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The Impact of Economic factors on the labour market in Kazakhstan

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Abstract.

This study is devoted to the analysis of the impact of economic indicators on unemployment rate in Kazakhstan. The purpose of this research is to analyze how rates, especially wage, inflation rates and economic growth factors affecting the unemployment in Kazakhstan with the providing comparison with the developed and developing country. The analysis in the study carried out by using a regression model and benchmark analysis. In this study used data from 2000 to 2020 years quarterly taken from the official websites and Excel software was used as tool in the providing regression model. According to the results of the study, it was determined that the hypotheses constructed in the study, which were based on economic factors such as inflation, the level of average wages and GDP per capita, have a significant impact on unemployment in the labor market of Kazakhstan.

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Introduction.

The labor market plays a crucial role in the overall economic development of every nation's economy. Economic factors, for example, inflation, Gross domestic product per capita, and average wages fundamentally affect the elements of the labor market and its proficiency. In Kazakhstan, one of the main economies of Central Asia, the investigation of the effect of these variables on the work market is an especially important examination task.

The purpose of this thesis is to examine the impact of economic factors on Kazakhstan's labor market. Inflation, GDP per capita, and average wages are the main considerations in the work. Using a regression model, the study will find a statistical connection between these factors and labor market indicators.

For a more complete comprehension of the effect of variables on the labor market in Kazakhstan, a benchmark examination will be led contrasting the circumstance in Kazakhstan and the developed country UK and developing Mexico. Using this method, we will be able to determine which economic factors are universal and have a similar effect on the labor market in different nations, as well as the characteristics and contextual factors that may affect the analysis's findings in each nation.

The statistical relationship between economic factors and labor market indicators will be examined using the regression model. We will be able to estimate the magnitude and statistical significance of each factor's impact on the labor market using this model, as well as ascertain the relationship's direction (positive or negative).

This study's findings can be used to make public policy decisions and come up with appropriate measures to improve Kazakhstan's labor market. They can also be used as a foundation for additional labor economics research and the development of efficient strategies for the expansion of the labor market in other nations.

As a result, the goal of this thesis is to improve our understanding of the connection between Kazakhstan's labor market and economic factors. The study will look at how the unemployment rate is affected by inflation, GDP per person, and average wages.

It is normal that the consequences of this study will prepare for a superior comprehension of the elements of the work market in Kazakhstan and assist with recognizing factors that can add to its compelling working. They can likewise act as a reason for the improvement of strategies and projects pointed toward lessening joblessness, expanding laborers' wages, and animating monetary development in the country.

The study of how economic factors like inflation, GDP per capita, and average wages affect Kazakhstan's labor market is the primary focus of this thesis. Utilizing a relapse model and benchmark examination, the work is pointed toward distinguishing factual connections and relevant elements, as well as giving valuable proposals to advancing the circumstance in the work market in Kazakhstan.

Literature review.

A vital component of any economy is the labor market. The wages that employees get have a significant role in how the labor market operates. Kazakhstan is a rapidly developing country in Central Asia with a growing economy and a changing labor market. Kazakhstan's labor market has changed significantly during the last few decades. Wage rate, inflation, GDP per capita are important factors in determining the influence on the labor market. The main objective of this study is to determine the impact of the above factors on the labor market, especially on the unemployment rate.

The papers below provide a range of findings about how raising the minimum wage affects unemployment. Dube et al. (2010) and Schmitt (2013) discovered that minimum wage hikes had a little overall impact that was statistically insignificant, indicating that they had no adverse effects on employment. According to Campos Vázquez & et al. (2017), the minimum wage hike in Mexico had no impact on employment and could even have encouraged unemployed people to transition into formal jobs, lowering the unemployment rate. Whereas Richard Dickens & et al. (1999) discovered a favorable effect of minimum wage hikes on employment, Charles Brown et al. (1982) discovered a negative correlation between minimum wage increases and employment. It is crucial to keep in mind that these research findings might fit specifically to the nations and situations in which they were carried out and might not necessarily be applicable globally.

Next part aims to synthesize existing studies that investigate the impact of the minimum wage on the labor market. Neumark and Wascher (2006) conducted research on the impact of minimum wage policies on employment in the United States. Findings suggest that the impact of minimum wage policies on employment may depend on institutional and policy differences across countries, and that more nuanced policy design could mitigate potential negative effects. Meer and West (2016) analyzed data sets and finds consistent evidence that the minimum wage has negative effects on employment. The authors note that this is an important effect which needs to be known and suggest that future research should focus on understanding the mechanisms by which the minimum wage affects employment.

Another study showed that the unemployment rate is significantly impacted by the inflation rate. Regression analysis was used to perform the study, which was undertaken in 5 nations. The research which made its conclusion after analyzing data from nations from 2000 to 2018. (Rayhan et al., 2020) The study done by Korkmaz and Abdullazade (2020) also suggests that policies aimed at reducing inflation can lead to a decrease in demand for goods and services, which can in turn lead to a decrease in demand for the workforce and an increase in unemployment. According to the research Omran and Bilan (2021) we can determine that high inflation may lead to higher economic growth, it can also lead to higher unemployment rates. Overall, these findings highlight the necessity for taking both inflation and unemployment into account for implementation of policies.

Also, the Okun's Laws interpreted in the 1960s focused on the negative relationship between GDP and unemployment rate. (Gdp rises for 4% lead to decrease in unemployment for 1%) However, there is research by Sánchez and Liborio (2012) that casts doubt on this idea and claims that the percentage provided by Okun's Law. It is crucial to remember that Okun's Law is only a broad guideline, and there may be variances in the precise correlation between GDP growth and unemployment rate in various locations and historical contexts. However, the underlying tenet that a greater GDP growth rate is often correlated with lower unemployment rates continues to serve as a valuable benchmark.

The effect of the wages, inflation, and GDP per capita on macroeconomic variables, especially unemployment and employment is a much-debated topic in economic literature. Because the theory is inconclusive, our aim is to investigate the effect of the wages on unemployment for Kazakhstan. The study in Kazakhstan may be important for understanding the economic situation in the country and for developing an appropriate employment policy. The data used is quarterly and covers the period from 2000 to 2020. Thesis will be obtained by the approach of qualitative primary research, using regression analysis to identify the impact of wages on the Labor Market in Kazakhstan.

Research Question:

How do economic factors impact the unemployment rate in Kazakhstan, and what steps can be taken to promote positive outcomes?

Hypotheses:

- The inflation rate has a negative impact on the unemployment rate.
- Economic and social factors affect unemployment.
- Wage rate and unemployment have a positive relationship, meaning as one increase, the other decreases.
- The unemployment rate and GDP per capita have an inverse relationship, meaning as GDP per capita increases, the unemployment rate decreases.

Research Methodology.

For this study, we applied qualitative primary and secondary research, using regression analysis. Firstly, in this way, we focus on practical verification by conducting a regression model and identifying the importance of eco-economic factors in the labor market of Kazakhstan. Also, it encourages us to test the hypotheses we have put forward. The quantitative research method will give our work an objective, because this method is based on the collection and analysis of numerical data, and will allow us to avoid subjective assessments. Also, this method will help us to make the work more representative. In using quantitative data, we will strive to use more representative data so that they can be consecrated to a large public. Graphs, tables, and numerical values will be used to present the data, which will either refute or confirm our hypotheses.

Our main equation of the regression model will be:

$$Y(\text{unemployment}) = \beta_0 + \beta_1 * (\text{Wage rate}) + \beta_2 * (\text{Inflation rate}) + \beta_3 * (\text{GDP per capita})$$

For our study, multiple regression analysis was chosen, where there will be one dependent variable (Y) and three independent variables (β_1 , β_2 , β_3). Also, to obtain more correct results, we must take independent variables that show a minimal correlation between themselves. Thus, we took three different economic factors for each country (Kazakhstan, Mexico, and UK) from 2000 to 2020, which have non-collinearity among themselves and will be able to provide us with more correct results with the help of which it will be possible to assess the true relationship between dependent and independent variables. Also, for the regression model, more than 60 variables were taken for each factor, which makes the results of the model truer. (Mahbobi & Tiemann, 2015)

With the results of the regression model, we will pay attention to the P quadrant, P-value, and coefficients. A high P-squared indicator will give us an understanding of how well the model predicts the relationships between variables. P-value will be used to refute or confirm our constructed hypotheses. If this indicator is <0.05 (5%), we can reject Null Hypothesis, and say that this result for a special variable has a significant impact on the studied factor, in our case, unemployment. (Bevans,

2020) The regression coefficient reflects the change in the dependent variable, which corresponds to the change in the independent variable. Thus, we can say that the results of each coefficient also have values for our dependent variable and we can determine the correlation (positive or negative) that the two variables demonstrate with each other. (Schneider et al., 2010)

The purpose of our benchmark analysis was to compare the developed country of the United Kingdom and the developing country of Mexico in relation to Kazakhstan. This analysis was based on various economic indicators related to employment in the countries. The key results of the analysis revealed how the economy of different countries is based, develops, and what it comes to in the key to the labor market.

Finally, using a multiple regression model and a benchmark will give us a picture of what is happening in our labor market, in particular in terms of unemployment. Also, indicators from these types of analysis will show how we interpreted and were able to successfully use qualitative primary and secondary research using regression analysis in our study.

Benchmark analysis of UK, Mexico and Kazakhstan.

We consider the influence of economic factors like GDP per capita, interest rate, net inflow of direct investment, average rate, and unemployment rate on each other.

A country's currency loses purchasing power as inflation rises, allowing citizens to spend the same amount of money on fewer products and services. Consumer spending may decrease as a result, which may have a negative impact on economic activity and GDP per capita. As far as we are aware, Kazakhstan's inflation rate has always been greater than the UK's. For instance, in 2020, KZ has about 7% while the UK has 1%. Which obviously has an impact on the GDP gap. As is well known, Kazakhstan has historically had more inflation than England.

Interest rates are frequently increased by central banks to fight inflation. As in Kazakhstan, our rate is 9% (National Bank of the Republic of Kazakhstan's, 2020), UK 0.1% for 2020 according to the Bank of England. Borrowing becomes more expensive when interest rates increase, which can inhibit investment and impede economic progress.

High inflation rates of Kazakhstan can make the economy unclear, which may discourage investment and company activity. According to the (National Bank of the Republic of Kazakhstan's, 2023), the net inflow of direct investment is 3,670,000 dollars, (D. Clark, 2023) in UK there were 43 127 200 dollars in 2020. This may prevent economic expansion and lower the GDP per capita.

The average wage in the UK is \$1,749 greater than it is in Kazakhstan in 2020. More money is available for people to spend on goods and services when salary levels are greater. The GDP's largest component, consumer spending, could rise because of this.

Economic growth that supports high GDP per capita could help reduce unemployment in both countries. High oil and gas production, which contributes to Kazakhstan's economic growth, can create jobs in the oil and gas industry, as well as in related industries such as transportation and manufacturing. For example, oil production in 2000 was 30 million tons, when the unemployment rate was 12.75 % and GDP per capita was \$ 1,229. By 2020, oil production amounted to 85 million tons, while the

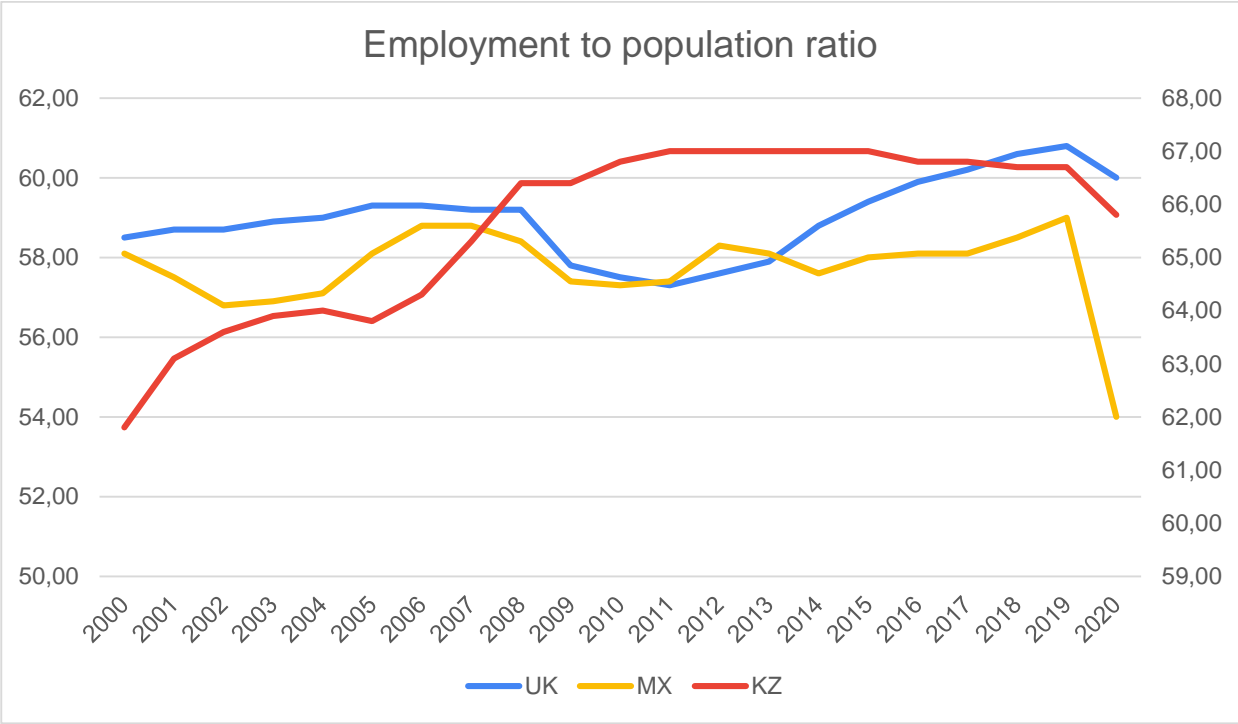
unemployment rate was 4.89 percent, and the GDP per capita was \$9,122 (KASE, 2016). Higher GDP per capita can also stimulate the growth of small and medium-sized businesses, which can create new jobs.

In Mexico, despite problems with oil production, a more diverse economy can create new jobs in other industries such as tourism, manufacturing, and services. A high GDP per capita can also mean more investment in the economy, which can also create jobs.

In Mexico, the inflation rate has generally been low over the past decade, averaging about 4.3% per year. In 2020, the inflation rate in Mexico was about 3.4%, which was below the average over the past decade. One of the reasons for such a low inflation rate is the relative stability of the Mexican economy. The Government and the Bank of Mexico have successfully implemented monetary policy. The objective of monetary policy in Mexico is to ensure macroeconomic stability, maintain a moderate level of inflation and stability of the financial system. The Bank of Mexico also conducts operations on the open market, buying and selling government bonds to control the level of money supply in the economy. Additionally, the nation underwent reforms, which resulted in a 4.2% decrease in the cost of telephone communication and a 40.7% fall in the cost of international long-distance communication. The cost of electricity reduced by 3.7%, and the price of home natural gas declined by 10.9% because of the energy reforms. (Presidency of the EPN Republic, 2016.). In Kazakhstan, the inflation rate has been higher in recent years compared to Mexico, averaging about 8% annually over the past decade. In 2020, the inflation rate in Kazakhstan was about 7.1%, which was below the average for the last decade.

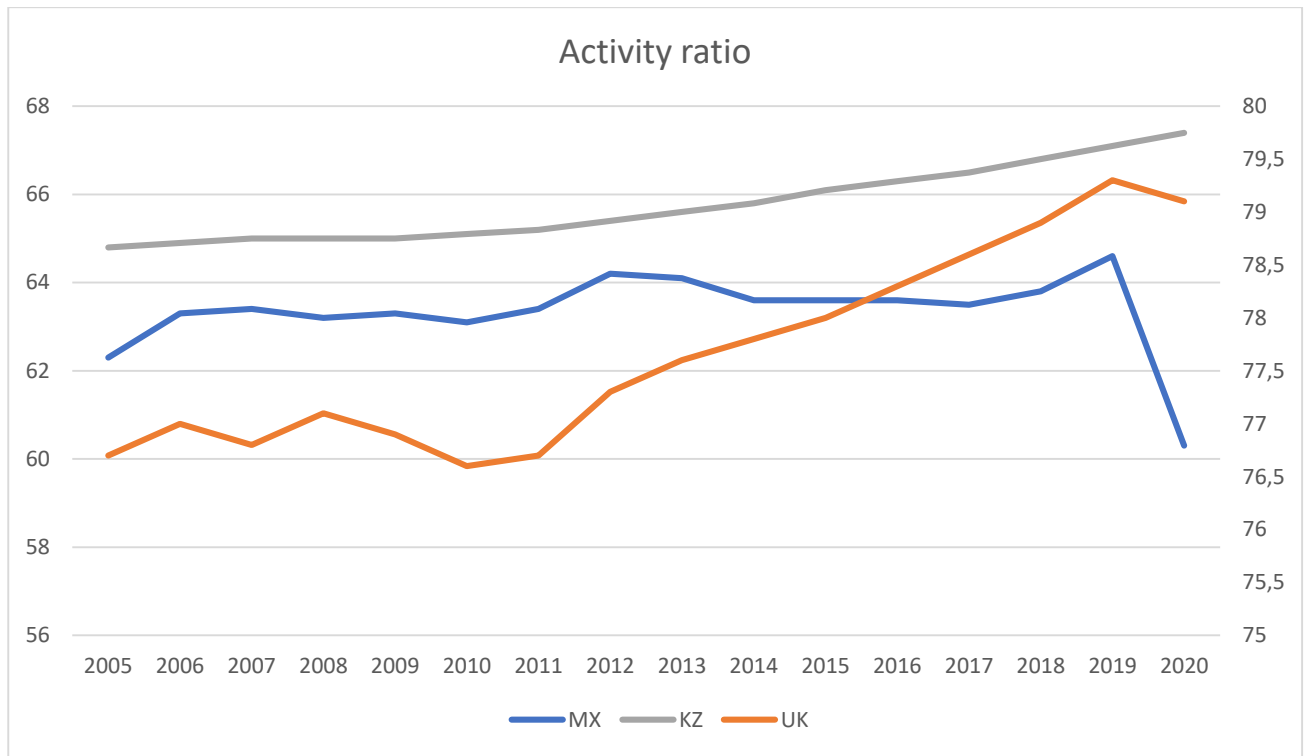
Since its introduction in 1999, Kazakhstan's minimum wage has been routinely raised to reflect increases in the cost of living and inflation. Over the period from 2000 to 2020, the minimum wage in Kazakhstan increased 5 times from \$ 19 to \$ 103. This growth is due to factors such as the economic growth that has been observed over the past two decades in Kazakhstan and contributed to an increase in labor productivity and wages. As the economy grew, so did the minimum wage. As well as the high level of inflation in the country, as we mentioned above, annual inflation is 8 percent, which was the goal of raising the minimum wage to maintain the purchasing power of workers. In Mexico, the minimum wage

practically does not change from 2000 to 2020, it increased from 113 to 199 dollars. One of the causes is that Mexico has prioritized maintaining low inflation rates and promoting foreign investment in its economic strategy, which has resulted in a preference for maintaining cheap labor costs to draw in foreign investment. This policy has contributed to a limited increase in the minimum wage in Mexico. (Máttar et al., 2002) (U.S. department of state,2022).



The employment-to-population ratio measures the civilian labor force currently employed against the total working-age population (Investopedia, 2023).

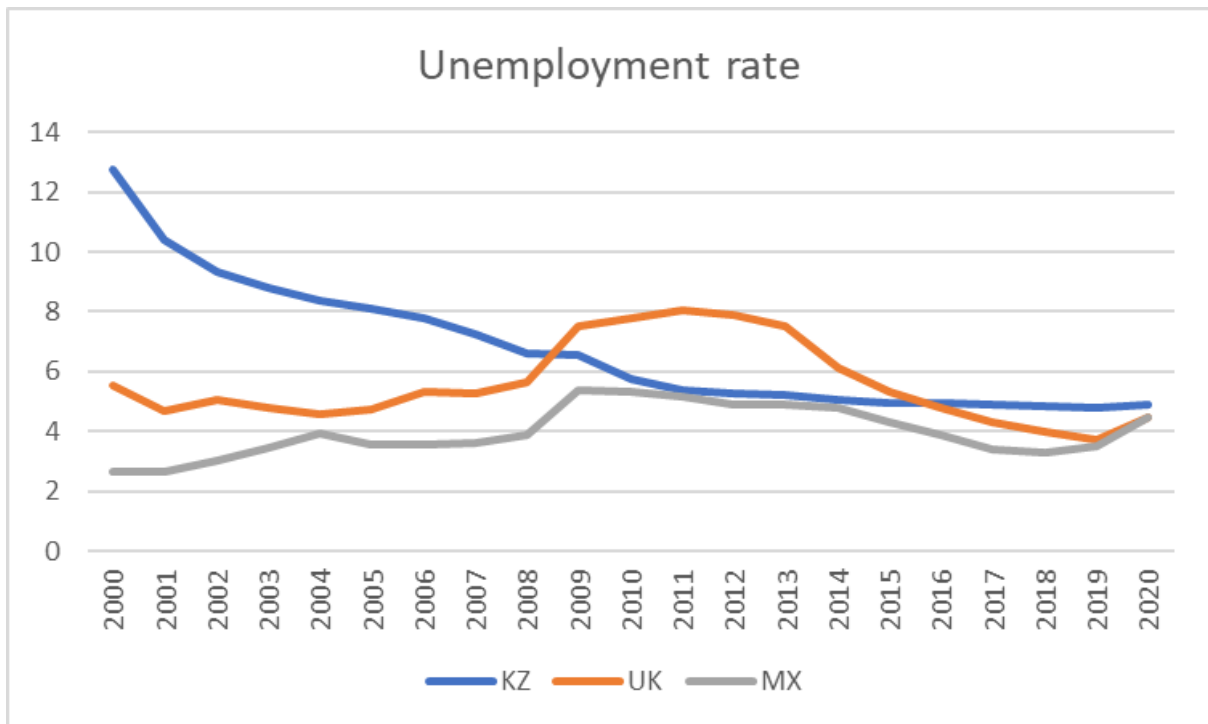
The Kazakhstan consistently had the greatest employment to population ratio of the three nations over the time, indicating a higher percentage of the working-age population was employed. Mexico lagged, with United Kingdom having the second-highest ratio. However, in 2020 the employment to population ratio fell in all countries, most likely because of the pandemic's negative economic effects.



When it comes to the percentage of the working-age population that is either employed or actively seeking for job, the UK regularly has the highest activity ratio. This may indicate a constant demand for workers and a favorable labor market.

The labor force share in Kazakhstan has increased relatively steadily, which could reflect improved employment opportunities or economic conditions. In comparison to the other two nations, Mexico's activity levels have remained relatively stable over the past few decades before significantly falling in 2020. This indicates that a smaller portion of the population of working age is employed.

These results indicate that the dynamics of the labor force varies in different countries: Mexico shows a downward trend, the UK shows stability, and Kazakhstan shows an upward trajectory.



Over the course of the time, Kazakhstan's unemployment rate gradually decreased, falling from 12.75% in 2000 to 4.89% in 2020. This suggests that the state of the labor market has generally improved, and that the unemployment rate has decreased as a percentage of the labor force.

During the studied period, the UK's unemployment rate ranged from 4% to 8.04%, and was largely constant and low. This shows that the labor market is generally healthy and that job prospects are reliable.

The unemployment rate in Mexico fluctuated, reaching a high of 5.36% in 2009 and a low of 3.27% in 2018. However, the percentage grew to 4.45% in 2020, possibly due to several economic causes, such as the COVID-19 pandemic's effects.

Results.

The relationship between the independent variables and the dependent variable, the unemployment rate, was investigated using regression analysis in three countries: Kazakhstan, Mexico, and the UK.

We have discovered official indicators for each country, including the inflation rate, GDP per capita, average wage, and unemployment rate. Our work includes 84 observations, one for each quarter, from 2000 to 2020. This was necessary for the result to be unambiguous and accurate. We used an Excel program to build a regression model, and for analysis, we look at indicators like the R-Square, Multiple R, P-value, Coefficient, and Significance level.

Based on outcomes:

Regression Statistics								
Multiple R	0.881446451							
R Square	0.776947846							
Adjusted R Squar	0.768583391							
Standard Error	0.010478894							
Observations	84							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	3	0.030598935	0.010199645	92.88683792	#####			
Residual	80	0.008784577	0.000109807					
Total	83	0.039383512						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.104369058	0.0034301	30.42740748	9.75537E-46	0.097542941	0.111195175	0.097542941	0.111195175
X Variable 1 (Infl	-0.012390085	0.041572134	-0.29803823	0.766446658	-0.095121268	0.070341098	-0.095121268	0.070341098
X Variable 2 (GDI	-5.48936E-06	1.45788E-06	-3.765313959	0.000316144	-8.39063E-06	-2.5881E-06	-8.39063E-06	-2.5881E-06
X Variable 3 (ave	1.05824E-05	2.9659E-05	0.356801638	0.722179717	-4.84408E-05	6.96056E-05	-4.84408E-05	6.96056E-05

Kazakhstan has a multiple correlation coefficient (Multiple R) equivalent to 0.8814, which shows the presence of a solid positive connection between independent factors and the unemployment rate. The coefficient of determination (R Square) was 0.7769, indicating that the level of inflation in the country, GDP per capita, and average wages may explain 77.7% of the variation in the unemployment rate. The Standard Error was 0.0105, which indicates the high accuracy of the model.

Regression Statistics								
Multiple R	0.534696566	Mexico						
R Square	0.285900417							
Adjusted R Squar	0.259121683							
Standard Error	0.007625591							
Observations	84							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	3	0.001862486	0.000620829	10.67639768	5.60609E-06			
Residual	80	0.004651971	5.81496E-05					
Total	83	0.006514457						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.012594442	0.009307973	1.353081135	0.179841131	-0.005929014	0.031117898	-0.005929014	0.031117898
X Variable Inflati	-0.096140933	0.055880746	-1.72046616	0.089213723	-0.207347163	0.015065296	-0.207347163	0.015065296
X Variable Avera	-1.14805E-05	2.82083E-05	-0.406990068	0.685102166	-6.76169E-05	4.46559E-05	-6.76169E-05	4.46559E-05
X Variable GDP	3.45469E-06	7.93028E-07	4.356329242	3.88831E-05	1.87652E-06	5.03287E-06	1.87652E-06	5.03287E-06

For Mexico, multiple correlation coefficient (Multiple R) was 0.5347, showing a moderate positive connection between the independent variables and the unemployment rate. The coefficient of determination (R Square) was 0.2859, indicating that independent variables can explain 28.6% of the variation in the unemployment rate. The Standard Error was moderately low - 0.0076, which shows a low error of the model. However, coefficient is less than 0.05, which means that regression coefficients for each independent variable were not statistically significant. This suggests that the economic factors being studied—inflation, average wages, and GDP—have not significant level of impact on Mexico's unemployment rate.

Regression Statistics								
Multiple R	0.53224553	UK						
R Square	0.283285304							
Adjusted R Squar	0.256408503							
Standard Error	0.011554606							
Observations	84							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	3	0.004221609	0.001407203	10.54014216	6.46135E-06			
Residual	80	0.010680713	0.000133509					
Total	83	0.014902321						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.150812266	0.0261546	5.766185199	1.46375E-07	0.098762953	0.202861578	0.098762953	0.202861578
X Variable 1	0.593666038	0.14409404	4.119990237	0.00	0.30690976	0.880422317	0.30690976	0.880422317
X Variable 2	-1.48987E-05	4.13589E-06	-3.602293274	0.000545992	-2.31294E-05	-6.668E-06	-2.31294E-05	-6.668E-06
X Variable 3	1.66263E-05	1.30423E-05	1.274800009	0.206070189	-9.32865E-06	4.25812E-05	-9.32865E-06	4.25812E-05

In the UK multiple correlation coefficient (Multiple R) is 0.53224553. This demonstrates that the independent variables and the dependent variable, the unemployment rate, have a moderately positive

relationship. **The coefficient of determination** (R Square) is 0.283285304. This means that approximately 28.3% of the variation in the unemployment rate can be explained by independent variables (inflation, GDP per capita and average wages). **The Standard Error** is 0.011554606. It is an estimate of the standard deviation of the regression error. A lower value of the standard error indicates more accurate predictions of the model. **The coefficient** for the inflation rate shows a result of 0.59, which means a positive effect, in which an increase in the variable entails a corresponding increase in the dependent variable. Thus, the analysis allows us to conclude that there is a relationship between the unemployment rate and independent variables (inflation, GDP per capita and average wages) and indicates the statistical significance of the regression.

Conclusion.

In conclusion, this work is devoted to the influence of economic factors (inflation, average wage, GDP per capita) on the labor market in Kazakhstan. Our goal was to identify the impact of these economic factors on the labor market, especially on unemployment. This work was done and analyzed using benchmark analysis and the use of a regression model.

During the study, we obtained the following results:

Firstly, based on the constructed regression models for three different countries and comparing them with Kazakhstan, we found that the inflation rate for our country has a negative impact on the unemployment rate. Also, based on our constructed model, we also proved our subsequent hypotheses, where:

1. The level of wages has a positive effect on unemployment, which means if the level of wages increases, then unemployment decreases.

2. Further, GDP per capita has the same negative relationship with unemployment (If the level of GDP per capita increases, then unemployment decreases accordingly)

Also, based on our benchmark analysis, we can confirm our latest hypothesis, which stated that economic and social factors also affect unemployment. The scope of our research was highlighted precisely according to these hypotheses, and we also cannot deny the fact that there are other levers of pressure on the unemployment rate. In general, our work confirms the importance of analyzing economic factors for understanding the problem of unemployment in Kazakhstan. The study of hypotheses and the application of analysis methods allowed us to obtain valuable results and make them available to the public.

Future research on this topic can be expanded and conducted in more depth, taking into account other factors. This will help to get a complete picture of the impact of various factors on unemployment

and will help to develop effective strategies to reduce unemployment in Kazakhstan, where our study can be taken as a basis.

Bibliography

Bank of England. (2023, January 31). *Interest rates and Bank Rate*. Bank of England.

<https://www.bankofengland.co.uk/monetary-policy/the-interest-rate-bank-rate>

Bevans, R. (2020). *Understanding P-values | Definition and Examples*. Scribbr.

<https://www.scribbr.com/statistics/p-value/>

Brock, T. (2020). *GDP Per Capita Defined: Applications and Highest Per Country*. Investopedia.

<https://www.investopedia.com/terms/p/per-capita-gdp.asp>

Brown C., Gilroy C., Kohen A. (1982). The Effect of the Minimum Wage on Employment and Unemployment: A Survey. *Journal of Economic Literature* 20.

https://www.researchgate.net/publication/254072142_The_Effect_of_the_Minimum_Wage_on_Employment_and_Unemployment_A_Survey

Brown C., Gilroy C., Kohen A. (1982). The Effect of the Minimum Wage on Employment and Unemployment: A Survey. *Journal of Economic Literature* 20.

https://www.researchgate.net/publication/254072142_The_Effect_of_the_Minimum_Wage_on_Employment_and_Unemployment_A_Survey

Campos Vázquez, R., Esquivel, G., & Santillán Hernández, A. (2017). The impact of the minimum wage on income and employment in Mexico. *CEPAL Review* N°, 122.

https://www.cepal.org/sites/default/files/publication/files/42667/RVI122_Campos.pdf

Clemente, J. (2019). *7 Oil & Gas Problems That Mexico Must Solve*. Forbes.

<https://www.forbes.com/sites/judeclemente/2019/04/21/7-oil-gas-problems-that-mexico-must-solve/?sh=68fe04cf12db>

Dickens R., Machin S., Manning A. (1999). The Effects of Minimum Wages on Employment: Theory and Evidence from Britain. <https://discovery.ucl.ac.uk/id/eprint/16931/1/16931.pdf>

Dube, A., Lester, T., & Reich, M. (2010). Published Version Minimum Wage Effects Across State Borders: Estimates Using Contiguous Countries. Minimum wage effects across state borders: estimates using contiguous counties. <https://irle.berkeley.edu/files/2010/Minimum-Wage-Effects-Across-State-Borders.pdf>

Economics | Macroeconomics | country macro data | countryeconomy.com. (2016).

[countryeconomy.com - Economic and sociodemographic information](#)

Employment-to-Population Ratio: Definition and What It Measures. Investopedia. (2023)

https://www.investopedia.com/terms/e/employment_to_population_ratio.asp#:~:text=What%20I,s%20the%20Employment%20to

EPN, P. de la R. (2016). *In 2015, Mexico achieved the lowest inflation rate on record*.

<https://www.gob.mx/ejn/en/articulos/in-2015-mexico-achieved-the-lowest-inflation-rate-on-record>

Forbes.kz. (2022). OPEC: The volume of oil production in Kazakhstan will grow in 2022-2023.

https://forbes.kz/process/energetics/opek_obyem_dobyichi_nefti_v_2022-2023_godah_v_kazahstane_vvirastet/

Gov.egov.kz. (2021). Inflation in the Republic Kazakhstan.

<https://www.gov.kz/memleket/entities/stat/press/news/details/308960?lang=ru>

Gov.kz. (2021). Over the years of Independence, gas production in Kazakhstan has increased sevenfold.

<https://www.gov.kz/memleket/entities/energo/press/news/details/238813?lang=ru>

Gross Average Monthly Wages by Indicator, Country, and Year. (2023). United Nations Economic

Commission for Europe. https://w3.unece.org/PXWeb2015/pxweb/en/STAT/STAT_20-ME_3-MELF/60_en_MECCWagesY_r.px/

- Korkmaz, S., & Abdullazade, M. (2020). The Causal Relationship between Unemployment and Inflation in G6 Countries. *Advances in Economics and Business*, 8(5), 303–309.
<https://doi.org/10.13189/aeb.2020.080505>
- Labor force, total - United Kingdom | Data*. (n.d.). Data.worldbank.org.
<https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=GB>
- G6 country Definition*. Law Insider. <https://www.lawinsider.com/dictionary/g6-country>
- Mahbobi, M., & Tiemann, T. K. (2015). *About the Book*. Opentextbc.ca; BCcampus.
<https://opentextbc.ca/introductorybusinessstatistics/front-matter/about-the-book/>
- Máttar, J., Moreno Brid, J. C., & Peres Núñez, W. (2002). Foreign investment in Mexico after economic reform. In *repositorio.cepal.org*. ECLAC. <https://repositorio.cepal.org/handle/11362/4876>
- Meer, J., & West, J. (2016). Effects of the Minimum Wage on Employment Dynamics. *The Journal of Human Resources*, 51(2), 500–522. <http://www.jstor.org/stable/24736030>
- The base rate of the National Bank of the Republic of Kazakhstan (2015-2023). Information system PARAGRAPH*. https://online.zakon.kz/Document/?doc_id=36378707&pos=136
- National Bank of the Republic of Kazakhstan. (2023). Direct investments in the direction of investment. <https://www.nationalbank.kz/ru/news/pryamyie-investicii-po-napravleniyu-vlozheniya>
- Neumark, D., Wascher, W., Bernstein, J., Campolieti, M., Cardoso, A., Couch, K., Cunningham, W., Holzer, H., Karageorgiou, L., Leigh, A., Maloney, W., Michl, T., Portugal, P., Potter, N., Reich, M., Sabia, J., Schiller, B., Wessels, W., & Wise, D. (2006). Nber working paper series minimum wages and employment: a review of evidence from the new minimum wage research.
https://www.nber.org/system/files/working_papers/w12663/w12663.pdf

- OECD. (2016). *OECD Development Pathways Multi-Dimensional Review of Kazakhstan Volume 1. Initial Assessment*. OECD Publishing. https://www.oecd.org/dev/MDCR_Phase-I_Brochure_RUS_web.pdf
- OECD. (2016). *Reforming telecommunications in Mexico*. <https://www.oecd.org/about/impact/reforming-telecommunications-in-mexico.htm>
- Organization for Economic Co-operation and Development. (1999, April 1). *Employment to Population Rate: All Ages: All Persons for the United Kingdom*. FRED, Federal Reserve Bank of St. Louis. <https://fred.stlouisfed.org/series/LREPTTTTGBQ156S>
- Rayhan, A. a. M., Rusdarti, R., & Yanto, H. (2020). Factors Influencing Unemployment Rate: A Comparison Among Five Asean Countries. *Journal of Economic Education*. <https://doi.org/10.15294/jeec.v9i1.38358>
- Roberts, E. (2017, May 9). *Report: Mexico was second deadliest country in 2016*. CNN. <https://edition.cnn.com/2017/05/09/americas/mexico-second-deadliest-conflict-2016/index.html>
- Sánchez, J. M., & Liborio, C. S. (2012). The Relationships Among Changes in GDP, Employment, and Unemployment: This Time, It's Different. *Economic Synopses*, 2012(13). Retrieved from <https://doi.org/10.20955/es.2012.13>
- Schmitt, J. (2013). Why does the minimum wage have no discernible effect on employment? <https://cepr.net/documents/publications/min-wage-2013-02.pdf>
- Schneider, A., Hommel, G., & Blettner, M. (2010). Linear Regression Analysis. *Deutsches Aerzteblatt Online*, 107(44). <https://doi.org/10.3238/arztebl.2010.0776>
- UK net FDI inward flows by country 2021. Statista. <https://www.statista.com/statistics/915358/uk-net-fdi-inward-flows-by-countr/#statisticContainer>

Tengrinews.kz. (2022, November 7). Why inflation is rising and how to stop it, experts told.

https://tengrinews.kz/kazakhstan_news/pochemu-rastet-inflyatsiya-kak-ostanovit-rasskazali-482203/

The World Bank. (2021). *GDP (current US\$) | Data*. Worldbank.org.

<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=MX>

The World Bank. (2021). *GDP (current US\$) - Kazakhstan*

<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=KZ>

The World Bank. (2021). *Services, value added (% of GDP) -*

Mexico <https://data.worldbank.org/indicator/NV.SRV.TOTL.ZS?locations=MX>

United States Department of State. (2022). [https://www.state.gov/reports/2022-investment-climate-](https://www.state.gov/reports/2022-investment-climate-statements/mexico/)

[statements/mexico/](https://www.state.gov/reports/2022-investment-climate-statements/mexico/)

World Bank. (2023). World Bank Open Data. Worldbank.org. Retrieved from

<https://data.worldbank.org/>