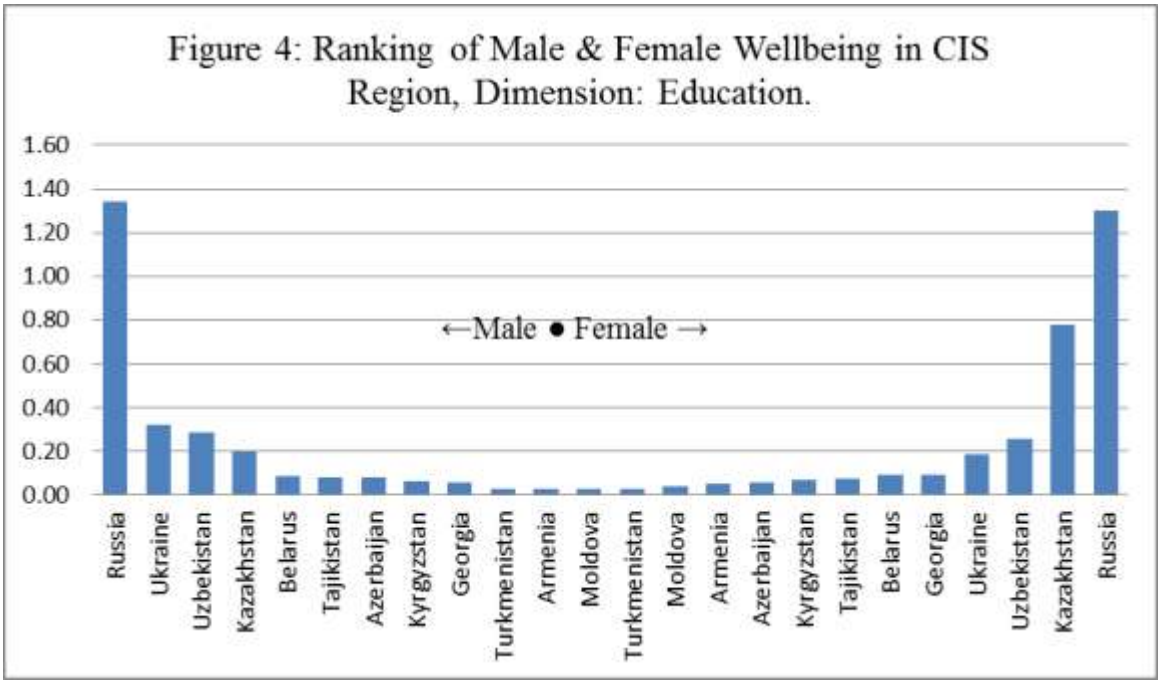


Figure 4: Ranking of Male & Female Wellbeing in CIS Region, Dimension: Education.
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
←Male ● Female →
Russia
Ukraine
Uzbekistan
Kazakhstan
Belarus
Tajikistan
Azerbaijan
Kyrgyzstan
Georgia
Turkmenistan
Armenia
Moldova
Turkmenistan
Moldova
Armenia
Azerbaijan
Kyrgyzstan
Tajikistan
Belarus
Georgia
Ukraine
Uzbekistan
Kazakhstan
Russia

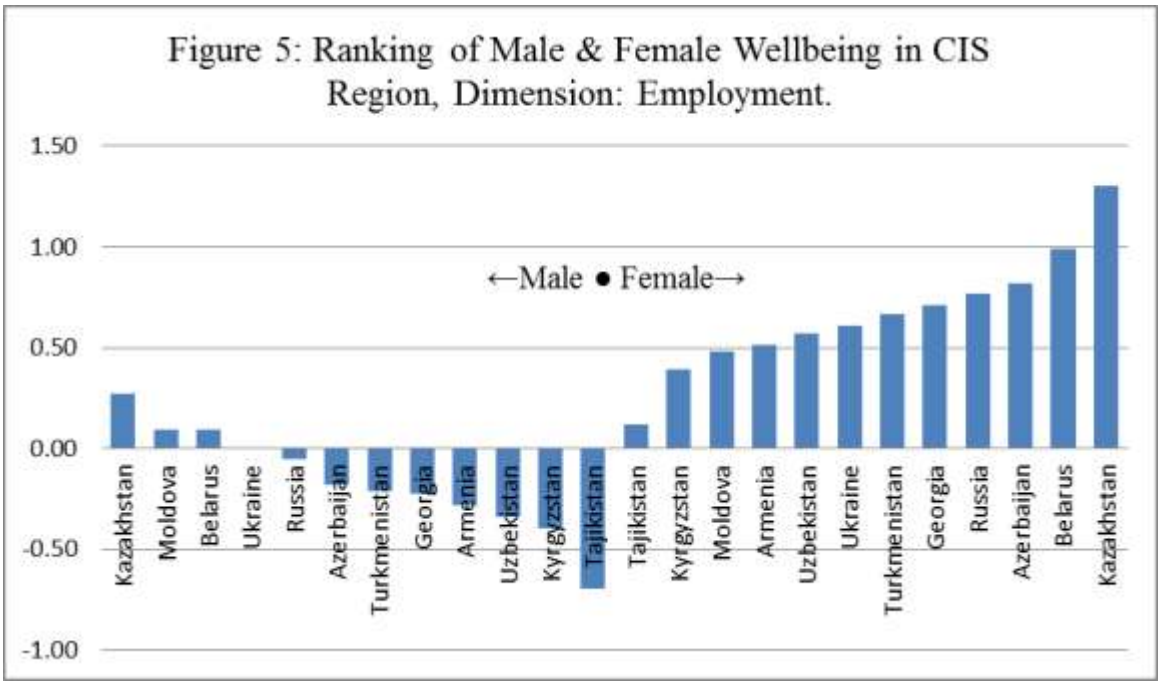


Figure 5: Ranking of Male & Female Wellbeing in CIS Region, Dimension: Employment.
1.50
1.00
0.50
0.00
-0.50
-1.00
←Male ● Female→
Kazakhstan
Moldova
Belarus
Ukraine
Russia
Azerbaijan
Turkmenistan
Georgia
Armenia
Uzbekistan
Kyrgyzstan
Tajikistan
Tajikistan
Kyrgyzstan
Moldova
Armenia
Uzbekistan
Ukraine
Turkmenistan
Georgia
Russia
Azerbaijan
Belarus
Kazakhstan

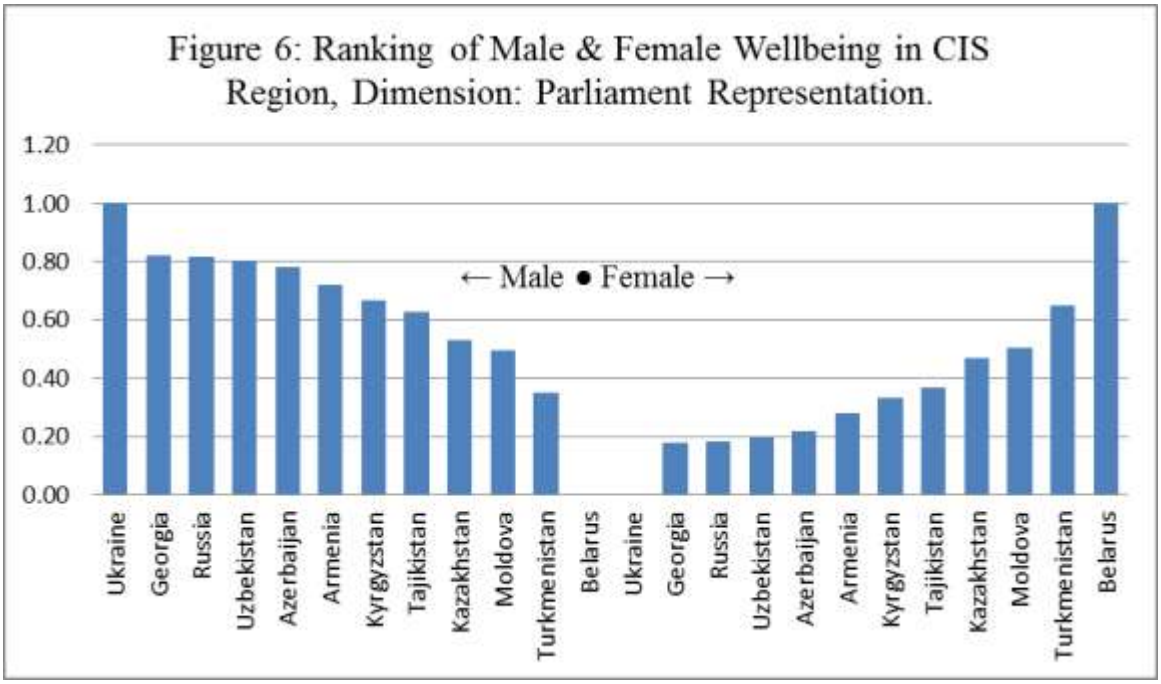


Figure 6: Ranking of Male & Female Wellbeing in CIS Region, Dimension: Parliament Representation.
1.20
1.00
0.80
0.60
0.40
0.20
0.00
← Male ● Female →
Ukraine
Georgia
Russia
Uzbekistan
Azerbaijan
Armenia
Kyrgyzstan
Tajikistan
Kazakhstan
Moldova
Turkmenistan
Belarus
Ukraine
Georgia
Russia
Uzbekistan
Azerbaijan
Armenia
Kyrgyzstan
Tajikistan
Kazakhstan
Moldova
Turkmenistan
Belarus

Figure 7: Male and Female Wellbeing in CIS Region, Dimension: Health.

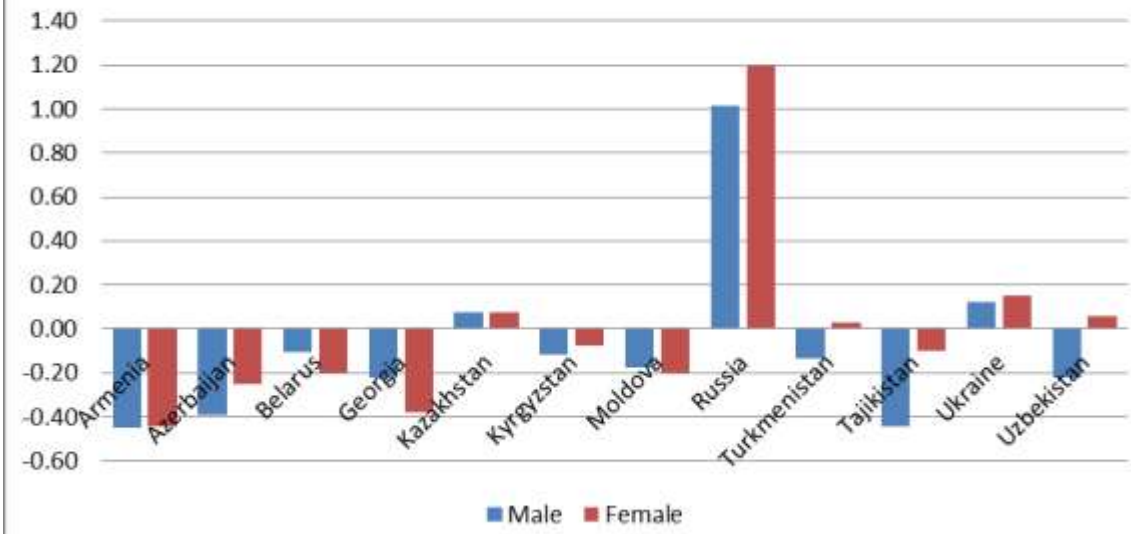


Figure 8: Male and Female Wellbeing in CIS Region, Dimension: Education.

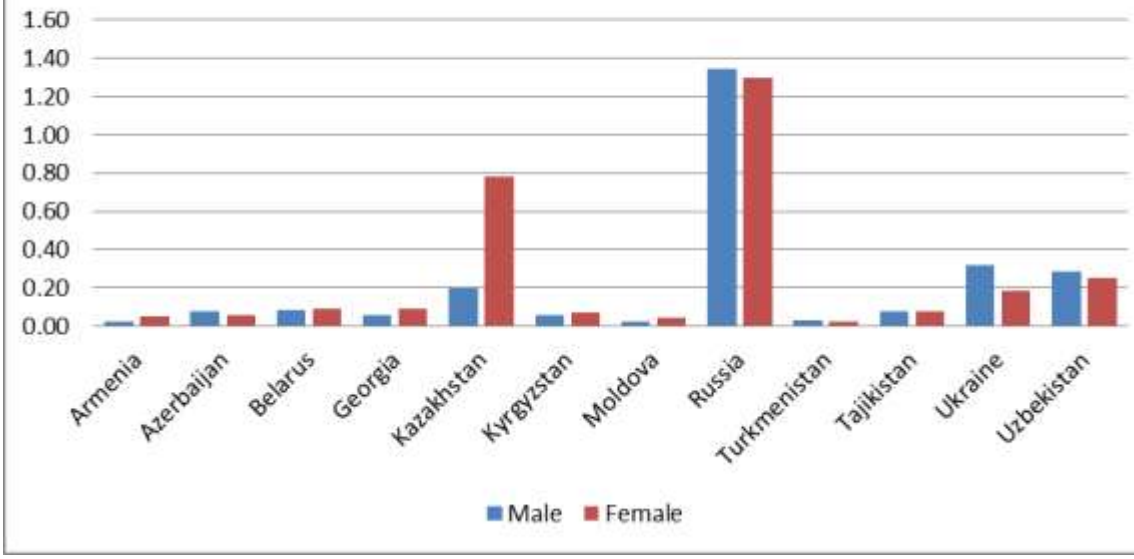


Figure 9: Male and Female Wellbeing in CIS Region, Dimension: Employment.

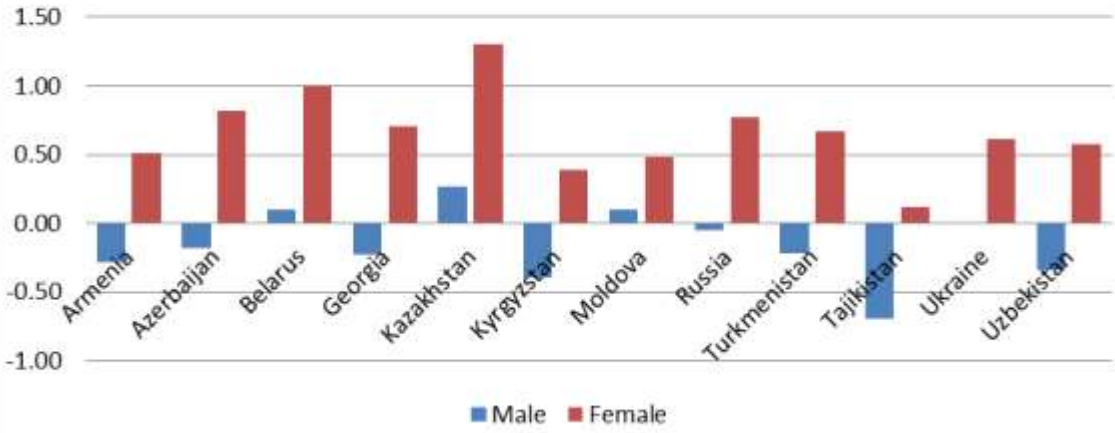
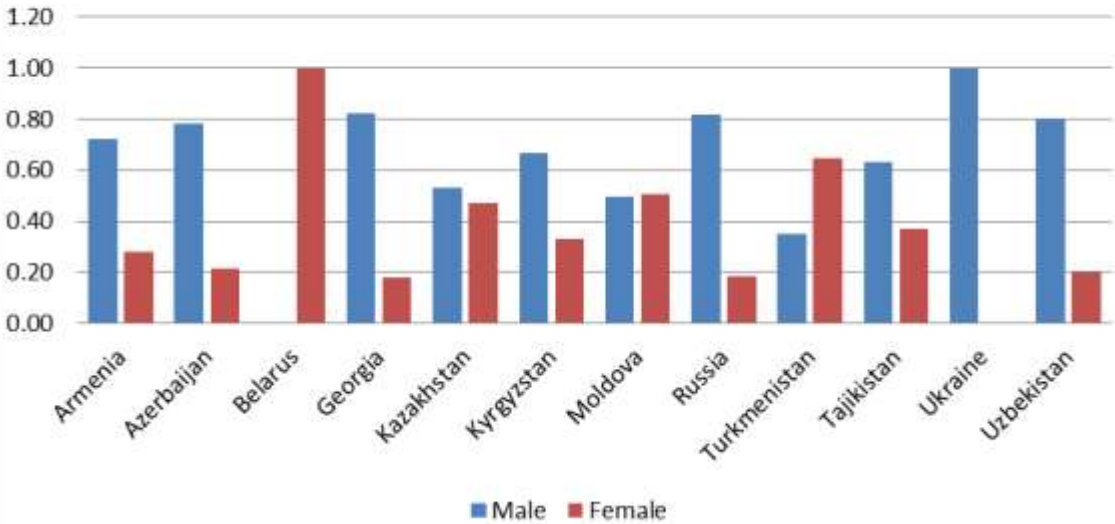
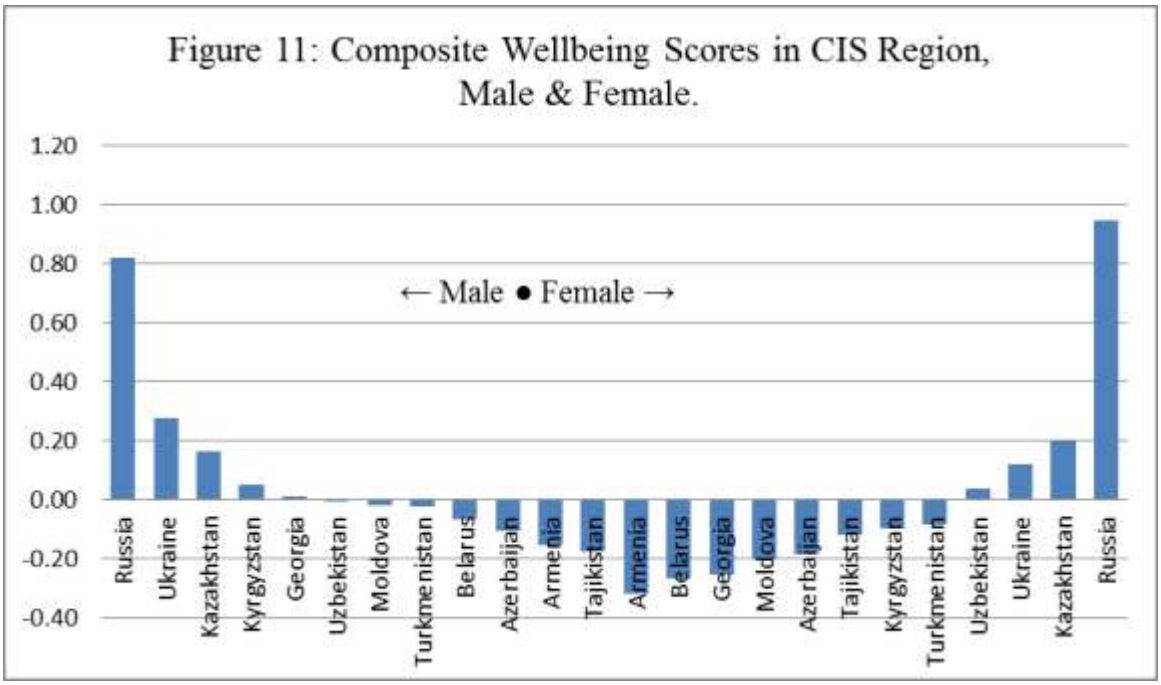


Figure 10: Male and Female Wellbeing in CIS Region, Dimension: Governmnet Representation.





Appendix Table 1: Correlation among Dimensions of Male Well-Being Index.

	Health	Education	Employment	Government Representation
Health	1			
Education	0.92	1		
Employment	0.62	0.58	1	
Government Representation	0.15	0.42	-0.28	1

Appendix Table 2: Correlation among Dimensions of Female Well-Being Index.

	Health	Education	Employment	Government Representation
Health	1			
Education	0.88	1		
Employment	0.45	0.74	1	
Government Representation	-0.22	0.69	0.29	1