

The impact of women's labor resources on economic growth in Uzbekistan

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Abstract. One of the main economic and social wealth of Uzbekistan is its people. Although policymaker pay the special attention at the gender equality in almost every aspect of our lives, we still have gender bias in our labor market. The current study empirically investigated the relationship between female labor force participation and economic prosperity of the country. The paper implemented Granger casualty test to define which variable causes to change another variable amongst the gathered secondary data, after it employed Last Squares method to define the long term relationship amongst variables such as GDP, female labor force participation rates (FLFPR), fertility rates, female unemployment rates, female higher educational attainment and women in business and law index. The study showed that GDP influences the tribulations in rates of female labor force participation, and not on the contrary. Meanwhile, OLS regression gave a negative output of the correlations amongst GDP, Female Unemployment Rate, and Female in Business and Law Index regarding to the FLFPR. The significance of Women in Business and Law index is insignificant. In contrast the long term positive relationship is defined among fertility rate and higher education attainment with FLFPR. But in case of fertility rates the variable is insignificant.

1 Introduction

1.1 Female labor force and the GDP

There is growing evidence that the low participation of women in the formal labor market in developing countries hinders economic growth and poverty reduction. Women entrepreneurs are a growing market force, serving as an important source of innovation and job creation and driving economic growth. Rural women are the protagonists of development. They serve as catalysts for achieving the transformative economic, environmental and social changes necessary for sustainable development. However, limited access to credit, health care and education are among the many problems they face. Increasing women's participation in development is important for achieving social justice as well as reducing poverty. Global experience clearly shows that women's empowerment contributes to economic growth, improving the survival of children and the general health of the family, lowering fertility

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rates and slowing population growth. In short, investing in women is fundamental to sustainable development. However, despite these remarkable gains, women still face many barriers to contributing to and benefiting from development. Barriers start with relatively low investment in women's education and health, continue with limited access to services and resources, and empower women with legal and regulatory constraints. As a result, global developments over the last 30 years have not led to proportionate gains for women.

1.2 The role of women in the labor market

Indeed, due to the cultural specifications, religious beliefs and social norms, women's participation in workforce was almost prohibited throughout the world. The situation began changing dramatically only during the nineteenth century. And Uzbekistan was not the exception, after the colonization of our country by the Soviet invaders Uzbek women began somehow participating in economic life of the country, which was after 1920's. It is frequently assumed that employment of women took them out of the households to the industry creating the same economic opportunities for them. But in fact, if to look at the jobs that women started entering in the nineteenth century, we can see that there has not been a revolutionary alteration. Because females were mostly busy in the spheres highly related to their domestic routine work, meaning that women do less qualified and less paid jobs. This leads to unprecedented wage gaps between men and women, according to the UN (2020), females earn 77% of males' income. This results in a lifetime of income inequality between men and women and more women are retiring into poverty. There is numerous social, political, and other boundaries for female participation in the labor market in Uzbekistan. This problem grows to the decrease of potential income earners for the GDP of the country (PwC, 2020) [1].

2 Literature review

2.1 Review of empirical research

Since gender equality is one of the most debatable questions in Central Asian countries there are no sufficient empirical research done in this area, especially for Uzbekistan case. Mariel, O. (2022), investigates the relationship between higher educational attainment and labor force participation of Afghan women to the economic growth of their country [2]. He used OLS regression analysis and defined that correlation between FLFPR and was negative and insignificant, although unemployment rates have a negative effect to the economic prosperity of the country. Another empirical analysis conducted by Quinfen, M. (2017) as a determinant of the female workforce in Malaysia, his paper used the autoregressive distributed lag (ARDL) integration framework and confirmed that there is a long-term relationship between the female workforce and the determinants of GDP, education, and fertility rates [3]. Another empirical study of correlation between GDP and FLFPR is the work of Uwimana, O., (2020), study aimed at proving the U-feminization hypothesis in the case of Rwanda to determine if there is a long-run relationship between economic growth and women labor force participation. GDP per capita at constant 2010 US \$ was used as an indicator of economic growth. The cointegration test used is ARDL Boundary Approach to determine if they move together in a long run [4].

2.2 Review of the U-shaped relationship between GDP and female labor force

Examining the long-term coefficient, it can be seen that there is a U-shaped relationship between Rwanda's economic growth and women's economic participation, which means that economic growth initially leads to a decrease in women's participation rate. work and then vice versa. Fertility rates have also been shown to affect women's employment and unemployment rates. The research of Nazah, N., and et (2021) evaluated the effect of female fertility and education on women's employment rates in a data set from 39 Asian countries using the ARDL panel analysis for 1990-2018 [5]. Their results showed that the fertility rate had a negative effect on women's employment in the short term, but not in the long term. On the other hand, women's education has had a positive effect on women's long-term employment rate, but not in the short term. In addition, the causal relationship of the panel showed a two-way relationship between women's employment and fertility, women's employment and education, and women's fertility and education. In the investigation of Atuzarra, and et (2019) authors examined the relationship between women's employment rate and economic development in 28 European Union countries between 1990 and 2016 [6]. The analysis was conducted from two different perspectives. First, all EU-28 countries were examined, and second, the evidence was divided into two groups: the old Member States (EU-15) and the new Member States (EU-13). The results for all European countries (EU-28) were in line with the hypothesis that predicts a U-shaped relationship between women's employment and economic development. When we grouped the sample, we found evidence that supports the feminization hypothesis for the new EU countries, but not for the older ones. Verick Sh. (2014) explains U-shaped hypothesis the relationship between women's employment level and economic development: structural changes in economic activity and changes in the supply of domestic work and changes in attitudes towards women working outside the home in basic form [7]. This hypothesis suggests that women's participation is highest in poor countries where women earn a living and decline in middle-income countries due to (mainly) the migration of men's industrial labor. As the level of education increases and fertility rates fall, women can enter the labor market as demand increases in the services sector. Although this is a stereotypical fact, it is not reliable for other econometric data sets and methods.

2.3 Review of the relationship between women's activities and education

Serano, J., and et (2019) employed data from the National Household Survey of 18 Latin American Countries from 1987 to 2014 to estimate fixed-effect models at the national and population levels to examine the employment rate of women (LFP) over economic cycles [8]. The scholars found that women's LFP followed a reverse cycle pattern, suggesting a negative impact on employees, especially for married women, women with children and vulnerable women. They ensured that this factor could have contributed to a slowdown in the labor supply for women in Latin America in the 2000s, which experienced exceptionally high economic growth over the decade. Another article showed and analyzed the change in the employment rate of women between 2013 and 2017 in some countries of Central and Eastern Europe. At the national level, empirical data were analyzed through descriptive statistics, demographic indicators and indicators of labor market conditions. The analysis of spatial self-correlation was performed to find out the strength of spatial relations between regions in terms of women's activities and the educational environment. In addition, based on spatial regression, the dependence of comprehensive indicators of women's activities and level of education was analyzed empirically. The survey found that the employment rate of women in the countries surveyed increased by an average of 6.5 percentage points. The economic activity of women is affected by demographic

factors, including the level of education. The spatial regression analysis (from 2017) concludes that a 1% increase in the value of the composite indicator of the level of education of women increases the composite indicator of the level of activity in the region considered by almost 0.59% (assuming that other factors are constant) are maintained (Malinowski, M., & Jabłońska-Porzuczek, L., 2020) [9].

3 Methodology

The rudimentary aim of the research is to define whether there is a relationship between FLFPR and the national GDP of the country, to reach this aim we will use quantitative method with secondary data. Which will be used to reach the first objective of this research. The data will be processed in Excel and Python. Empirical studies will be analyzed in Eviews. We will take the data on GDP, unemployment rates of women, fertility rates, higher education attainment of girls and women in business index of females of Uzbekistan by the years of 1999 to 2021. At first it was considered to take the data starting from 1990 however, it was defined that statistical committee of Uzbekistan possessed gap in data of higher education attainment from 1992 to 1998 which is considered as missing data and not desirable to build an econometric model. Because it may cause the misestimating of the results. The long-run causal effect of economic growth and female labor force will be analyzed using the Ordinary Least Squares model and Granger causality test for causality and direction since the variables do not have the same order of integration. Moreover, the data we obtained for empirical studies is time series and such type of data tends to be non-stationary, and this is not desirable for our econometric model.

4 Data analysis

This study covers a period of 23 years (1999-2021). Given that the study is available and that the duration is long enough to provide an opportunity, labor market reform for Uzbek women. Promoting model increasing employment rate of women in Uzbekistan. Data used in this study is secondary data. The main source of data for analysis is the World Bank and United Nations data bank [11]. Bulletins and statistical reports of the National Bureau of Statistics of Uzbekistan. Here, GDP will be taken as independent variable, however some variables as gross domestic product in percent and GDP in constant rates, define the same variables only in different context so it was decided to use GDP per capita. GDP per capita defines more clear evidence of economic prosperity of country's people so this definition will be used for analysis of some related aspects of the collected data. The econometric model's equation to be used to determine the extent of contribution from the female labor force is as follows:

$F(\text{FLFPR}) = F(\text{Fertility Rate, Female Unemployment Rate, Female Higher Education Attainment, Gross Domestic Product per capita, Women in Business Index of Uzbekistan})$

Hence, we need to define the linear relationships amongst variables, and the equation will be changed to:

$$y = \beta_0 + \beta_1 * x_1 + \beta_2 * x_2 + \beta_3 * x_3 + \beta_4 * x_4 + \beta_5 * x_5 + \varepsilon$$

This will be transformed to the more suitable form of equation:

$$\text{Ln}y = \beta_0 + \text{LnFerR} + \text{LnFemUnR} + \text{LnFemHEdAt} + \text{LnGDP} + \text{LnFBLI} + \varepsilon$$

Where: y = FLFPR- Female Labor Force Participation Rates and it is dependent variable

Explanatory variables will be used as abbreviations in order to shorten the economic models outlook, and they are as follows:
Fertility Rate-FerR,
Female Unemployment Rate-FemUnR
Female Higher education attainment-FemHEdAt,
Gross Domestic Product-GDP,
Women in Business Index-FBLI
The relationship between GDP and FLFPR will be used to determine the U-shaped characteristics of the variables, and statistical tools such as Eviews and Python will be to define the correlation analysis of data found from the Republican statistical collections.

5 Results and discussion

5.1 Analysis of variables of the model

As it was mentioned previously the number of observations is 23, without any missing data, the observations for female higher education attainment has a missed data from 1992 to 1998, whereas other variables had all the numbers from 1990 to 2022. Thus, we cannot run an econometric model with missing data, and we had to take data for all other variables starting from 1999 to match the female higher education attainment.
The series for our mode represents that for Women in Business Index average value is 66.7, for higher education attainment, Unemployment rates, fertility rates, female labor force, and GDP the average arithmetic means are 40.7, 7.6, 2.5, 50.7, and 4.34. interesting thing about this statistic is that FLFPR were mostly more than 50% for these 23 years. Difference of median values from means is not big, only female unemployment rates difference is about 2. Hence, it must be mentioned that median is the value in the center which is allocated after sorting series in ascending order. Additionally, we may see maximum and minimum values from descriptive statistics, which is the highest for female unemployment rates, the range is about 11,

Table 1. Descriptive Statistics (prepared by authors)

	FBLI	FEMHEDAT	FEMUNR	FERR	FLFPR	GDP
Mean	66.68478	40.73913	7.561609	2.513043	50.72161	4.34E+10
Median	67.50000	40.46000	5.94900	2.46600	50.254	4.98E+10
Maximum	70.62500	45.08000	15.37100	2.98300	56.55	8.62E+10
Minimum	64.37500	36.47000	4.72100	2.35700	44.838	9.69E+09
Std.Dev	1.934976	2.747769	3.251084	0.153905	3.74779	2.74E+10
Skewness	0.197624	0.179519	1.195644	1.918917	0.12045	0.108146
Kurtosis	2.425497	1.875126	3.116785	5.819307	1.743121	1.488764
Jarque-Bera	0.466013	1.336155	5.493068	21.73258	1.569537	2.233507
Probability	0.792149	0.512693	0.06415	0.000019	0.456225	0.327341
Sum	1533.750	937.0000	173.9170	57.8000	1166.597	9.99E+11
Sum sq.Dev	82.37092	166.1052	232.5300	0.521109	309.0105	1.66E+22
Observations	23	23	23	23	23	23

Meaning that, female unemployment was about 4.7% in the most optimistic outcome and increased to 15.4% in the pessimistic outcome. Skewness measures the degree and direction of asymmetry. A symmetrical distribution, such as the normal distribution, has zero distortion and the distribution is oblique to the left. If the mean is lower than the median, it is negatively skewed. We have no absolute zero skewness, however many of our variables' skewness's are very close to zero. It must be mentioned that all our series has a negative skewness, as medians of each of them is higher than skewness. Close to normal kurtosis in our data is female unemployment rates as it's kurtosis coefficient is about 3 (3.1), we usually call the situation when kurtosis is 3, mesokurtic, but other series are either leptokurtic or platykurtic. FBLI, FemHEAT, FLFPR and GDP are platykurtic, because their kurtosis are less than 3, and have long left tail as their skewness' are positive. In contrast, FemUR, FerR are leptokurtic, for their kurtosis is more than 3, and possess long right tail (skewnesses are positive). Jarque-Bera coefficient deserves a special attention, because it defines whether the series is normally distributed or not, null hypothesis for Jarque-Bera is that series are normally distributed, and this is desirable outcome. So, if we obtain more than 5% probability for Jarque-Bera we may accept null hypothesis, which holds true for our every variable, except fertility rates. The reason is its Jarque-Bera probability is 0.000019, and if to turn it into percent we obtain 0.0019% which is less than 5% and we reject null hypothesis and accept alternative hypothesis, the series is not normally distributed.

Table 2. Augmented Dickey Fuller Test (prepared by authors - authors estimations in EViews 12)

Variables	At level	At first difference	At second difference	Critical value (%)			p-value	Order of integration
				1%	5%	10%		
LnGDP			-5,059328	-3,80855	-3,02069	-2,65004	0,007	I(2)
LnFLFPR		-5,512065		-3,78803	-3,01236	-2,64612	0,0002	I(1)
LnFemUn		-3,854297		-4,5326	-3,67362	-3,27736	0,036	I(1)
LnFerR	-7,03851			-3,7696	-3,00486	-2,64224	0	I(0)
LnFemHEdAt		-4,331572		-4,4679	-3,64496	-3,26145	0,0132	I(1)
LnFBLI			-4,637286	-4,5326	-3,67362	-3,27736	0,008	I(2)

The data we are using for our empirical analysis is time series data and tends to be non-stationary. Time series is called non-stationary when its statistical properties, such as mean, variance and covariance of the distribution are constant over time. In other words, it has a trend over time, if we look at our table we can see that only LnFerR is stationary, and others became stationary at first or second level. So, before preceding the data we need to get the first or second difference of required variable and then run our regression. Otherwise, running the model with not stationary variables may bring us a spurious or nonsense regression, which is meaningless to interpret. I (0), I (1) and I (2) in the table 2 means that the given variable becomes stationary at level (I (0)), at first difference (I (1)) or at second difference (I (2)). P-value less than 5% is desirable in this case. So, from the represented data only LnFerR is stationary without differencing, LnFLFPR, LnFemUn, LnFemHEdAt are stationary at first difference, whereas LnGDP and LnFBLI are stationary at second difference (Table 2). To evaluate the unit roots of the series we employ additional Philip Perron Test to compare the results (table 3).

Table 3. Philips Perron Test (prepared by authors - authors estimations in EViews 12)

Variables	At level	At first difference	At second difference	Critical value (%)			p-value	Order of integration
LnGDP			-5,856328	-	-	-	0,0006	I(2)
LnFLFPR		-5,512065		4,49831	3,65845	3,26897	0,0002	I(1)
LnFemUn		-3,088204		3,78803	3,01236	2,64612	0,043	I(1)
LnFerR	6,09735			3,78803	3,01236	2,64612	0,001	I(0)
LnFemHEdAt		-4,25516		-3,7696	3,00486	2,64224	0,0153	I(1)
LnFBLI			-3,158902	-4,4679	3,64496	3,26145	0	I(2)

Table 3 shows exactly the same difference order for the dataset. But we cannot implement Engle granger or Johansen cointegration test for such order of differences in dataset, because named tests can define the cointegration between variables only if their orders are same. But in table 3 we see all types of difference order.

We implement the Granger causality test, to examine which variable comes first, or which variables causes the next happen. The test is run only for stationary variables and in the above two tests we estimated that some variables are stationary at level, first and even second order. We differenced the variables in required order. After we run Granger Causality test and defined that not every variable causes the other. The table 4 demonstrates our data:

Table 4. Results of Granger Causality Test (prepared by authors - authors estimations in EVIEWS 12)

Pairwise Granger Causality Tests Date: 07/05/22 time: 21:42 Sample: 1999-2021 Lags:2			
Null hypothesis:	Obs	F-Statistic	Prob.
D1HEATR does not Granger Cause D1FEMUNR D1FEMUNR does not Granger Cause D1HEATR	20	0.29626 6.70078	0.7478 0.0083
D2FBLI does not Granger Cause D1FEMUNR D1FEMUNR does not Granger Cause D2FBLI	19	1.17929 4.17780	0.3363 0.0378
D2GDP does not Granger Cause D1FLFPR D1FLFPR does not Granger Cause D2GDP	18	15.6552 0.07182	0.0003 0.0378
D2FBLI does not Granger Cause D1HEATR D1HEATR does not Granger Cause D2FBLI	19	3.74796 0.20731	0.0497 0.8152
D2GDP does not Granger Cause D2GDP D2FBLI does not Granger Cause D2FBLI	18	3.67342 0.72073	0.0544 0.5048

We collected the significant hypothesis from the test; D1 means the first difference, while D2 defines the second difference. The first raw indicates that there is a connection between female unemployment at first difference and Female higher education attainment, because the null hypothesis of granger casuality cites that there is not a cause effect from female unemployment rate and female higher education attainment, and if to look at the p-value (probability value) we see less than 0,05 number, which means the probability is less than 5% and we reject the null hypothesis and accept alternative hypothesis, which would be there is a casuality from female unemployment to the higher education attainment of girls. the same

goes for the other results. For instance, female unemployment rates cause the index of women in business for Uzbekistan, GDP at second difference volatility causes female labor force participation change, this consideration alters our implication about female labor force participation effects on the GDP of the country and now the dependent for the equation with these two variables should be female labor force participation rates. Women in business and Law Index change results in movement of female higher education attainment, and GDP transition at second difference results in women in business and law too. So we can include from the test that GDP at second difference volatility mirrors both at female labor force participation rates at first difference and also index of females in business and law. Whereas the women in business and law index changes may cause the changes in the first difference higher education attainment rates of women, only. And female unemployment rates at first difference movements may cause the alterations in either first difference girls' tertiary education attainment or second difference women in business index.

5.2 Implication of the model

After, we suggested which variable should be taken as regressors we run the OLS regression analysis of logarithmed variables.

In order to define how fit our model to our data we need firstly look at the R-squared (table 5) coefficient the it shows 0,99 which we interpret as 99%, the variables explain the dependent variable in 99% cases. After it is important to look at the value of F-statistics, the higher the value the better, additionally probability of F-statistics is 0%, therefore it is significant, F-statistics null hypothesis is, all independent variables jointly cannot influence the dependent variable. Thereby the null hypothesis is rejected as the probability rate is 0%. The model's variables as GDP (LNGDP), female unemployment rate (LNFEMUNR) and partly female higher education attainment rates are statistically significant for our model, because the p-values (probabilities) for the variables are close to 0% which is a good sign (table 5).

Table 5. The OLS regression analysis of logarithmed variables. Source: authors computation estimated in EVIEWS 12

Dependent Variable: LNLFPR Method: Least Squares Date: 07/05/22Time: 22:57 Sample (adjusted): 1999 2020 Included observations: 22 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.872716	0.344825	17.03101	0.0000
LNGDP	-0.239938	0.008838	-27.14917	0.0000
LNFBLL	-0.036367	0.074971	-0.485082	0.6342
LNFEMUNR	-0.078975	0.016864	-4.682948	0.0002
LNFERR	0.016138	0.020311	0.794563	0.4385
LNHFEDAT	0.096197	0.068783	1.398567	0.1810
R-squared	0.993955	Mean dependent var		3.929169
Adjusted R-squared	0.992066	S.D. dependent var		0.070717
S.E. of regression	0.006299	Akaike info criterion		-7.069837
Sum squared resid	0.000635	Schwarz criterion		-6.772280
Log likelihood	83.76821	Hannan-Quinn criter.		-6.999742
F-statistic	526.1626	Durbin-Watson stat		1.803919
Prob (F-statistic)	0.000000			

The table 4 contains very useful information for our future econometric model, it states that GDP does not cause female labor force participation with 0.03%, therefore we reject the null hypothesis and accept alternative hypothesis: GDP does Granger cause FLFPR. In contrast the following raw estimates that FLFPR doesn't not Granger cause GDP in second difference with 93% probability, which is significant and we cannot reject null hypothesis instead we accept the null hypothesis.

After such assumption we run the OLS multiple regression (table 5), as the variables are turned into logarithms the conclusion driven the possible outcomes of each variable to FLFPR in percent. The coefficients of the variables should be considered as the percentage change in the process. Every one percent increase in GDP decreases FLFPR to 0.23%, every one percent rise in females in business and law index and unemployment rates of women lower the FLFPR by 0.03% and 0.07% respectively, and the one percent rise in fertility rate increases FLFPR by 0.016%, which is strange and will be discussed further. And finally, each additional 1% growth in higher education attainment for girls' increase FLFPR by 0.096% (ftable 5), which might hold true because usually the possible joining to the workforce of the girls' with higher education is higher than those without a tertiary degree. The new family (after marriage) of a girl allow to work a girl who holds a degree easier, and girls without a degree tend to stay at home.

The negative correlation of the GDP and FLFPR can be because of the shrinking spheres of women who are working. And spheres which mostly contribute the GDP of the country is occupied with less women and their share is shrinking.

5.3 Model testing

It is important to check our model for reliability, so it was decided to conduct further analysis to check. To check for the serial correlation among residuals we convey the Breusch_Godfrey test, the hypothesis of the test is:

- null: residuals are not autocorralated
- alternative hypothesis: residuals are autocorralated

Table 6. The Breusch_Godfrey test. Source: authors computation in Eviews 12

Breusch-Godfrey Serial Correlation LM Test Null hypothesis: No serial correlation at up to 2 legs				Heteroskedasticity Test: Breusch-Pagan-Godfrey Null hypothesis: Homoskedasticity			
F-statistic	0.225392	Prob.F (2,14)	0.8010	F-statistic	2.393623	Prob.F (5,16)	0.0840
Obs*R-squared	0.686277	Prob.Chi. Square (2)	0.7095	Obs*R-squared	9.414239	Prob.Chi. Square (5)	0.0936
				Scale explained	8.965780	Prob.Chi. Square (5)	0.1104

We pay attention at probability of chi-squared (table 6), we see more than 5% result, thus we cannot reject null hypotheis and residuals are not autocorrelated. After comes heteroskedascity test, which we conducted with Breusch-Pegan-godfrey test. In statistics, heteroskedasticity occurs when the standard error of a variable observed over a period of time is not constant. Homoskedasticity is the opposite (table 6), occurs when the standard error of a variable observed over a period of time is constant. Thus, the null and desired hypothesis is:

- H-null: residuals are homoskedastic
- H-alt: residuals are heteroskedastic

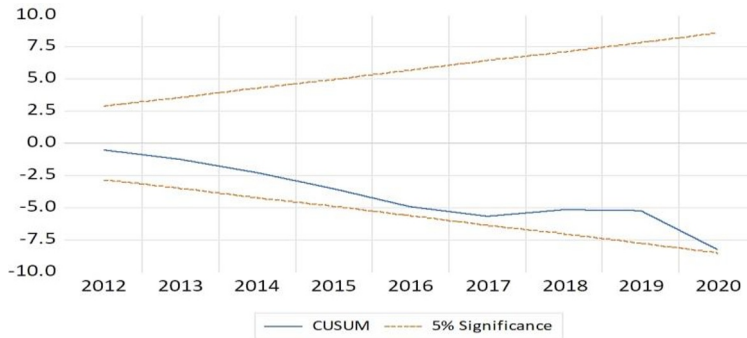


Fig. 1. Cusum test (prepared by authors). Source: authors computation in Eviews 12

The results show the probability of Obs*R-squared (Prob. Chi square) is 9% (0.09) in figure 1 which is desirable and we accept the null hypothesis. One more test we implied to diagnose the residuals is Jarque-Bera test: The Jarque-Bera test is a good fit test to determine if the sample data have skewness and kurtosis that are consistent with a normal distribution. Our results for the test are: Jarque-Bera 4.208398, probability is 0.121913 (12%), and it is more than 5%, thus we cannot reject null hypothesis and accept that model has a goodness of fit. Now we test the stability of the model and exploit CUSUM test (figure 1):

This test demonstrates how stable our model is. The line graph is situated inside the significance zone, the model is between -5% and 5% zone, so our model is stable. All these results showed us that our model matches for analyzing the data we obtained.

6 Recommendations

After examining the obtained quantitative data, we conclude there is a particular relationship between GDP and FLFPR however, Granger casualty test showed us that it is GDP which influences FLFPR and not on the contrary. In addition, the OLS model implied for the dataset consisted of six series, as GDP, FLFPR, Female Unemployment rates, Women in Business and Law index, Fertility rate, Girls' higher education attainment rates showed us that 1% rise in GDP causes 0.23% fall in FLFPR. The reason for such occasion might be the expansion of the GDP of Uzbekistan for the account of the male dominated spheres or the decision of women not working and letting the bread winners (men) take care of the economic burden of the family. The large proportion of Central Asian countries including Uzbekistan, have the negative relationship between GDP and economic welfare, meaning that women whose husbands are earning enough prefer dedicating themselves to the raise of their children, however this theory is opaque for now and in order to clarify the reasons of this relationship qualitative research should be conducted in the region of Central Asia (Khitarishvili, T., 2016) [10]. The study showed that gender inequality in the labor market remains prevalent and in some cases exacerbated in the economy of Uzbekistan. Relatively fewer women participate in the labor market. In general, countries with a high proportion of people employed in agriculture, women are overrepresented as family workers. They are also less likely to become entrepreneurs and own land. Achieving these goals requires a comprehensive, evidence-based strategy that increases people's choices and opportunities by complementing supply-side interventions with demand-side measures aimed at creating fair and conservative jobs. Aggressive measures for women's economic empowerment should be at the heart of political dialogues aimed at increasing inclusion and reducing poverty and inequality. Gender inequality is one of the negative topics discussed in society, and men in particular ignore the reduction of women's rights as a human right. Surveys show that most men do not perceive or experience gender bias in everyday life. Although this study focuses

on the economic side of the issue, I strongly believe that gender bias in the workplace goes beyond how men treat women. As such, in the daily life of Uzbekistan, one can observe the discriminatory attitude of a woman who is the victim of any violence against other women. It is no secret that gender inequality in the workplace exists in almost every country and suffers even in the most developed societies.

Specific recommendations derived from the study are:

- Promoting women's entrepreneurship by encouraging women-led projects to hire others to create their own jobs and contribute to the economy.
- Make maternity care accessible to all working women, including women entrepreneurs, and explore the possibility of setting up a maternity benefit fund in collaboration with the social partners.
- Attracting more girls to higher educational establishments, as the Least Squares Method shows the positive outcome of the higher educational attainment on the female labor force participation rates.
- Increasing interests of our girls to the industries which produce more domestic product.

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