

**RESEARCH ARTICLE**

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# Cross-Country Study of Central Asia and Central Europe: Gender Equality Issues

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**Abstract**

The study investigates how gender stereotypes and economic differences influence gender inequality in emerging economies. The research aims to examine gender imbalances in Central Asia (CA) and Central Europe (CE) which share a long socialist history. The objectives of the paper are to collect data on both CA and CE regions and examine relationships between Human Development Index, Global Innovation Index, Gender Inequality Index, and Global Gender Gap. The relevance of actions and initiatives to promote gender equality in regions is emphasized. To consider the problem from the point of view of theory, we did a literature review of sociological, economic, and educational studies on gender and the formation of gender stereotypes using the Web of Science and Scopus databases and the Mendeley and Research Gate social networks. A comparative analysis of quantitative data of secondary information was carried out based on information from the countries of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) and Central Europe (Czech Republic, Hungary, Poland, and Slovakia). The study uses a quantitative correlation method. Countries with a high gender gap are expected to have lower human development and innovation levels. Central Asian countries have more significant gender gaps and gender inequalities than Central Europe. The value of the study lies in the attempt to recreate the big picture regarding the existing gender gaps in the countries with emerging economies, covering countries of Central Asia and Central Europe. Agencies of countries with emerging economies can use the study results to analyze scenarios and forecasts to develop labor markets and elaborate policies and programs to combat gender inequality.

**Keywords:** Gender, Gender Stereotypes, Global Gender Gap, Employment, Gender Inequality Index, Human Development Index

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## 1. INTRODUCTION

The fight against gender inequality is one of the essential issues not only from a social point of view but also from an economic one since the dominance of masculinity in society can lead to low employment of women in the skilled labor market. The choice of a particular profession, hiring, and promotion of the career ladder result from conscious and unconscious gender stereotypes formed under the influence of traditional family culture. The issue of identity and difference has become a familiar subject of theoretical discussion and empirical analysis in women's and gender studies (Fernandes, 2004), and economic parity is one of the main challenges to achieving gender equality worldwide (Medina-Claros et al., 2021). Over the past century, women in developed countries have made significant progress in the labor market, but persistent gender pay and employment gaps remain resilient (Olivetti & Petrongolo, 2016). Despite changes in women's education levels and gained work experience, the convergence of the gender wage gap slowed in the 1990s and stalled in the 2000s (Cha & Weeden, 2014).

The status of Asian women depends on marital status and children. Usha (2016) argues that the persistence of the patriarchal, exploitative social order and structural inequalities inherent in Central Asian societies disproportionately influence women.

A recent survey conducted in Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia, and Kazakhstan, found that gender stereotypes are more potent in Kazakhstan compared to Central and Eastern Europe (Lipovka & Buzady, 2020). In Central Asian countries, women are less likely to be employed in the formal economy. 42% of women compared to 32% of men work in the informal economy (SDG Indicators, 2019). As a result, women are more likely than men to experience poverty.

Gender stereotypes and conservative attitudes toward family responsibilities continue to be supported in Asian societies. The resurgence of traditional gender stereotypes, limited access to the decision-making process, and insufficient attention to gender issues by the region's states push women to the background (Usha, 2016).

Gender disparity in the workplace has been debated and studied for decades. Notwithstanding advancements, such as more women are educated, gender employment gaps persist. These problems necessitate a detailed literature evaluation. An analysis of the existing literature showed a knowledge gap about the impact of gender stereotypes and gender inequality on the position of women in the CE and CA regions, which are united by a common socialist past and undemocratic governments. The study found a strong correlation between human development indicators, innovation, gender inequality, and gender gaps. The study aims to study gender inequality in countries with a common socialist past. The study's objectives are to collect and compare information on the CA and CE countries, conduct a correlation analysis between indicators of human development, innovation, gender inequality, and the gender gap. The study also examines the factors contributing to gender inequality and emphasizes the importance of measures and programs to promote gender equality in Central Asia and Central Europe. By achieving the listed objectives, the study intends to add to the knowledge of gender inequality in emerging economies and shed light on the possible solutions.

## 2. LITERATURE REVIEW

Theoretical viewpoints, empirical studies on the presence and impacts of gender discrimination, and research on strategies to eliminate gender inequality make up the literature on gender inequality in the workplace. Eagly and Koenig (2021) believe that stereotypes arise due to distributed social roles based on defined attributes like gender, race, and age. In turn, the stereotype does not allow them to go beyond a particular role, and the vicious circle closes, preventing them from taking on a new role. Stereotypes reinforce gender roles and restrict

women's workplace development. Eagly and Koenig (2021) suggest that instead of "directly attacking" stereotypes in people's minds, a more effective strategy consists of "policies and programs that change the distributions of category members in roles, thereby changing stereotypes at their source."

Francesconi and Parey (2018), using data from six cohorts of German university graduates, estimated "the extent of gender gaps in college and labor market performance twelve to eighteen months after graduation": the gender gap in full-time monthly earnings was about 20 log points. In most European countries, women earn only 60 to 75% of men's wages, and the average gender gap in pensions in the 28 member states of the European Union (EU) is as high as 39% (Ólafsdóttir, 2021).

Based on a sample of 42,638 respondents from Central and Southern Europe and North and South America, Merten (2005) found a significant relationship between culture and gender and a positive correlation between the indicator of gender empowerment and gender differences. Ólafsdóttir (2021) believes that equality is far from reality despite improving women's legal status in Europe.

Four replica studies by Cuddy et al. (2015) confirm Williams & Best's (1990) findings on gender stereotypes in 26 countries based on an analysis of cross-national data on gender stereotypes. The findings of Cuddy et al. (2015) support the cultural moderation hypothesis of gender stereotypes. This hypothesis is supported by the significant study by McGuire et al. (2021), who concluded that to arouse girls' interest in science and mathematics, it is necessary to apply career aspiration motivation, thereby challenging gender stereotypes. According to Meho (2021), the gender gap remains highly disproportionate in the biological and life sciences, computer science, and mathematics.

Recent studies on gender stereotypes show that their formation occurs mainly in the family, which are then fixed in public institutions. Findings from Muntoni and Retelsdorf (2019) support the suggestion that parental gender stereotypes play an important role in perpetuating gender differences. A longitudinal study by Starr and Simpkins (2021) found a significant positive association between parental and adolescent stereotypes. The social cognitive theory argues that children learn gender stereotypes through gender information (Seitz et al., 2020), which means that both school and university have an impact. A study by Cho and Jang (2021) shows a high correlation between gender role stereotypes and patriarchal family environments. From this point of view, Rubio-Marín (2015) describes the Scandinavian experience of overcoming traditional gender representations and stereotypes built around them by bringing fatherhood to the fore while maintaining the importance attached to care and reproduction.

Hermes (2011) argues that combating gender stereotypes should be done through education and the media. Presently, access to education and the media depend on access to the Internet. Gender equality in Internet access is increasingly recognized as a development goal (Fatehkia et al., 2018). Access alone is not enough, and women need freedom of action and the ability to use access (Mariscal et al., 2019). If social change does not interrupt the vicious circle, adherence to typical social roles will continually reproduce existing stereotypes (Eagly & Koenig, 2021). In our opinion, the reproduction of a vicious circle is doomed in societies with an advanced innovative culture to which men and women should contribute. The development of science, technology, engineering and mathematics (STEM) requires qualified professionals in these areas. However, in some areas, women's representation does not reach 30% of the total (Verdugo-Castro et al., 2022). The more women are involved in STEM - the more innovation is expected. It is important to note that women and men approach innovation differently, and there is no single recipe for practical innovation (Gligor et al., 2022). A study by Mendonça and Reis (2020) sheds light on gender differences in the use of innovation. It concludes that while men innovate more, female innovators are no different from male innovators. Lipovka et al. (2021) believe that in

organizations, women leaders are more oriented to build a working environment and motivate the innovative activities of their subordinates. The gender diversity of managers in organizations has a “double positive effect” as women prefer to build connections with women, and men tend to collaborate with men (Mendoza-Silva, 2021). Therefore, STEM education for women can potentially revolutionize employment and performance.

Search engines (SE) can perpetuate known gender stereotypes and have been found to influence users accordingly (Fabris et al., 2020). The fact that formed gender stereotypes have a powerful impact on human life is confirmed by artificial intelligence experiments (Ahn et al., 2022). Despite the availability of new technologies, there continue to be socio-cultural norms that limit access for women (Mariscal et al., 2019). Even the gender gap in prestigious scientific awards results from demographic inertia and other factors that merit further study (Meho, 2021). The results of a survey of 287 Spanish women and men analyzed using multivariate regression analysis show that the perception of a lack of equality increases the gender gap, even if the country has policies aimed at closing the gender gap in terms of women's role in the family (Ilie et al., 2021).

Gender stereotypes formed in early childhood continue to influence people's decisions in school, college, university, and the workplace. Thus, the family and social institutions determine the views of women and men, which ultimately has many consequences both for the individuals themselves and for society as a whole. Many Asians still believe that a woman's proper place should be in the family, primarily responsible for household chores and caring for her husband and children (Tang, 2016). The study of gender stereotypes in society is essential from a sociological, cultural and economic point of view, which can manifest itself not only in the imbalance of the labor market but also in low employment among women, lower incomes and lack of career growth. For example, Asian women are more likely to work part-time and be unemployed or part-time, especially in adverse economic conditions (Tang, 2016).

Teelken et al. (2019) found “micro-political practices” associated with hiring and promotion, and the authors explain this by unconscious stereotypes that permeate micro-political practices. Pedersen & Nielsen (2020) found evidence of employee decision bias due to gender stereotyping. According to Ólafsdóttir (2021), European women have less access to economic assets: they possess less property, often occupy precarious and low-paid jobs, and continue to suffer disproportionately from poverty and poverty employment discrimination. Nevertheless, Medina-Claros et al. (2021) find no evidence of a gender gap in promotions. Moreover, this is not surprising because it is well known that women can quickly build communication.

Meanwhile, Evans et al. (2021) argue that empirical evidence does not support the hypothesis that a reduction in the gender gap in school education consistently results in a reduction in the gender gap in labor force participation. We believe a close correlation between school education and the gender gap is difficult to identify, and more research is needed here. However, Evans et al. (2021) failed to record five facts.

1. Women are more educated in all countries today than 50 years ago.
2. In most countries, women remain less educated.
3. In many countries with low levels of education, the gender gap widened as the number of boys in school increased and then narrowed as girls enrolled.
4. The gender gap rarely persists in countries where boys achieve a high level of education.
5. Fifth, in the youngest cohorts in some regions of the world, women are more educated than men.

The first, third, fourth, and fifth statements are promising and indicate positive trends in the field of gender.

### 3. METHODOLOGY

In this study, gender inequality in Central Asia and Central Europe was compared using quantitative secondary data. We gathered pertinent articles from the Mendeley and ResearchGate social networks as well as those included in the Scopus and Web of Science databases and concentrated on sociological, economic, and educational aspects of gender imbalance. Because of a lack of information from Turkmenistan, we focused on Kazakhstan, Kyrgyzstan, Uzbekistan, and Tajikistan. The Visegrad Group is an association of four states, represents the countries of Central Europe: Poland, the Czech Republic, Slovakia, and Hungary. These nations are compared to Central Asian countries because these both regions have emerging economies and similar socialist experiences.

The theoretical framework of the paper is a Social Role Theory (Eagly, 2013), according to which, gender stereotypes that are commonly accepted arise due to a society's inherent gender labor division. Stereotypes that associate agency with men and communion with women have been developed in western societies due to men's increased participation in paid jobs of more power and status and the disproportionate assignment of nurturing tasks to women. It is important to note that the gendered division of labor also grants men and women differing skill sets. Therefore, "societal stereotypes about gender" (Eagly & Wood, 2012) are "perpetuated through a vicious cycle" and cause cognitive biases leading to prescribed social roles (Eagly & Koenig, 2021)

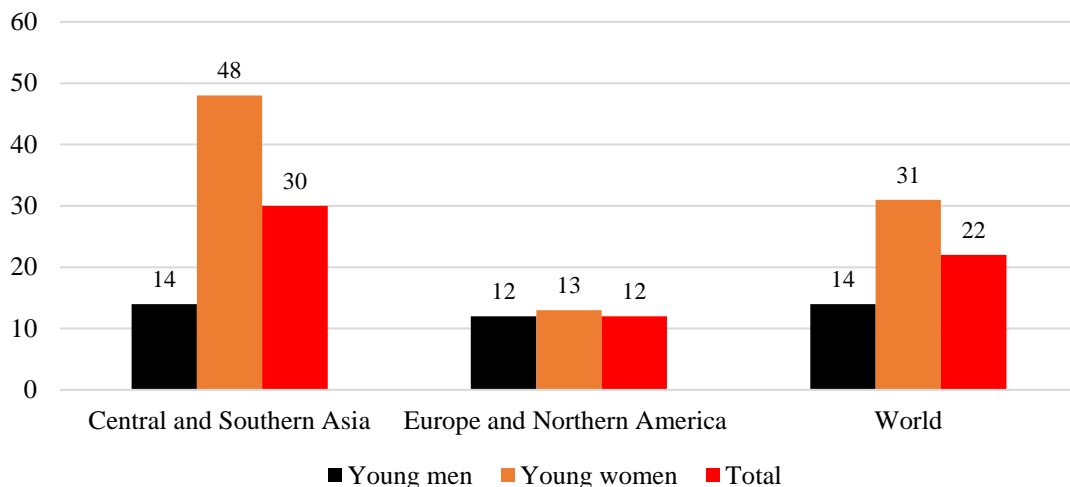
Analysis of secondary information on the research topic allowed the authors to formulate a hypothesis: In transition economies, gender gap and gender inequality indicators are highly correlated with human development indicators and innovation rates.

To test the hypothesis, we conducted a correlation analysis between four indices - Gender Inequality Index, Global Gender Gap, Human Development Index, and Global Innovation Index, of which the last two are related to the quality of life, people's opportunities to be realized, and the state of the labor market. These variables were chosen on the grounds of relevance, significance, comparability, and data accessibility. These metrics are essential for measuring and comprehending social, economic, and cultural issues. The disparities in access to resources and opportunities by gender are reflected in the gender gap and gender inequality indices. On the other hand, human development and innovation rates offer perceptions of the standard of living, development of the economy, and advancement of technology. These factors significantly influence policies provided and explain how the vicious cycle could be broken. Better economic performance, social stability, and human rights can result from reducing gender disparity and the gender gap. Meanwhile, raising human development indicators and innovation rates can promote social well-being, sustainable development, and global competitiveness. These characteristics can also be contrasted across different regions, countries, and times. It makes it possible to benchmark, monitor, and assess progress (regress) over time. Another point is accessibility to all listed data.

### 4. FINDINGS AND DISCUSSION

Globally, young women are twice as likely as young men to be not educated or trained and unemployed. In 2019, the global NEET (Not in Education, Employment or Training) rate was 31.1% for young women compared to 14.0% for young men (Figure 1).

According to Figure 1, Asia has a high gender gap in NEET, with 48% of young women in 2019 participating in neither education nor employment or training. In 2020, job cuts hit young people harder than older workers. Technical and vocational education and on-the-job training have suffered significant disruptions, forcing many to drop out (SDG Indicators, 2019).



**FIGURE 1.** The proportion of youth NEET by gender for 2019, in percentage

*Note:* compiled by the authors on the reference SDG Indicators (2019)

As more women than men were forced out of the labor market during the pandemic, the crisis likely exacerbated the NEET gender gap (SDG Indicators, 2019).

The Gender Inequality Index (2022) is a numerical display of three indicators (reproductive health, empowerment, and the labor market) that give information about the country. Reproductive health is measured by the maternal mortality rate and the teenage pregnancy rate. Empowerment and opportunities (empowerment dimension) are measured by the proportion of seats in parliament occupied by genders and the level of secondary and higher education. A higher Gender Inequality Index (2022) indicates discrimination (Table 1).

**TABLE 1.** United Nations Development Programme: Gender Inequality Index 2021

| Rating | Country         | Gender Inequality Index |
|--------|-----------------|-------------------------|
| 31     | Poland          | 0.109                   |
| 34     | Czech Republic  | 0.120                   |
| 41     | Kazakhstan      | 0.161                   |
| 45     | Slovak Republic | 0.180                   |
| 55     | Hungary         | 0.221                   |
| 56     | Uzbekistan      | 0.227                   |
| 68     | Tajikistan      | 0.285                   |
| 87     | Kyrgyz Republic | 0.370                   |
| 43     | Turkmenistan    | 0.177                   |

*Note:* compiled by the authors based on the reference Gender Inequality Index (2022)

According to Table 1, among countries with transit economies, the most unfavorable situation with discrimination is observed in such countries as Uzbekistan, Tajikistan, and the Kyrgyz Republic. The lowest rates are typical for Poland, the Czech Republic, and Kazakhstan. There is no information available for Turkmenistan. Mariscal et al. (2019) emphasize the need to assess the global gender gap and develop meaningful indicators that support the development and implementation of effective policies. The Global Gender Gap Index, developed by the World Economic Forum, measures differences in resources and opportunities due to gender and is

calculated based on four categories: economic participation and economic opportunity, education, health and survival, and political empowerment (Table 2).

**TABLE 2.** World Economic Forum: Global Gender Gap Report 2021

| Rating | Country         | Global Gender Gap |
|--------|-----------------|-------------------|
| 65     | Kazakhstan      | 0.719             |
| 67     | Slovak Republic | 0.717             |
| 76     | Czech Republic  | 0.710             |
| 77     | Poland          | 0.709             |
| 86     | Kyrgyz Republic | 0.700             |
| 88     | Hungary         | 0.699             |
| 114    | Tajikistan      | 0.650             |
| -      | Uzbekistan      | 0.6913            |

*Note:* compiled by the authors based on the reference World Economic Forum (2022)

According to Table 2, the most favorable situation with the gender gap index is observed in Kazakhstan, Poland, Czechia, and Poland ranked 65th, 67th, 76th, and 77th. The Kyrgyz Republic is 86th, Hungary is ranked 88th, and Tajikistan is 114th. No data is available for Turkmenistan; for Uzbekistan, the most recent data is available only for 2009 (Hausmann et al., 2009).

Castellano and Rocca (2020) examine the causes of the gender gap in the labor market based on the Gender Gap Index and Labor Market Index and according to the study, gender disparities are found everywhere, even regarding time spent at work in response to family commitments. Petrongolo and Ronchi (2020) also point out that commuting can be a driver of the gender pay gap, as it can make women feel an aversion to commuting time. Similar gender gaps also occur in high-income countries. According to the authors, the service economy, which is particularly important for women's employment prospects, can positively influence the reduction of gender gaps. Growth in the share of services explains at least half of the change in women's work hours (Olivetti & Petrongolo, 2016). The level of economic inactivity among women speaks volumes regarding a country's social fabric, attitudes toward working women, and family structure in general (Key Indicators of the Labour Market, 2022).

The Human Development Index (HDI) is a United Nations indicator used to quantify a country's achievements across various indicators (Human Development Index, 2022). The health dimension is measured by life expectancy at birth; the education dimension is measured by average years of schooling for adults aged 25 and over and expected years of schooling for school-age children. The standard of living is measured by gross national income per capita. This indicator can be used to judge the level of literacy, access of the rural population to electricity, income inequality, and access to the Internet.

HDI is calculated by UNDP experts and a group of independent international experts based on analytical developments and statistical data from national institutions and international organizations.

The Human Development Index (2022) ranges from 0 to 1.0, where 1.0 is the maximum possible human development. The HDI has four levels: very high human development (0.8–1.0), high human development (0.7–0.79), medium human development (0.55–0.70), and low human development (below 0.55)

According to obtained results, a very high level of the human development index is typical for Czechia, Poland, Slovakia, Hungary, and Kazakhstan (56th place). A high level of the Human Development Index is observed in Uzbekistan (101st place) and Turkmenistan (91st place); an average level in Kyrgyzstan (118th place) and Tajikistan (122th place) (Table 3).

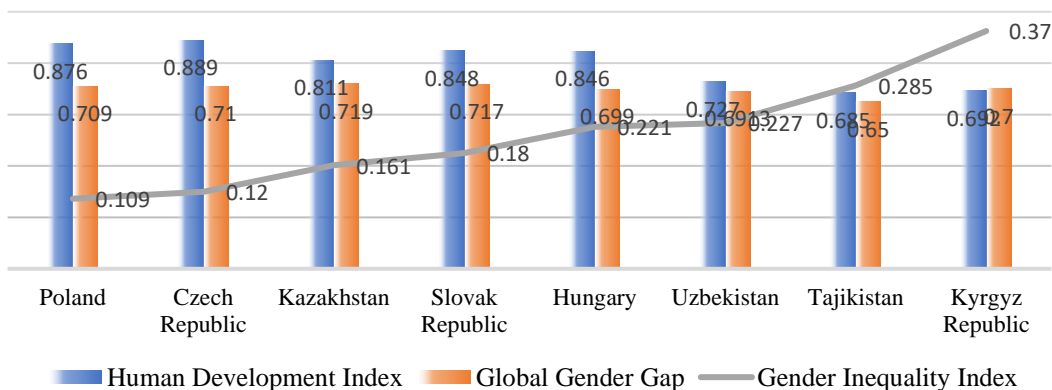
**TABLE 3.** United Nations Development Programme: Human Development Index 2021

| Rating | Country      | Human Development Index | Limits    | Level           |
|--------|--------------|-------------------------|-----------|-----------------|
| 32     | Czech Rep.   | 0.889                   | 0.8–1.0   | Very high level |
| 34     | Poland       | 0.876                   | 0.8–1.0   | Very high level |
| 45     | Slovak Rep.  | 0.848                   | 0.8–1.0   | Very high level |
| 46     | Hungary      | 0.846                   | 0.8–1.0   | Very high level |
| 56     | Kazakhstan   | 0.811                   | 0.8–1.0   | Very high level |
| 91     | Turkmenistan | 0.745                   | 0.7–0.79  | High level      |
| 101    | Uzbekistan   | 0.727                   | 0.7–0.79  | High level      |
| 118    | Kyrgyz Rep.  | 0.692                   | 0.55–0.70 | Average level   |
| 122    | Tajikistan   | 0.685                   | 0.55–0.70 | Average level   |

*Note:* compiled by the authors based on the reference Human Development Index (2022)

The gender gap varies depending on the country's socio-cultural, legal, and economic conditions. A global indices study shows that differences between countries in the gender development gap are more pronounced than in other dimensions (Medina-Claros et al., 2021).

A study by Salis and Flegl (2021) found that the Human Development Index is the “most influential factor” in the context of the gender gap; moreover, the more developed the country - the smaller the gender gap in entrepreneurship. At the same time, men own much more wealth than women, and the lower the social status - the smaller the gender differences in wealth (Meriküll et al., 2021). There is significant relationship between gender indices and the Human Development Index (Figure 2).

**FIGURE 2.** Relationship between Gender Inequality Index, Global Gender Gap, & Human Development Index

*Note:* compiled by the authors based on references Human Development Index (2022), Gender Inequality Index (2022), World Economic Forum (2022)

In Figure 2, the symmetry observed between the Gender Inequality Index, Global Gender Gap, and the Human Development Index: the higher human development - the lower the Gender Inequality Index.



To determine the tightness of the relationship between the indices, we calculated the Spearman correlation coefficients using the SPSS program (Table 4).

**TABLE 4.** Empirical values of correlation analysis by Spearman

|   | <b>Global Gender Gap</b> | <b>Gender Inequality Index</b> |
|---|--------------------------|--------------------------------|
| Human Development Index   | 0.857*                   | -0.881**                       |
| Global Gender Gap   | 1                        | -0.881**                       |
| <i>Statistically significant at * - p&lt;0,05; ** - p&lt;0,01; *** - p&lt;0,001</i> |                          |                                |
| <i>Note: calculated by the authors</i>  |                          |                                |

According to Table 4, there is a close correlation between the three indicators. It is important to note that for the sake of completeness, we used the Uzbekistan's Global Gender Gap for 2009 due to the lack of recent data.

The 2022 Global Innovation Index analyzes the most recent global innovation trends and ranks the innovation ecosystems of 132 economies, highlighting strengths and weaknesses in terms of innovation and certain gaps in innovation performance. To compare global innovation indices, we combined data of the Central Europe and Central Asia countries (Table 5).

**TABLE 5.** World Intellectual Property Organization: Global Innovation Index 2022

| <b>Rating</b>                          | <b>Country</b>  | <b>Global Innovation Index</b> |
|--|-----------------|--------------------------------|
| 30                                     | Czech Republic  | 42.8                           |
| 46                                     | Slovak Republic | 34.3                           |
| 38                                     | Poland          | 37.5                           |
| 34                                     | Hungary         | 39.8                           |
| 83                                     | Kazakhstan      | 24.7                           |
| 82                                     | Uzbekistan      | 25.3                           |
| 94                                     | Kyrgyz Republic | 21.1                           |
| 104                                    | Tajikistan      | 18.8                           |
| <i>Note: calculated by the authors</i> |                 |                                |

According to Table 5, the countries of Central Europe are ahead of the countries of Central Asia in the Global Innovation Index and are in the range from 37.5 to 42.8. Among the countries of Central Asia, Uzbekistan (25.3) is the most innovative country, the least is Tajikistan (18.8), which ranks 104th in the world out of 132 countries that have adopted participation in the rating.

Next, we calculated the correlation coefficients using Excel with the addition of the Global Innovation Index since we firmly believe that innovation depends on the level of human development (Table 6).

**TABLE 6.** Correlation analysis results in Excel

|  | <b>Human Development Index</b> | <b>Global Gender Gap</b> | <b>Gender Inequality Index</b> | <b>Global Innovation Index</b> |
|--|--------------------------------|--------------------------|--------------------------------|--------------------------------|
| Human Development Index                | 1                              |                          |                                |                                |
| Global Gender Gap                      | 0.69527015                     | 1                        |                                |                                |
| Gender Inequality Index                | -0.87357                       | -0.53206                 | 1                              |                                |
| Global Innovation Index                | 0.922153                       | 0.538586                 | -0.71749                       | 1                              |
| <i>Note: calculated by the authors</i> |                                |                          |                                |                                |

According to Table 6, the closeness of the relationship between all indices varies from moderate (-0.53206; 0.538586) and strong (0.69527015; -0.71749) to very strong (0.922153). For example, the Global Gender Gap indicator calculated by the World Economic Forum has a moderate negative (-0.53206) correlation with the Gender Inequality Index, a strong positive correlation (0.69527015) with the Human Development Index, and a positive medium correlation (0.538586) with the Global Innovation Index. The correlation coefficients confirm our hypothesis, that in transition economies, gender gap and gender inequality indicators are highly correlated with human development indicators and innovation rates.

## 5. DISCUSSION

The Central Asian labor market is characterized by gender trends such as female employment in public sector jobs (education and healthcare) with low wages and employment of males in technical sectors (construction, industry, extraction of natural resources, IT) with high wages and pays.

Occupational imbalance contributes significantly to the formation of the gender gap. It is supported by the results of a study by Bannier et al. (2019), who, using nationally representative data from the United States, showed that women have poorer knowledge of bitcoin characteristics than men. Therefore, closing the gender gap in financial literacy is essential. While progress has been made in increasing access to digital technologies, there are still significant challenges to be overcome to ensure that women participate in the transition to a digital society, which will undoubtedly increase productivity and social development (Mariscal et al., 2019).

From our point of view, the involvement of women in modern digital technologies depends on the innovative culture in society and the STEM professions' popularity among women. Thus, Hoang, Nahm & Dobbie (2021), after analyzing the links between gender, innovation, and labor productivity concluded that in order to enhance economic growth, adequately formulated policies related to women's entrepreneurship are needed, and McGuire et al. (2022) suggest a greater focus on innovation and expansion of support tools and methods for solutions to gender issues.

A study by Hussain et al. (2015) showed that the formation of gender stereotypes and gender roles in the family sphere is the result of "gender socialization, a differentiated family environment and a differentiated role of parents to children." In turn, the gender roles formed in the family continue to be performed in public institutions and are crosscutting via the family-kindergarten-school-university organization. For example, Teelken, Taminiu & Rosenmüller (2019) revealed the impact of gender stereotypes on the gender gap in the process and the results of selecting candidates for vacant positions.

Even though COVID-19 has launched a large-scale digital transformation in society (Brauweiler & Yerimpasheva, 2021), it is essential to note that the pandemic has also significantly contributed to widening gender gaps worldwide. Thus, the COVID-19 pandemic, according to Collins et al. (2020), created problems for women's working hours and employment. Thus, mothers with young children cut their working hours four to five times as much as fathers, leading to a 20–50 per cent widening gender gap in terms of hours worked (Collins et al., 2020). The COVID-19 pandemic has increased women's domestic and childcare work beyond the threshold, creating a gender gap in productivity and job satisfaction (Feng & Savani, 2020).

UN data confirm it: the decline in women's employment in 2020 was 5.0%. Women are more likely to leave the labour market to care for children, further widening gender gaps in labour force participation rates (SDG Indicators, 2019).

Despite policy changes and progress made by European women and girls, gender inequalities, traditional gender roles, and gender stereotypes persist in all areas of life, especially at home, in education, in the media, and the justice system (Ólafsdóttir, 2021).

It should be noted that the employment of women in the labour market is a multifaceted problem, and its solution includes economic, political, educational, cultural, social, psychological, and even technical aspects.

Implications: The study's results can be used to predict the state of the labour market, considering traditional cultures that reproduce gender stereotypes. This study links two Eurasian regions, represented by countries with transit economies, with different traditional cultures, separated by thousands of kilometres, a long time under the influence of the Soviet Union, and striving to overcome gender inequality..

## 6. CONCLUSIONS

The paper's objectives have been to study gender inequality in CA and CE countries, compare mined information, and conduct a correlation analysis between human development indices, innovation, gender inequality, and the gender gap. Despite significant gender gaps in the countries of CA and CE, women are actively involved in economic life and have certain economic opportunities. However, the lack of democratic freedoms in CA countries significantly fuels women's traditional family roles, and naturally, economic empowerment for women is needed to overcome gender gaps. Understanding the problem by decision-makers and stakeholders would provide an impetus for professionalizing women. The deteriorating situation with gender inequalities has become aggravated by the global crisis and the consequences of the COVID-19 pandemic.

The literature on gender inequality in the workplace highlights the negative role of gender stereotypes in shaping gender-based disparities in pay, employment opportunities, and career advancement. At the same time, empirical research has proved that gender inequality and gender gap variables correlate highly with human development and innovation rates. Further research should focus on identifying effective interventions and strategies to reduce gender inequality in the workplace. Important to note that developed countries demonstrate low female unemployment, minimal salary gap, and sustainable economic growth that expands employment opportunities for women. Every positive result in the labor market can be highlighted as a good practice and applied in less developed countries.

The theoretical meaning of the article is to update the importance of understanding the vicious circle mechanism, which manifests itself in regional stereotypes and ideas about gender roles influencing women's employment in the labor market. Instead of trying to change people's minds, it is necessary to pursue an effective social policy and implement programs (Eagly & Koenig, 2021) to support women's businesses, expand women's employment, involve women in STEM, and change their social roles.

The politicians of Central Asia and Central Europe should reconsider their gender policy to unlock and use better the gender potential of their economies since the traditionalist stereotypes negatively shape the gender ideals of the population and build barriers to sustainable development.

Limitations: Some countries (Turkmenistan and Uzbekistan) have incomplete and outdated stat information. Also, when comparing Central Asia and Central Europe, we proceeded from a similar socialist experience and did not consider cultural differences between countries and regions.

Further Research and Perspectives: The authors plan to conduct primary qualitative and quantitative research on the prospects of gender gaps in countries of Central Asia.

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