Chapter 16
Gender Equality and Individualistic Values as Determinants of Employment and Income in Central Asian Countries

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Abstract This chapter aims at disclosing the interrelationships of economic activity, support for gender equality, individualistic values and income in Central Asia. The authors use the 6th wave of the World Values Survey (2010–2014) to test empirically the association between employment, values and income for Kazakhstan, Kyrgyzstan and Uzbekistan and Russia. Gender equality attitudes in these four countries do not differ much from each other. In general, the societies are quite conservative in their evaluation of the women roles. The effect of gender equality on employment varies across the mentioned four countries. Kazakhstan and Kyrgyzstan show that support for gender equality is negatively related to self-employment. The pattern in Russia is the opposite. Gender moderates the relationship between support for gender equality and employment status in the Central Asian countries, as distinct from Russia. The evidence from Russia demonstrates a strong and positive association between self-employment and individualism. However, in Central Asia individualism is a weak predictor for employment status.

Keywords Gender equality attitudes · Individualistic values · Income · Employment status · Central Asia

16.1 Introduction

This chapter addresses the relationship between economic activity and the post-materialist values, namely, individualism and support for gender equality. The current study empirically tests and discusses whether support for gender equality and individualism explain a variation of employment status in Central Asia and Russia. Recent

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empirical research has shown a significant relationship between values and employment status but only for economically developed countries (e.g., Cinalli and Giugni 2013; Hatos et al. 2015). This chapter attempts to fill the gap in the literature by adding the evidences from developing countries of Central Asia and Russia.

Being more traditional society Uzbekistan and Kyrgyzstan do not have high female labor force participation rates, in Kazakhstan and Russia women were always more active in the labor market. The more gender equal soviet ideology improved people's attitudes towards working women in Russia and Kazakhstan, while in Uzbekistan and Kyrgyzstan the female empowerment was less developed. The employment rates among women in 2011 varied from 52.62% in Kyrgyzstan to 65.36% in Kazakhstan. Are these differences in female employment rates could be explained by gender equality attitudes?

The chapter contributes to research on the link between gender equality attitudes and individualistic values, on the one hand, and employment status and income, on the other. The authors discuss the gender differences in the probability to have a full-time job in Kazakhstan, Kyrgyzstan, Russia and Uzbekistan. Furthermore, the employment status critically defines income and financial well-being in the Post-Soviet space as job is mostly the only income source for many families. The authors make one step further with their analysis to test the mediating impact of gender equality attitudes on income through the employment status of a person. The focus is on the mechanism underlying this relationship. In contrast to previous studies, this research assesses whether the effect of gender equality attitudes and individualistic values on income is direct or mediated through employment status.

The outline of the chapter is as follows. First, the authors describe the socioeconomic situation in the Central Asian region with a focus on gender differences. This facilitates the interpretation of the empirical results. The next section gives a concise overview of the existing research on gender equality attitudes and employment opportunities for men and women, allowing us to suggest a list of hypotheses. The section on data and methodology is followed by the results description, findings' discussion and conclusion.

16.2 Background of the Study

Let's briefly describe the situation in the labor markets of the Central Asian countries and Russia, in order to illustrate the socioeconomic situation in the region. Table 16.1 provides the general information for these countries.

Uzbekistan and Kyrgyzstan suffer from a lack of job opportunities. Labor supply exceeds the labor demand dramatically. At the same time, there are huge shortages in highly qualified specialists. The quality of available workplaces is rather low, which creates incentives to search for jobs abroad and migrate predominantly to the better developed Russia and Kazakhstan. Russia and Kazakhstan, having better developed economic industries, possibilities for full-time employment including social guarantees and chances for career development, seem to be advantageous to migrants.

Table 16.1 Demographic and socioeconomic characteristics of the Central Asian countries and Russia, 2011

	Kazakhstan	Kyrgyzstan	Russia	Uzbekistan
Total population number	16,557,201	5,514,600	142,960,868	29,339,400
Total employment rate (%)	66.57	59.03	58.61	61.04
Female employment rate (%)	65.36	52.62	56.15	52.87
% of self-employed	32.45	36.93	7.04	43.87
Unemployment rate (%)	5.39	8.53	6.54	4.96
GDP per capita (current international $)	21,276.93	2920.60	24,310.04	4469.99
Minimum wage	15,999 tenge ($109)	690 Kyrgyz Soms ($15)	4611 rubles ($157)	49,735 Uzbek Sum ($29)
Average wage	90,028 tenge ($615)	9304 Kyrgyz Soms ($202)	23,369 rubles ($798)	628,019.99 Uzbek Sum ($366)
Position of country in Doing Business	59	44	123	150
Remittances received (% of GDP)	0.12	27.81	0.28	No data available

Sources Russian Federal State Statistics Service. Available at: https://www.gks.ru/; Ministry of National Economy of the Republic of Kazakhstan. Statistics committee. Available at: http://stat.gov.kz/; National Statistical Committee of the Kyrgyz Republic. Available at: http://www.stat.kg/; The state Committee of the Republic of Uzbekistan on statistics. Available at: https://stat.uz/; Worldwide governance indicators. The World Bank. Available at: https://datacatalog.worldbank.org/dataset/worldwide-governance-indicators; The International Labor Organization. Available at: https://www.ilo.org/global/statistics-and-databases/lang–en/index.htm

The distribution for 2011 (see Table 16.2) demonstrates that up to 60% of workplaces in Russia were in the industrial and service sector, education and public health service. At the same time, approximately one-third of the workforce in Kyrgyzstan, Kazakhstan and Uzbekistan was employed in the agricultural sector.

Despite the disadvantages of the Central Asian labor markets mentioned above one can single out some benefits of Central Asian labor markets. They are a predominantly young labor force and a significant share of own-account workers (34.5, 29.5 and 26.9% in Uzbekistan, Kazakhstan and Kyrgyzstan, respectively). Economic development is driven by the young motivated generations and small businesses growth. Figure 16.1 depicts the distribution of economically active population.

There is a strong need for highly qualified agricultural engineers, experts on agricultural economics, taxation in agricultural sector etc., but these specialties are poorly represented in the Central Asian universities. Thus, the paradox of the low developed

Table 16.2 Structure of employment by industries, %, 2011

Country	Year	By industries							
		Agriculture, hunting, fishing	Industry	Construction	Transport and communication	Trade, restaurants, hotels	Finances	Education, healthcare, social service	Other services
Kazakhstan	2011	26.4	12	7.4	8	16.0	7.3	15.0	7.9
Kyrgyzstan	2011	30.7	10	11.0	7	19.0	3.3	11.2	8.4
Russia	2011	7.9	20	7.2	9	18.0	8.6	17.0	12.0
Uzbekistan	2005	29.1	13	8.3	5	8.9	0.5	20.8	14.0

Source Russian Federal State Statistics Service. http://www.gks.ru/bgd/regl/b12_39/IssWWW.exe/Stg/03-03.htm. Accessed 20 June 2019

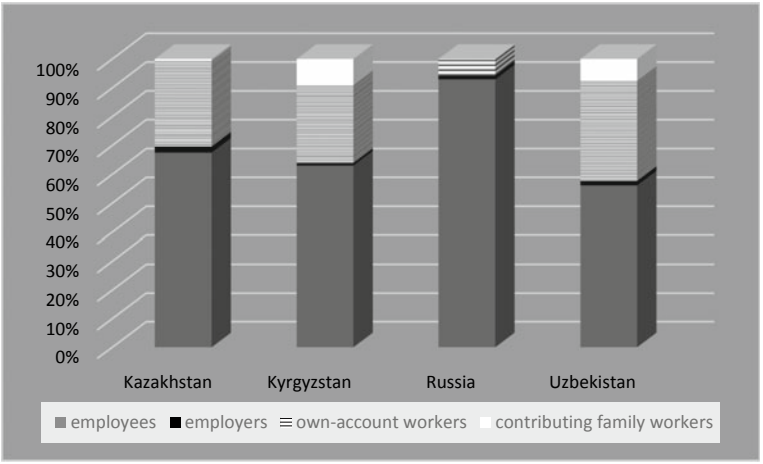

Fig. 16.1 Distribution of economically active people by employment status, 2011 (*Source* The International Labor Organization https://www.ilo.org/shinyapps/bulkexplorer47/?lang=en&segment=indicator&id=EMP_2EMP_SEX_STE_DT_A)

Central Asia presupposes the surplus of the labor force, which is accompanied by a deficit in the qualified labor force. A very small proportion of youth aged 15–29 have higher education in Uzbekistan and Kyrgyzstan (Karabchuk et al. 2015). There is also a lack of state institutions contributing to the smooth transition from university to employment.

Figure 16.2 depicts how the rates of total and female labor force participation change from 1992 to 2012. Kazakhstan consistently demonstrates the highest total and female employment rates. In 2012 the female employment rates in the four countries varied significantly, with the highest rate in Kazakhstan (61%) and the lowest rate in Kyrgyzstan (47%). It worth to mention that most of the time Kyrgyzstan demonstrates a downward trend in female employment rates.

16.3 Gender Equality and Individualism as Factors of Economic Activity and Income

The OECD standard defines full-time employees as those who work 30 h or more a week on the main job (Labor Force Statistics in OECD countries, 2015). However, this hour cut-off varies across countries. For example, in Austria, Israel, and the United States, they propose a 35-hour threshold. Part-time employees are those who work less than 30 h a week. The self-employed are those who are not hired but work for themselves or their family business. The nature of self-employment can be both voluntary and involuntary. The unemployed comprise all persons who currently do not have a job but are available for paid work and are searching for a job (all three

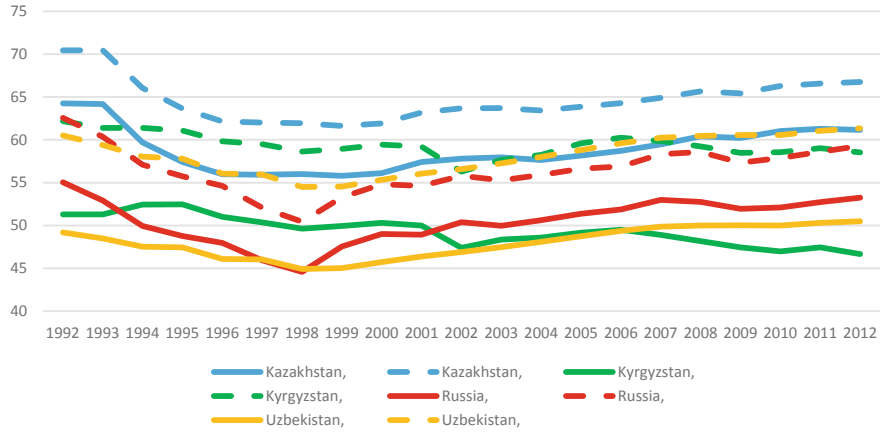

Fig. 16.2 Total and female employment rates in Kazakhstan, Kyrgyzstan, Russia and Uzbekistan (1992–2012), % of population aged 15 and older. Total employment rates are indicated by dashed lines, and female employment rates are shown by solid lines. (*Source* The authors visualized the data provided by the World Development Indicators [the World Bank]. Available at: https://data.worldbank.org/ Accessed 06 December 2019)

conditions should be satisfied simultaneously). The economically inactive comprise those who do not have a job but at the same time are not looking for it. This category includes students, housekeepers, retired or people with disabilities.

The substantial increase in the female participation in the global labor market over the last decades has stimulated research on gender equality, values and employment (especially part-time employment). Recent research emphasizes gender equality values as an explanatory variable for women's job-seeking and labor market participation decisions. Inactivity usually is a voluntary choice while unemployment is mostly involuntary choice. Values do matter in this context as they determine women's employment status. Women, who consider their gender as docile and submissive to men and separate the female domain from the private sphere, are more likely to be economically inactive (Spierings et al. 2010). Stam et al. (2014) using regression and event history analysis on the Dutch data from 2007 to 2010 conclude that women sharing the traditional gender role values tend to decrease their working hours and choose part-time employment. Moreover, the likelihood of labor market entry for women with such gender role values is significantly lower than for other women.

Societies with a more traditional values experience gender discrimination in the labor market more frequently. Due to gender discrimination, females tend to exit the paid job and become self-employed (Williams 2012). There is evidence that there are significant differences in support for gender equality between employed and economically inactive women (full-time housekeepers). A higher support for gender equality positively contributes to the likelihood of women's entry into the labor force (Bolzendahl and Myers 2004). Entering the labor market promotes egalitarian attitudes toward the gender division of labor. Women develop their egalitarian views

when they benefit from gains through employment (Lee 2019) or meet other women who are capable of combining their family responsibilities in childrearing and work (Davis and Greenstein 2009). However, this gap is partially attributed to their background socioeconomic characteristics such as educational attainment and family responsibilities in childrearing (Cunningham 2008; Pampel 2011; Rodriguez and Pillai 2019).

Socioeconomic characteristics are important factors of employment status. For example, Millan et al. (2012) show that gender and the level of education have a statistically significant effect on self-employment duration in Europe. Being a highly educated male increases the probability of surviving as an entrepreneur. Their finding about the nonlinear relationship between age and the length of the self-employment survival period is consistent with previous studies (e.g., Taylor 2004).

The authors hypothesize that *higher support for gender equality significantly increases the probability of being employed or self-employed (H1).*

Furthermore, many researchers have shown strong positive relationship between individualistic values and self-employment (e.g., Baluku et al. 2018; Tiessen 1997). However, this finding was not confirmed for transition economies and developing countries. Using the 2008 European Values Survey, Hatos et al. (2015) showed that there is no association between individualism and self-employment in Romania. The recent research (Rantanen and Toikko 2017) demonstrates that the mechanism underlying the link between individualism and self-employment is rather complex. Individualism has a positive indirect effect on entrepreneurial intention through numerous factors (for example, subjective norms that refer to the expectations of peer groups, perceived behavioral control that reflects how an individual evaluates his or her capacities to cope with responsibilities associated with self-employment).

The evidence from the 2005 Mexican wave of the World Values Survey (Temkin 2009) shows that the values of the self-employed in the informal sector are different from the formally employed and informal employees. In comparison with the other categories, the informally self-employed attach less importance to determination and independence. Opposite to Mexican developing economy, the generous welfare regimes with higher share of social expenditure tend to strengthen the collectivist values. As more people rely on state assistance, social dependency increases. As a result, there is a shift towards unemployment (mostly voluntary) under the generous welfare model (Cinalli and Giugni 2013).

Based on the mentioned above it is hypothesized that *more individualistic values increase the probability to be self-employed (H2).*

The literature on the association between post-materialist values and income is not that rich. Despite this fact, the findings of some studies imply that the effect of values is indirect. Previous studies imply that the relationship between income and values is mediated through work engagement and career decision. For example, the longitudinal study of Finnish young people by Sortheix et al. (2013) showed that individual orientations towards interesting work and strivings towards the match between job tasks and educational background contribute to work engagement. Such work values as autonomy at work, leadership, and variety of job tasks, have a positive effect on career decision and self-efficacy (Choi et al. 2013).

The researchers underscore the importance of intrinsic values as significant determinants of positive career outcomes in contrast to extrinsic values. Paradoxically, extrinsic values, which focus on the external characteristics of work, such as income, and prestigious work, do not promote career development since tangible rewards do not provide a long-term effect (Choi et al. 2013; Dik et al. 2008). In the context of this study, it is plausible to suggest that individualism and gender equality are mediator variables between employment practices and individual performance. Therefore, it is hypothesized that *gender equality preferences and individualistic values, have an indirect effect on income. Employment status mediates the relationship between the values and income (H3).*

16.4 Data and Methodology

The authors use the 6th round of the World Values Survey (Inglehart et al. 2014), with the 2011 field work conducted in Central Asia and Russia. There are several reasons for choosing this database. First, it provides measures of gender equality attitudes and individualistic values as well as the employment status and income that are the variables of interest for the present study. Second, it contains comparable data for Kazakhstan, Kyrgyzstan, Uzbekistan and Russia. Third, the WVS data is representative for the national population of the countries and quite in line with the official labor market statistics, except self-employed rates (see Table 16.3). Self-employed individuals are highly underrepresented while unemployed are a bit overrepresented in the World Values Survey.

Table 16.3 Official Labor Force Statistics (2011) in comparison with the WVS data (Wave 6, 2010–2014)

%	Kazakhstan		Kyrgyzstan		Uzbekistan		Russia	
	Of. Stat.	WVS	Of. Stat.	WVS	Of. Stat.	WVS	Of. Stat.	WVS
Active population	76.80	71.3	68.19	64.8	67.66	55.5	73.09	67.2
Non-active population	23.2	28.7	31.81	35.2	32.34	44.5	26.91	32.8
Employment	66.57	65	59.03	54.7	61.04	42.1	58.61	61.6
Self-employment	32.45	5.2	36.93	14.3	43.87	7.2	7.04	4.4
Part-time employment	18.29	13.1	32.91	15.9	No data available	14.9	8.82	5.8
Unemployment	5.39	6.3	8.53	10.1	4.96	13.1	6.54	5.6

Sources World Development Indicators (the World Bank). Available at: https://data.worldbank.org/. Accessed 06 December 2019; WVS—the calculations were made by the authors on the basis of Inglehart et al. (2014)

16.4.1 Operationalization of the Variables

The wording of the question that is used to measure income is as follows: "On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. The authors would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in". As the income status variable has a large enough number of categories (10), it is dealt as an interval one in the empirical part.

Employment status is used first as a dependent variable and then as a mediator of the relationship between income status and post-materialist values. This is a self-reported variable: people answering the question assign themselves to one of the statuses: (1) full-time employment (in case an individual works 30 hours a week and more); (2) part-time employment (if an individual works less than 30 hours a week); (3) self-employment; (4) unemployed; (5) non-activity (the self-reported status "Retired", "Housewife", "Students" were coded as non-activity). The demographic profiles of the employment categories show that full-time workers are predominantly males, while part-timers are mainly females. It is further observed that both full-timers and part-timers in Russia have bigger share of elderly people than their Central Asian counterparts, what reflects the population structure of the countries. The Russian population is considerably older than the Central Asian one.

The key predictors of employment status for us are gender equality attitudes and individualistic values. "Gender equality attitudes" measures the propensity of an individual to support gender equality principles. A composite index of gender equality attitudes was constructed, following Inglehart and Welzel's methodology (Inglehart and Welzel 2005; Welzel 2013), on the basis of the following survey items:

1. When a mother works for pay, the children suffer
2. On the whole, men make better political leaders than women do
3. A university education is more important for a boy than for a girl
4. On the whole, men make better business executives than women do

The original scale of these variables (4 categories of agreement) was recoded into dummy variables, where 1 stands for "disagree" (original categories 3 "disagree" and 4 "completely disagree" were recoded into 1), 0—"agree" (original categories 1 "completely agree" and 2 "agree" were recoded into 0). The index of gender equality was calculated as a sum of the values for these four recoded dummy variables. Its categorical scale ranges from 0 to 4 with higher values corresponding to greater support for gender equality.

To measure individualistic values,[1] the authors follow the approach used by Arikan (2011). The WVS survey contains a list of items that assess child-rearing values.

[1]It is important to distinguish between individualism and preferences for income inequality. To avoid confusion, which may lead to a misinterpretation of individualism, the authors exclude from consideration individual views on income distribution and government responsibilities.

These items encompass the main features of individualism, namely preferences for autonomy and self-achievement. Respondents are asked to choose up to five important qualities that children can be encouraged to learn at home. This analysis utilizes an additive measure of individualism. It is constructed by adding the qualities chosen by an individual from the following list: (1) Independence (2) Hard work (3) Feeling of responsibility (4) Imagination. Therefore, the individualism index has a categorical scale and varies from 0 (if an individual mentioned none of the given qualities as desirable) to 4 (if all these qualities were chosen as desirable). Higher values indicate higher support for individualism.

Apart from the indicators given above, a set of control variables was used. They are gender dummy variable, and since the study is focusing on gender difference female category was used as a reference category. 5 age groups were constructed (18–24, 25–34, 35–44, 45–54, 55–65 years old) with the youngest group of individuals aged from 18 to 24 used as a reference category, higher education (a dummy variable which takes a value 1 if a respondent has a university degree, 0—otherwise), a marital status (a dummy variable which takes a value 1 if an individual is married or is currently living together with his or her partner, 0—otherwise), a number of children and a settlement size (higher values indicate larger population size of the city).

The analysis was carried out in two stages. First, to estimate the association between values and employment status, the authors ran multinomial logit regression models for each of the country since the outcome variable (employment status) is nominal. Full-time employment is chosen as a reference category, thus, all subsequent conclusions are hold in relation to this category. The model specification in the log-linear form is as follows:

$$\ln \Omega_{A|B}(X) = \beta_{0,A|B} + \beta_{1,A|B} GE_i + \beta_{2,A|B} Ind_i + \sum_{k=1}^{N} \beta_{k,A|B} C_{ki} + \varepsilon_i,$$

where B is a reference category of the dependent variable (full-time employment), A is any other category compared to the reference one. $\Omega_{A|B}(X)$ is the relative risk ratio of A versus B given explanatory variables X. This model is linear in the logarithm of relative risk ratios. GE_i and Ind_i stand for gender equality and individualism values respectively. C_{ki} is a set of control variables with k as a control variable index. N is the total number of control variables included in this series of models. ε_i indicates error terms that are assumed to have a standard logistic distribution.

The second stage of the empirical analysis fulfills two research tasks. The effect of gender equality attitudes and individualistic values on income status was estimated. Besides, the second stage disentangles the mechanism underlying this relationship. More specifically, it is tested whether employment status mediates the association between values and income. The mediation analysis decomposes the total effect of values (gender equality or individualism) into a *natural direct* and a *natural indirect* effect (Steen et al. 2017). The natural direct effect is the expected effect of a 1-unit increase in exposure level (values) on the dependent variable (income) when keeping the mediator fixed at the same value. The natural indirect effect shows the

change in the dependent variable (income) expected as a result of a 1-unit increase in the mediator (employment status) when keeping the exposure (values) fixed. This identification implies using a counterfactual framework.

Since the original data provide us only with the observed values of exposure, mediator and outcome variables, there is a problem of missing data. To disentangle the natural direct and indirect effects, it is necessary to have information about the counterfactual values. In other words, one needs to know which value the outcome variable (income) would take if a variable of interest (mediator or exposure) changed by 1 unit, holding all other variables constant. To generate unobserved counterfactual values, the authors apply the imputation-based approach. This approach relies on models for the exposure mean. The counterfactual outcome variables might no longer take their original values as they are substituted by conditional mean imputations. The imputation algorithm was repeated for each of the four countries under study. The procedure was implemented in three steps.

First, a preliminary regression model was estimated. This model used income as a dependent (outcome) variable, attitudes towards gender equality and individualistic values as exposure variables, employment status as mediators (with full-time employment as a reference category). Besides, confounding effects of individual characteristics were controlled by including a set of control variables. Linear regression models were estimated since the number of categories of the dependent variable, namely 10, makes it possible to approximate the original categorical scale to the interval one.

Second, the dataset was expanded by adding counterfactual values. As it was mentioned above, the authors applied conditional mean imputations to generate these values. The expanded dataset enables to observe the values of the outcome variable at all possible combinations of the mediator and exposure variables.

Third, the final disentangles the natural direct and the natural indirect effects of gender equality and individualism on income status. The linear regression models were re-estimated on the expanded dataset. As in the previous model specification, income status is used as a dependent variable. The main explanatory variables included in the model are the imputed counterfactual indicators. The inclusion of these predictors enables to separate the direct and indirect effects of post-materialist values. Since the indirect effect is produced through employment status and involves its variance, the original mediator variables are excluded from the model. In other words, the original mediators were substituted for the imputed counterfactual indicators.

16.5 Results and Discussion

The first part of this section focuses on the relationship between the attitudes towards gender equality and individualism, on the one hand, and employment status, on the other hand. Tables 16.4, 16.5, 16.6, and 16.7 represent the coefficients of the multino-

Table 16.4 The relationship between gender equality, individualism and employment status (Full-time employment is a reference category) in Kazakhstan. Multinomial Regression Models

	Part-time employment	Self-employment	Unemployment	Economic inactivity
Gender equality	0.980 (0.0668)	0.759** (0.0768)	1.014 (0.0974)	0.724*** (0.0456)
Individualism	1.130 (0.128)	1.149 (0.192)	0.895 (0.137)	1.113 (0.117)
Gender (female—reference)	0.744 (0.129)	1.681* (0.438)	1.209 (0.290)	0.142*** (0.0267)
Age 25–34	0.416** (0.115)	1.116 (0.541)	0.325** (0.118)	0.179*** (0.0458)
Age 35–44	0.450** (0.131)	0.776 (0.405)	0.292** (0.118)	0.0654*** (0.0194)
Age 45–54	0.258*** (0.0839)	0.581 (0.322)	0.430* (0.168)	0.101*** (0.0290)
Age 55–65	0.396* (0.152)	0.374 (0.284)	0.492 (0.243)	0.722 (0.205)
Higher education	0.976 (0.171)	1.185 (0.314)	0.461** (0.137)	0.271*** (0.0519)
Married	0.831 (0.168)	1.269 (0.430)	0.680 (0.193)	1.153 (0.216)
Number of children	1.326*** (0.107)	1.298* (0.149)	1.044 (0.123)	1.413*** (0.104)
Settlement size	0.984 (0.0322)	0.876** (0.0428)	0.793*** (0.0373)	0.944 (0.0286)
N	1391			
Pseudo-R2 −2 log-likelihood	0.1387 3129.2588			

Note Calculations are made by the authors on the basis of Inglehart et al. (2014)
Coefficient estimates are exponentiated. Standard errors are given in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

mial regression models for Kazakhstan, Kyrgyzstan, Russia and Uzbekistan, respectively. Each table contains the estimations for four categories of the employment status (i.e., part-time employment, self-employment, unemployment and economic inactivity) in reference to full-time employment (reference category).

The authors provide the interpretation in terms of relative risk ratios since the exponentiated coefficient estimates are reported. Those estimates that are larger than 1 indicate that a one unit increase in an explanatory variable increases a likelihood of being in a given outcome category (in this case, employment status) as compared to full-time employment, all other variables being equal. Estimates smaller than 1 can be interpreted as a decrease in a likelihood of being in a given outcome category in reference to full-time employment.

Table 16.5 The relationship between gender equality, individualism and employment status (full-time employment is a reference Category) in Kyrgyzstan. Multinomial regression models

	Part-time employment	Self-employment	Unemployment	Economic inactivity
Gender equality	1.005 (0.0613)	0.799*** (0.0522)	0.888 (0.0657)	0.937 (0.0524)
Individualism	0.951 (0.103)	0.994 (0.114)	1.018 (0.130)	0.970 (0.0958)
Gender (female—reference)	0.610** (0.109)	2.048*** (0.416)	1.345 (0.298)	0.230*** (0.0388)
Age 25–34	0.491* (0.149)	0.996 (0.366)	0.265*** (0.0914)	0.141*** (0.0383)
Age 35–44	0.547 (0.184)	1.496 (0.590)	0.260*** (0.102)	0.108*** (0.0328)
Age 45–54	0.718 (0.245)	1.201 (0.490)	0.241*** (0.0980)	0.164*** (0.0503)
Age 55–65	0.476 (0.206)	1.223 (0.578)	0.158*** (0.0875)	0.455* (0.160)
Higher education	1.023 (0.181)	0.350*** (0.0738)	0.185*** (0.0514)	0.176*** (0.0321)
Married	1.347 (0.345)	1.141 (0.333)	1.401 (0.449)	1.249 (0.285)
Number of children	1.011 (0.0683)	1.011 (0.0742)	0.937 (0.0802)	1.109 (0.0679)
N	1406			
Pseudo-R2 −2 log-likelihood	0.1286 3749.5594			

Note Calculations are made by the authors on the basis of Inglehart et al. (2014)
Coefficient estimates are exponentiated. Standard errors are given in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

The findings indicate that supporters of gender equality are less likely to be self-employed in Kyrgyzstan and Kazakhstan. However, the opposite is true for Russia: all other variables being equal, one unit increase in gender equality index increases the risk of being self-employed by nearly 28% as compared to full-time employed. It is also observed that supporters of gender equality are less likely to be economically inactive in Kazakhstan. Gender equality index does not have any significant effect on the employment status in Uzbekistan.

The most important outcomes of the study relate to the gender effects on the probability to have a full-time job in the four countries. The main conclusion is that gender does matter, it affects employment status: males have better chances to be full-time employed than women in all four countries. The likelihood of being non-active for the men in Central Asia as well as in Russia is significantly lower than for women. Except for Uzbekistan, in all the countries males are more likely

Table 16.6 The relationship between gender equality, individualism and employment status (full-time employment is a reference category) in Russia. Multinomial regression models

	Part-time employment	Self-employment	Unemployment	Economic inactivity
Gender equality	1.009 (0.0816)	1.284** (0.122)	0.919 (0.0977)	0.939 (0.0523)
Individualism	0.845 (0.112)	1.359* (0.204)	0.845 (0.144)	1.056 (0.0992)
Gender (female—reference)	0.697 (0.148)	1.913** (0.465)	2.490** (0.756)	0.284*** (0.0433)
Age 25–34	0.609 (0.202)	1.262 (0.529)	1.539 (0.776)	0.224*** (0.0521)
Age 35–44	0.368** (0.138)	1.285 (0.549)	1.608 (0.822)	0.0616*** (0.0190)
Age 45–54	0.460* (0.162)	0.744 (0.339)	1.261 (0.653)	0.0944*** (0.0251)
Age 55–65	0.980 (0.356)	0.429 (0.255)	0.832 (0.514)	1.453 (0.315)
Higher education	1.414 (0.297)	1.246 (0.300)	0.285** (0.125)	0.567*** (0.0956)
Married	0.710 (0.154)	0.843 (0.217)	0.445** (0.131)	1.118 (0.171)
Number of children	1.032 (0.127)	1.215 (0.152)	1.155 (0.165)	1.142 (0.0923)
Settlement size	1.035 (0.0412)	1.066 (0.0485)	0.880** (0.0429)	0.921** (0.0239)
N	1706			
Pseudo-R2 −2 log-likelihood	0.1487 3165.0086			

Note Calculations are made by the authors on the basis of Inglehart et al. (2014)
Coefficient estimates are exponentiated. Standard errors are given in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

to be self-employed than females. In Kyrgyzstan and Uzbekistan women are more likely to work part-time than full-time in comparison with men while in Kazakhstan and Russia the corresponding coefficients for part-time work turned statistically insignificant. In contrast to the Central Asian countries, for males in Russia the risk of being unemployed is higher than for females.

Gender and the attitudes towards gender equality interrelate and have a mutual effect on employment status. To test this idea, the authors additionally estimated the regression models with interaction terms between gender equality and gender (see Table 16.8). The results confirm that there are gender differences in the association between gender equality index and employment status in Kazakhstan and Kyrgyzstan. In these countries a higher support of gender equality among males is associated with part-time employment, while for females the relationship between

Table 16.7 The relationship between gender equality, individualism and employment status (full-time employment is a reference category) in Uzbekistan. Multinomial regression models

	Part-time employment	Self-employment	Unemployment	Economic inactivity
Gender equality	0.918 (0.0685)	1.155 (0.108)	1.011 (0.0805)	0.932 (0.0634)
Individualism	0.988 (0.124)	1.105 (0.179)	1.135 (0.151)	0.924 (0.108)
Gender (female—reference)	0.344^{***} (0.0684)	1.140 (0.298)	0.821 (0.177)	0.0436^{***} (0.00937)
Age 25–34	0.410^{*} (0.146)	1.275 (0.641)	0.565 (0.200)	0.187^{***} (0.0629)
Age 35–44	0.379^{*} (0.145)	0.922 (0.499)	0.310^{**} (0.125)	0.0776^{***} (0.0283)
Age 45–54	0.531 (0.221)	1.674 (0.946)	0.448 (0.197)	0.158^{***} (0.0618)
Age 55–65	0.815 (0.460)	1.771 (1.376)	0.823 (0.514)	1.623 (0.800)
Higher education	0.902 (0.211)	0.203^{***} (0.0918)	0.171^{***} (0.0653)	0.365^{***} (0.0877)
Married	1.060 (0.291)	0.982 (0.359)	0.625 (0.181)	2.336^{***} (0.602)
Number of Children	0.900 (0.0746)	0.892 (0.0924)	0.845 (0.0783)	1.032 (0.0765)
Settlement size	0.851^{***} (0.0319)	0.908^{*} (0.0440)	0.859^{***} (0.0346)	0.879^{***} (0.0299)
N	1336			
Pseudo-R2 −2 log-likelihood	0.1680 3254.7112			

Note Calculations are made by the authors on the basis of Inglehart et al. (2014)
Coefficient estimates are exponentiated. Standard errors are given in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

the likelihood of being part-time employed and gender equality attitudes is insignificant. The other finding is that in Kazakhstan gender equality attitudes reduce the risk of being economically inactive for females. In Russia and Uzbekistan there are no significant gender differences in the effect of the gender equality values on employment status.

The findings demonstrate that the association between individualistic values and employment status is insignificant. This is true for each of the countries except Russia, where individualistic value index increases the risk of being self-employed as compared to full-time employed, keeping all other variables fixed.

As for the control variables, in the four countries age demonstrates a consistent negative effect on the likelihood of being economically inactive as compared to the base category of the youngest people aged 18–24 years. For Kazakhstan it is also true

Table 16.8 Gender differences in the relationship between employment status and gender equality attitudes in the Central Asian countries and Russia. Multinomial regression models with interaction terms

	Part-time employment	Self-employment	Unemployment	Economic inactivity
Kazakhstan				
Gender equality	0.847 (0.0744)	0.785 (0.122)	0.985 (0.142)	0.657*** (0.0484)
Gender (female—reference)	0.325** (0.120)	1.759 (0.888)	1.017 (0.551)	0.0673*** (0.0245)
Gender equality × gender	1.424* (0.196)	0.960 (0.196)	1.079 (0.209)	1.436* (0.213)
Kyrgyzstan				
Gender equality	0.891 (0.0753)	0.789* (0.0908)	0.769* (0.0944)	0.881 (0.0662)
Gender (female—reference)	0.357** (0.113)	1.826 (0.621)	0.838 (0.311)	0.181*** (0.0528)
Gender equality × gender	1.288* (0.159)	1.043 (0.147)	1.267 (0.195)	1.118 (0.129)
Uzbekistan				
Gender equality	0.843 (0.0861)	1.004 (0.150)	0.893 (0.107)	0.847 (0.0731)
Gender (female—reference)	0.263*** (0.0840)	0.733 (0.329)	0.556 (0.197)	0.0287*** (0.00968)
Gender equality × gender	1.167 (0.177)	1.270 (0.242)	1.250 (0.200)	1.291 (0.206)
Russia				
Gender equality	0.932 (0.0990)	1.291 (0.203)	0.699 (0.133)	0.937 (0.0662)
Gender (female—reference)	0.462 (0.195)	1.945 (1.131)	1.073 (0.586)	0.287*** (0.0828)
Gender equality × gender	1.202 (0.196)	0.998 (0.198)	1.491 (0.341)	0.992 (0.115)

Note Calculations are made by the authors on the basis of Inglehart et al. (2014)
Control variables are included in the models. Coefficient estimates are exponentiated. Standard errors are given in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

that the older a person is, the lesser the likelihood for him or her to be unemployed or part-time employed is. This result is rather evident if it is taken into consideration that the population in the Central Asian countries is rather young. Moreover, the youth tends to emigrate to look for a job.

In line with the previous studies on the relationship between employment and human capital (Choi et al. 2019; Davidsson and Honig 2003; Sanders and Nee 1996), higher education decreases the likelihood of being unemployed and economically

inactive. This finding remains robust for the Central Asian countries and Russia. The other observation is that in Uzbekistan and Kyrgyzstan having a university degree decreases a risk of being self-employed in reference to full-time employed.

A marital status does not have a significant effect on employment status in Kazakhstan and Kyrgyzstan. In Russia, being married decreases the risk of being unemployed. In Uzbekistan, being married increases the likelihood of being economically inactive. The authors suggest that this positive effect is mainly due to the sample of married women who are more likely to become housekeepers. The number of children has a significant effect only in Kazakhstan. The more children an individual has, the higher a risk is for him or her of becoming part-time employed and economically inactive. The result that turns out to be robust for all the countries is that living in bigger settlements is associated with a lower risk of being unemployed. In Kyrgyzstan and Uzbekistan, living in bigger settlements has a negative effect on the likelihood of each of the employment status as compared to full-time employment.

The second part of the empirical analysis was aimed at disclosing the relationship between the attitudes towards gender equality, individualism, employment status, on one side, and income, on the other. Besides, the authors attempt to disentangle the mechanism underlying this relationship by testing the hypothesis about the mediation role of employment status in the association between the post-materialist values and income.

Before implementing the mediation analysis, preliminary linear regression models with income as a dependent variable were estimated. First, only employment status as key explanatory variables and control variables were included. Second, support for individualism and support for gender equality as predictors were added. The authors make these steps to test whether the values have more explanatory power than employment status. If this was the case, value variables would suppress the effect of the other explanatory indicators.

The results show that being unemployed and being economically inactive significantly decreases the income status. This is true for each of the countries under study except for Kyrgyzstan where employment status is not related to income. One of the explanations of this phenomenon might be the big role of the remittances in the economic life of the Kyrgyz families that are sent from the migrant workers abroad. Remittances in Kyrgyzstan accounted for 27.5–30.75% of GDP in 2011–2012 accordingly.

Apart from these findings, in Kazakhstan part-time workers experience significant income reductions. The peculiarity of Russia is that being self-employed positively contributes to income. These findings are robust to the inclusion of gender equality and individualism. Values do not suppress the effect of employment status on the dependent variable. Kazakhstan demonstrates a positive link between gender equality and income, namely the Kazakhs who support gender equality tend to earn more. However, this result does not hold for the other considered countries. The estimates for Kyrgyzstan, Russia and Uzbekistan suggest that neither gender equality nor individualism are associated with income.

It is important to consider that the coefficient estimates for the values in the preliminary regression models might be misleading due to the aggregation of direct and

indirect effects. It is hypothesized that gender equality and individualism contribute to income through employment status. Table 16.9 reports the results of estimated regression models on the expanded imputed dataset (for more details see the description of the imputation procedure in Sect. 16.4). These models separate the natural direct and indirect effects. The models are estimated for the total sample and separately for males and females to see whether there are some gender differences in the mediation effect.

The effect decomposition indicates that in Kazakhstan gender equality has only a direct effect on income. The corresponding indirect effect is small in magnitude and insignificant. In Kyrgyzstan support for gender equality is not related to income both in terms of direct and indirect effects. However, for females in Kyrgyzstan support for gender equality values and income are negatively related. The same is true for Uzbekistan. The possible explanation for this counterintuitive result is that the self-employed are highly underrepresented in the data for the Central Asian countries used in this study. The estimates for Russia support the hypothesis about the mediation role of employment status. The authors observed earlier the insignificant impact of gender equality because the positive direct and negative indirect effects were suppressing each other. The effect decomposition demonstrates that higher support for gender equality positively contributes to income through employment

Table 16.9 Support for gender equality and income: direct and indirect effects. Mediation analysis

	Kazakhstan	Kyrgyzstan	Russia	Uzbekistan
Total sample				
Direct effect of gender equality	0.146*** (0.041)	– 0.058 (0.036)	– 0.061* (0.032)	– 0.052 (0.0367)
Indirect effect of gender equality	– 0.002 (0.007)	– 0.006 (0.005)	0.014** (0.006)	0.004 (0.005)
Control variables	Included			
Males				
Direct effect of gender equality	– 0.025 (0.024)	– 0.046 (0.026)	– 0.1167*** (0.022)	– 0.0598* (0.025)
Indirect effect of gender equality	– 0.0018 (0.003)	0.0001 (0.0029)	– 0.003 (0.003)	– 0.0001 (0.002)
Control variables	Included			
Females				
Direct effect of gender equality	– 0.0202 (0.0235)	– 0.066** (0.024)	– 0.0328 (0.023)	– 0.068** (0.023)
Indirect effect of gender equality	– 0.002 (0.0025)	– 0.007* (0.003)	– 0.003 (0.0026)	– 0.0027 (0.0029)
Control variables	Included			

Note Calculations are made by the authors on the basis of Inglehart et al. (2014)
Natural Effect model on the imputed sample. Standard errors based on the non-parametric bootstrap are given in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

status. However, in Russia there is no direct association between gender equality and income. The coefficient estimate for the direct effect produced by gender equality has a negative sign, but it is at the edge of significance. In Russia the mechanisms of the relationship between support for gender equality values and income vary by gender. Russian women's income does not depend on their support for gender equality. Males with a higher support for gender equality tend to have a lower income. This effect is direct, which implies that a higher level of gender equality does not predetermine the choice of employment status by males. At the same time if males oppose the idea that they are the only breadwinners in their families, they tend to be less eager to look for additional sources of income.

Additionally, the same algorithm was repeated to define the mechanism of the relationship between individualism and income. The findings indicate the absence of direct and indirect effects in all the countries under consideration.

16.6 Conclusion

This chapter was aimed at testing the association between support for gender equality and individualism, on one side, and employment status and income, on the other. The current study contributes to the research on economic activity and employment status determinants in the Central Asian economies. This section of the chapter summarizes and discusses the main results of the comparison between Kazakhstan, Kyrgyzstan, Uzbekistan on the one hand, and Russia, on the other hand, as one of the main country-recipients of labor immigrants from Central Asia.

The analysis of the relationship between values and employment status shows that the effect of gender equality on employment varies across the countries under consideration. The hypothesis about the positive relationship between self-employment and gender equality was confirmed only for Russia. Self-employment is also significantly correlated with gender equality attitudes in Kazakhstan and Kyrgyzstan, but the effect is in the opposite direction. To explain this phenomenon, one can address the fact that the self-employed in Russia and Central Asia are different categories of people. In Central Asia, young people regardless of gender become entrepreneurs since there is a lack of workplaces in the current labor market. Most Russian self-employed individuals are opportunity entrepreneurs (Pham et al. 2018). Such factors as market opportunities and the desire for independence and creativity (i.e., individualism) facilitate entry into self-employment (Block and Koellinger 2009; Liu and Huang 2016).

Individualism in its turn is positively correlated with gender equality. Collective societies are usually characterized as being based on patriarchal hierarchies. For example, family hierarchies shape gender inequality and traditional attitudes toward the role of women in labor markets (Alesina and Giuliano 2014). The positive association between individualism and gender equality values explains why gender equality is related to the higher likelihood of self-employment in Russia. The other possible explanation could be that Russian women who support gender equality dare

to start their own business. However, the analysis does not support this proposition by showing that in Russia the effect of gender equality on self-employment does not vary by gender (see details in Table 16.8).

At the same time the Central Asian countries demonstrate that gender moderates the relationship between support for gender equality and employment status. Women in Kazakhstan are more likely to be active in the labor market and to be part-time employed if they share gender equality values. This is in line with the recent studies (Lee 2019; Rodriguez and Pillai 2019). The effect is twofold. On the one hand, women who have positive attitudes toward gender equality choose to be employed rather than to be housewives. On the other hand, women who participate in the labor force benefit from employment, which fosters their gender equality values. That makes it difficult to speak about causal relationships and there for the next studies should address the endogeneity problem here. Unfortunately, the nature of the available data does not allow the authors to solve the endogeneity problem.

The evidence from Russia confirms the hypothesis about the positive association between self-employment and individualism. Individualism increases the likelihood of being self-employed. This conclusion is consistent with previous findings (Baluku et al. 2018). People with a higher propensity to rely on their own capacities are more inclined to start their own business. Individualism does not predict employment status in the Central Asian countries. As the authors have already discussed above, people in these countries are pushed into self-employment due to the lack of job opportunities. Therefore, in Central Asia values are weak predictors of employment status.

The second part of the analyses focused on the association between the post-materialist values and income. Only the evidence from Kazakhstan confirms that gender equality is a significant predictor of income. This country indicates that supporters of gender equality values tend to earn more. However, there is not enough evidence for understanding how this relationship works. To clarify the mechanism underlying this link, the mediation analysis was implemented. The important observation is that the effect of gender equality values in Kazakhstan is direct and not mediated by employment status. This implies that a higher support for gender equality may result in higher work engagement. This is in line with the previous studies (Choi et al. 2013; Sortheix et al. 2013). The high level of work engagement in its turn may contribute to higher income.

On the contrary, for Russia it is true that gender equality has an indirect effect on income. This effect is mediated through the employment status. The results also evidence that individualism is a weak predictor of income for both Russia and the Central Asian countries. The mediation analysis indicates that individualism produces a direct effect on income. To summarize, the hypothesis about the indirect effects of values is partially confirmed. While the Central Asian countries give more evidence for the direct relationship, Russia corroborates the proposition about the mediation between support for gender equality and income through employment status.

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