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THE NEXUS OF TRADE LIBERALIZATION AND UNEMPLOYMENT IN THE CONTEXT OF AFGHANISTAN

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ABSTRACT

Despite this, there have been conducted outnumber of studies on the relationship between trade and unemployment around the world. The purpose of this study is to investigate the nexus between trade and unemployment, and whether trade creates or destroys jobs in the context of Afghanistan. To answer this question, the data was gathered from various sources including the World Bank, and the National Statistics and Information Authority of Afghanistan, from 1990 to 2018. Using ADF (Augmented Dicky Fuller) stationarity test, ARDL Bound test, and causality test. The empirical evidence showed only short-run consequences in one variable which is Gross Domestic Products Per Capita. Further, the study employed diagnostic and stability tests to understand the fitness of the model. Hence, this study surely answers the questions and shows that there is no link between trade and unemployment. Finally, the study evinced only the influence of GDP Per Capita on unemployment. Besides, there is a unilateral causality running from GDP Per Capita toward Unemployment and also the study analyzed that GDP Per Capita has a negative and significant impact on Unemployment in the short run. Eventually, the study suggests that the government needs to reform policy in regard to tackling unemployment through domestic investment.

INTRODUCTION

Globalization is the act of interaction and integration, which has different economic, political, and social aspects. The increase in interactions and integrations causes growth in international trade and cultural exchange as well. Meanwhile, foreign trade is one of the main components of globalization. The most debatable issue over the impact of Trade on Unemployment has always been discussed, whether the trade is the creator or the destroyer of jobs "does opening up to international trade create or destroy jobs?" (Dividson et al., 1999; Felbermayr, 2011). In this logic, there are many controversial studies that show the contrast between different authors. For instance, Brecher (1974) and Helpman (2010) found a positive relationship between trade and unemployment. In another study, a negative relationship between both trade and unemployment has been shown (Felbermayr, 2011). Therefore, there is a huge public concern about the effect of trade and unemployment, some argue that free trade can increase the export market, which leads to a higher demand for the products, expanding domestic production, and finally creating more jobs.

Afghanistan has suffered 4 decades of civil unrest which affected various government and private sectors, the unfortunate situation of the country raised the lack of jobs, stagnation of industries, and increased unemployment (Ashrafi & Kalaiah, 2021). A lot of people especially the young generation lost their jobs. According to the World Bank, the unemployment rate was increased by 11.20 percent in 2020 in Afghanistan. Unemployment is one of the most socio-economic complications for economists and social welfare. The International Labour Organization (ILO) defines

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"unemployment" as the number of people who are unemployed but available for doing work, including those who lost a job or voluntarily left work. Thus, we tried to present the relationship between trade and unemployment, and the current study was undertaken to examine Trade Liberalization and Unemployment in the context of Afghanistan.

LITERATURE REVIEW

In this section, the review of research articles has been undertaken for understanding the concepts, objectives, and methodology adopted and the results of those studies. Based on past research, it is possible to identify the research gap and hence the review of articles has been undertaken which is explained in this particular part of the study.

There are numerous studies on the relationship between trade and unemployment, we try to go through both theoretical and empirical surveys. Historically, the relationship between trade liberalization and unemployment was studied using the Hecksher-Ohlin and Stolper-Samuelson theorems. The H-O theorem predicts that countries will export goods produced with the rigorous that are abundantly available. Many of the trade models consider full employment of labor and all factors at all times and, accordingly, there is no recognition of any effect of trade and employment. The four employment theories are minimum wage theory (Brecher, 1974; Davis, 1998), implicit contract theory Matusz (1996), efficiency wage theory Matusz (1996), and job search theory (Davidson, Martin, & Matusz, 1999), (Moore & Ranjan 2005) incorporated with traditional models of (H-O and Ricardo-Viner). The latest theoretical developments presented two new forms of trade models-heterogeneity of firms (Helpman & Itskhoki, 2010; Helpman, Itskhoki, & Redding, 2010; Egger & Kreickemeier, 2009) and offshoring or trade-in tasks (Batra & Beladi, 2010; Mithra & Ranjan, 2010; Ranjan, 2012 & 2013). The result of these studies showed the contradictory, complex and vague relationship between trade and aggregate employment. Hence, there is a need for empirical evaluation of how trade changes the level of equilibrium employment (Davidson and Matusz, 2004).

Most cases of empirical studies observed the impact of trade openness/trade liberalization. For example, Felbermayr et al. (2011) empirically analyzed 20 Organization for Economic Co-operation and Development (OECD) and the result is based on the consequence of panel and cross-sectional data. This study showed that over the long term; larger trade openness is related to a lower structural rate. As a result, the investigation into the relationship between trade openness and unemployment in developing economies has yielded conflicting results. In their intensive study of Malaysia, Nanthakumar et al. (2011) found out that the increase in trade balance had negative Granger non-causality effects on the severity of unemployment dynamics. Thus, trade liberalization is capable of increasing aggregate productivity in several sectors. Subsequently, the efficiency and performance of the economy raise the rate of labor utilization. Alawin (2013) assessment of trade balance and unemployment in Jordon, exploits quarterly data from 2000 to 2012. The findings of this study highlighted the lack of a long-run relationship between the balance of trade and the unemployment rate. According to these findings, the trade balance deficit causes unemployment in the short term and vice versa. Kim and Sun (2009) found that trade openness factors play a significant role in the labor market churning most industries like automobile, chemicals, and apparel sectors affected by the North American Free Trade Agreement (NAFTA). The results of these studies are that trade openness reduces aggregate unemployment in the inflexible labor market and conversely increases aggregate unemployment in the inflexible labor market. Hasan et al. (2012) studied the rate of unemployment and trade liberalization with the consideration of both urban and rural areas of the state. There was no sign of any decrease in the unemployment rate because of trade reform. On the other hand, trade openness declined the unemployment rate in urban areas. The findings of Dutt et al. (2009) study for 90 developing countries even removing control variables is a negative result for trade openness and unemployment rate. In addition, they pointed out weak support for the Hecksher-Ohlin theorem.

MATERIALS AND METHODS

The data required for this study was collected from various sources including World bank open data source, National statistics, and information Authority which encompass from 1990 till 2018, moreover dependent variable in this study is unemployment which is explained by independent variables including trade openness, term of trade, capital formation, and GDP per capita income.

Variables used in this study

Unemployment: Unemployment is the sum of the population involved in the Labour force of a country which the labor force generally encompasses a population aged from 15-64, further the unemployment population is a layer of a society that is actively looking for employment opportunities. Hence, this study analysis trade and its impact on unemployment.

Trade Openness: measured as the sum of total imports and exports as a ratio of the GDP. Further Trade Openness indicates the country's involvement in global trade, (literature).

Terms of Trade: measured as the percentage ratio of the export unit value indexes to the import unit value indexes, calculated relative to the base year 2000. In another word, the term of trade represents how much of a countries' export unit can purchase units of import or export prices divided by import prices and multiplied by 100 (TOT).

Domestic Investment: This variable is proxied by real gross capital formation measured as a percent of the GDP, moreover capital formation is the accumulation or aggregate of net capital of a country during a year. (DOMINVS).

The study employed the ARDL approach which is a proper model to estimate fewer data. Further, the study is calculating the short-run and long-run relationship among variables through the ARDL model. However, the bound ARDL test is applicable on stationarity order I(0) level and stationarity order I(1) or first different and also can be employed on a mixture of both stationarity orders (level and first different). Moreover, the ARDL test can crash and gives misleading result when the stationarity order I(2) arises. Therefore, to avoid the spurious result it's necessary to check the unit root test. In addition, to find out the unit root test, the study used ADF (Augmented Dicky Fuller) stationarity test to point out the stationarity of the variables (Ashrafi & Kaliah, 2020).

The result from ADF (Augmented Dickey-Fuller) test revealed that all the variables signalized at first difference stationarity order. Therefore, it is fit to run the ARDL test due to the small data size and stationarity at 1st difference. In addition, variables in the table are described as follows lun: Unemployment, Lgdpc: Gross Domestic Products Per Capita, Lop: Openness, Ltot: Term of Trade, Lcf: Capital Formation.

RESULTS AND DISCUSSION

ARDL Bound Test

The ARDL test developed by Pesaran et al. (1999) is a comprehensive test for different stationarity levels (level, first difference) as well as a small sample size.

Table 1. ARDL Bound Test

C	0.0106	0.0050	2.1141	0.0479
LUN	1.5509	0.1751	5.6451	0.0000
LCF	-0.0017	0.0042	-0.3518	0.7288
LGDPC	-0.0001	0.00117	-2.3116	0.0322
LOP	-0.0156	0.0099	-0.3518	0.7644
LTOT	-0.0111	0.04568	-0.1852	0.8550
R-squared	0.7560			
Adjusted R-squared	0.6790			
F-statistic	9.8164			
F-probability	0.0000			
Durbin-Watson stat	1.9017			

Test Statistic	Value	Significant	Lower Bound	Upper Bound
F-Statistic	2.7604	10%	2.45	3.5
K	4	5%	2.88	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

Source: Authors computation using EViews11

The above table shows that the dependent variable: Unemployment is positive and probable. Hence, it indicates that the lagged period of Unemployment, itself has a positive influence on the current period. Besides, GDP per capita is negative, and probable it illustrated that GDP per capita is influencing unemployment negatively. Further to understand the long-run association we apply the bound test. Moreover, the result from the bound test and F-statistic is 2.77 and this value should be compared to the Pesaran critical value of 5%. Nevertheless, to find out about the exitance of the long-run relationship of variables we compare the F-statistic to the bound table: Lower bound at 5% is 2.88 and the upper bound at 5% is 4.1. Moreover, the guideline is, that if the F-statistic is greater than the upper bound then there is a long-run association among variables but if the F-statistic is lower than the lower bound then there is no long-run relationship among variables. Thus, the result evinces that there is no long-run relationship among variables as per the guideline of the bound table. Similarly, if the bound test ruled out the presence of a long-run relationship, then we continue with the ARDL to find out the short-run causality relationship.

Table 3. ARDL Test

Variables	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
DUN (-1)	0.9889	0.1751	5.6451	0.0000
DUN (-2)	-0.3053	0.1700	-1.7958	0.0884
DOP	-0.0030	0.0099	5.6451	0.7644
DGDPC	-0.0270	0.0117	-2.3116	0.032
DCF	-0.0015	0.0042	-0.3518	0.7288
DTOT	-0.0008	0.0045	-0.1852	0.8550
C	0.0106	0.0050	2.1141	0.0479
R-squared	0.7560			
F-stat	9.8164			0.0000
Durbin-Watson stat	1.9017			

Source: Authors computation using EViews11

The table above shows the dynamic short run, in the short run only Gross domestic product per capita has a negative and significant effect on Unemployment. Further, it revealed that there is a short-run causality running from Gross Domestic Products Per Capita toward unemployment, and the result of table 3 indicated that if the GDP Per Capita changes by 0.01 units it changes Unemployment by -0.02 units. Moreover, the model passed the diagnostic and stability tests which have shown in tables4 and 5 and Figures 1 and 2 respectively.

The model is run against the serial correlation of (Breusch-Godfrey serial correlation LM test) to point out the exitance of serial correlation on the model.

Table 4. Breusch-Godfrey serial correlation LM test

Breusch-Godfrey serial correlation LM test **Null Hypothesis: No serial Correlation at up to 2 lags**			
F-statistic	1.9529	Prob.	0.1724
Obs R-squared	4.8577	Prob. Chi-Square	0.0881

Source: Authors computation using EViews11

The result from the above table shows that there is no serial correlation in the model and as the probability value is more than 0.05 significant value then we accept the Null Hypothesis. Moreover, the model run against Heteroskedasticity test of Breusch-Pagan-Godfrey to obtain the presence of Homoskedasticity of variables

Table 5. Heteroskedasticity Test Breusch-Pagan-Godfrey

Heteroskedasticity Test Breusch-Pagan-Godfrey **Null Hypothesis: Homoskedasticity**			
F-statistic	1.1366	Prob. F	0.3793
Obs. R-squared	6.8672	Prob. Chi-Squared	0.3333
Scaled Explained SS	2.5070	Prob. Chi-Squared	0.8677

Source: Authors computation using EViews11

The Result from the table-5 pointed out the existence of Homoskedasticity, as the P-value is greater than 0.05 significant value. Therefore, we accept the Null Hypothesis.

Similarly, the model tested against Jarque-Bera's normality test and the result indicated that the p-value is greater than 0.05 and we accept Null Hypothesis that the data is normally distributed. The study plotted CUSUM and CUSUMQ to see the stability of the model.

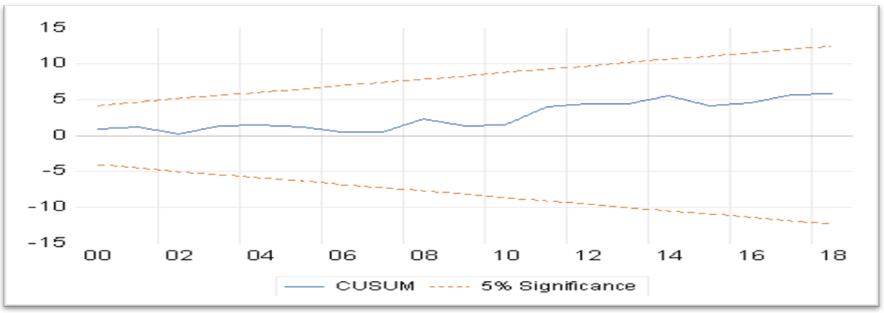

Figure 1. CUSUM Test
Source: Authors computation using EViews11

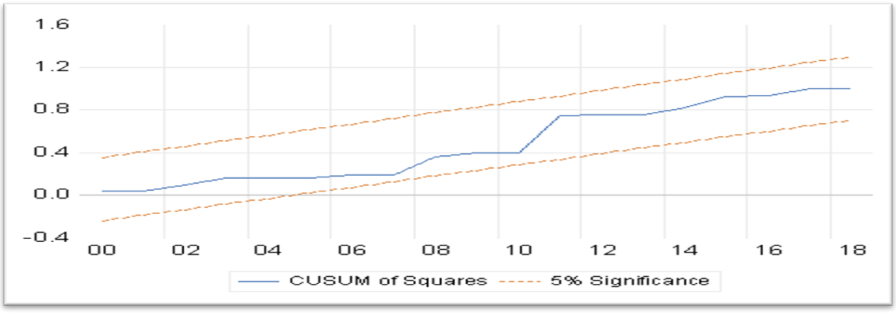

Figure 2. CUSUMQ Test
Source: Authors computation using EViews11

CUSUM and CUSUMQ figures from the stability test indicated that the model is fit as in the figure it shows that CUSUM of squares and CUSUM is significant. Similarly, the null hypothesis tells us that the model is not stable while the

residual test shows that the CUSUM and CUSUM of Square are significant at 5%. Thus, the model used in this study is stable.

CONCLUSIONS

The article has referenced many studies that were carried out to understand the relationship between trade liberalization and unemployment around the world. Hence, the purpose of this study focused on understanding the connection between trade liberalization and unemployment in Afghanistan. Data were gathered from various sources including World Bank, National Statistic, and Information Authority of Afghanistan encompassed from 1990 to 2018. Consequently, ADF (Augmented Dicky Fuller) stationarity test evinced the first-order stationarity of the data. Similarly, ARDL Bound test depicted the absence of a long-run relationship and the presence of a short-run. Further, the empirical evidence showed short-run consequences in one variable which is Gross Domestic Products Per Capita. Furthermore, the study pointed out that there is a unidirectional causality running from GDP Per Capita toward Unemployment, and GDP Per Capita has indicated a negative and significant impact on Unemployment in the short run. Moreover, this study calculated the result and found that there is no relationship between trade and unemployment in Afghanistan which neither rejects nor accepts the question raised "does opening up to international trade create or destroy jobs". Finally, the study suggested that the government needs to reform policy regarding tackle down unemployment through domestic investment.

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REFERENCES

Ashrafi, S. A. R., & Kalaiah, V. (2021). Trend, direction and performance of Afghanistan's international trade. *Australian Finance and Banking Review*, *5*(1), 54–63. https://doi.org/10.46281/afbr.v5i1.1069

Alawin, M. (2013). Trade balance and unemployment in Jordan. *European Scientific Journal*, *9*(7) ISSN 1857-7881.

Batra, R., & Beladi, H. (2010). Outsourcing and the Heckscher–Ohlin model. *Review of International Economics*, *18*(2), 277–288. https://doi.org/10.1111/j.1467-9396.2010.00857.x

Brecher, R. A. (1974). Minimum wage rate and the pure theory of international trade. *Quarterly Journal of Economics*, *88*(1), 98–116. https://doi.org/10.2307/1881796

Davidson, C., Martin, L., & Matusz, S. J. (1999). Trade and search generated unemployment. *Journal of International Economics*, *48*(2), 271–299. https://doi.org/10.1016/S0022-1996(98)00040-3

Davidson, C., & Matusz, S. (2004). International trade and labor markets: Theory, evidence, and policy implications. *W. E. Upjohn Institute for Employment Research*. https://doi.org/10.17848/9781417505920

Davis, D. (1998). Does European unemployment prop up American wages? National labor markets and global trade. *American Economic Review*, *88*, 478–494. https://www.jstor.org/stable/116845

Dutt, P., Mitra, D., & Ranjan, P. (2009). International trade and unemployment: Theory and cross-national evidence. *Journal of International Economics*, *78*(1), 32–44. https://doi.org/10.1016/j.jinteco.2009.02.005

Ashrafi, S. A. R., & Kalaiah, V. (2020). International trade and economic growth in Afghanistan. *Journal of Xi'an University of Architecture and Technology*, *12*(6), 1799–1808. https://doi.org/10.37896/JXAT12.06/2082

Egger, H., & Kreickemeier, U. (2009). Firm heterogeneity and the labor market effects of trade liberalization. *International Economic Review*, *50*(1), 187–216. https://doi.org/10.1111/j.1468-2354.2008.00527.x

Felbermayr, G., Prat, J., & Schmerer, H. (2011a). Globalization and labor market outcomes: Wage bargaining, search frictions, and firm heterogeneity. *Journal of Economic Theory*, *146*(1), 39–73. https://doi.org/10.1016/j.jet.2010.07.004

Felbermayr, G., Prat, J., & Schmerer, H. (2011). Trade and unemployment: What do the data say? *European Economic Review*, *55*(6), 741–758. https://doi.org/10.1016/j.euroecorev.2011.02.003

Hasan, R., Mitra, D., Ranjan, P., & Ahsan, R. N. (2012). Trade liberalization and unemployment: Theory and evidence from India. *Journal of Development Economics*, *97*(2), 269–280. https://doi.org/10.1016/j.jdeveco.2011.04.002

Helpman, E., & Itskhoki, O. (2007). *Labour market rigidities, trade, and unemployment (NBER Working Paper No. 13365), Cambridge, MA*.

Helpman, E., & Itskhoki, O. (2010). Labour market rigidities, trade, and Unemployment. *Review of Economic Studies*, *77*(3), 1100–1137. https://doi.org/10.1111/j.1467-937X.2010.00600.x

Helpman, E., Itskhoki, O., & Redding, S. (2010). Inequality and unemployment in a global economy. *Econometrica*, *78*(4), 1239–1283. https://doi.org/10.3982/ECTA8640

Kim, M., & Sun, H. (2009, May). Does trade liberalization affect labour market churning? In *Paper contributed to the 2009 Joint Statistical Meetings in Washington, DC*.

Loganathan, N., Sukemi, M. N., & Kogid, M. (2011). Dynamic causal relationship between trade balance and unemployment scenario in Malaysia: Granger non-causality analysis. *Journal of Economics and Finance Review*, *1*(3), 13–20.

Matusz, S. J. (1996). International trade, the Division of Labour and Unemployment. *International Economic Review*, *37*(1), 71–84. https://doi.org/10.2307/2527246

Mitra, D., & Ranjan, P. (2010). Offshoring and unemployment: The role of search frictions labor mobility. *Journal of International Economics*, *81*(2), 219–229. https://doi.org/10.1016/j.jinteco.2010.04.001

Moore, M. P., & Ranjan, P. (2005). Globalization vs skill-biased technological change: Implications for unemployment and wage inequality. *Economic Journal*, *115*(503), 391–422. https://doi.org/10.1111/j.1468-0297.2005.00994.x

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, *16*(3), 289–326. https://doi.org/10.1002/jae.616

Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled mean group estimation and dynamic heterogeneous panels. *Journal of the American Statistical Association*, *94*(446), 621–634. https://doi.org/10.1080/01621459.1999.10474156