



---

**IMPACT OF POLICY UNCERTAINTY ON TRADE AND WELFARE:  
EVIDENCE FROM PAKISTAN AND CHINA**

Sajida Zareen\* Dr. Amjad Amin<sup>†</sup>

**Abstract**

The impact of policy uncertainty on exports and imports (trade) between Pakistan and China is estimated in this study and the impact of trade on economic welfare is analyzed. Secondary data from 1972 to 2018 is taken from WDI. Pooled OLS is applied to achieve the study objectives. The impact of change in Policy Uncertainty (PU) between Pakistan and China is negative and significant. It is concluded that when policy uncertainty increases exports and imports (trade) between Pakistan and the China decreases because the trading partner of the home country feels insecure about their exported and imported products which affects the exports and imports (trade) negatively. ARMA Likelihood model is applied to check the impact of trade on economic welfare of the country. Results show that the impact is positive and significant. It is recommended that exports to Pakistan will increase if policy uncertainty is removed. Reducing tariff policy uncertainty will increase the competitiveness of Pakistan and China due to which the quality of production will be increased and Trade will improve.

**Keywords:** Trade, Policy, Economic, Pakistan, China

**Introduction**

The Policy uncertainty of trade is an economic risk where the future strategy of a state policy is unclear and risk is high due to which individuals delay their investment and spending until this uncertainty is cleared up. Trade policy uncertainty is not a new concept it has been started trending upward in 1960 (Coeli, 2018). Policy uncertainty has various fundamentals like the uncertainty about designing, initiation/practicing, and ending. The policy decision has economic significance for the economy. For instance, businessmen and investors always

---

\* PhD Scholar, Department of Economics, University of Peshawar, Pakistan, Email: [Hayakhan832@gmail.com](mailto:Hayakhan832@gmail.com)

<sup>†</sup> Assistant Professor, Department of Economics, University of Peshawar, Pakistan

Email: [amjadamin@uop.edu.pk](mailto:amjadamin@uop.edu.pk)

consider policy decisions, their implementation, and the persistence of a ruling party. If these policies are not brought into power due to certain reasons e.g. lack of ideas, ambiguous tax policy, political instability, and lack of funds, they prefer to look for other options instead of going for investment. This implies that uncertainty in policy decisions directly affects a country's economy, trade, market demand for various company products, and employment. High policy uncertainty tends to increase stock price volatility and decrease employment and investment in policy sensitive such as healthcare, defense, and infrastructure construction. Trade, in simple words, is the buying and selling of goods and exchanges of services between people and companies within a country and between the countries. Reducing policy uncertainty increases innovation in highly exposed industries there by increasing export revenues (Coeli, 2018). The economic worth of a country is reflected in terms of its measure in imports and exports. If a country's exports out pass imports, the situation is said to be 'surplus'; whereas less exports than imports signify 'deficit'. Different countries are engaged in trade and can export products which are over their needs and, on the other hand, import those products which they needed. Due to high trade policy uncertainty, entry into export market and investment will be low but the exporters favor the preferential trade agreements when trade policy uncertainty is low they prefer to wait rather to investment or enter into export market, even applied trade barriers were presently zero or low (Handley and Limao, 2015). Free trade agreements between Pakistan and China were officially announced in 2006 and became effective in July 2007, while the free trade agreement between the both countries in services was announced in 2009 (Dent, 2010). Trade among China and Pakistan is blessed with arable land and natural resources (Zafar, 2007). Pakistan has largest salt reserves and ranked second, third in copper reserves, fourth in cotton and milk production, fifth in gold, iron ore and coal reserves, 8th in wheat and 10th in rice production in all over the world (ul Hassan, 2003). Pakistan exports a large percentage of cotton to China while Pakistan major import from China is electrical machinery (Kumar, 2006). China is one of the top five major markets in exports to Pakistan while Pakistan is the second major market among other South Asian nations (Dash, 1996). Both countries also reached similar agreement in services in 2009 which covers tariff line of more than 7000. The trade volume between Pakistan and China was \$4 billion in 2006-07 which reached \$17.48 billion in 2017-18 (Khan et al, 2006). In view of this increment, imports of Pakistan jumped to \$1.74 billion (2017-18) from \$575 million (2006-07) (Crook et al, 1997). In addition, China exports to Pakistan were also increased from \$3.5 billion (2006-07) to \$15.74 billion (2017-18) (Tang & Chiu (2003).

The major issues around the world and particularly in under-developed countries are the negative impact of trade policy uncertainty on economic growth. The most important and necessary aspect of people's lives both as societies and individuals is well-being but due to uncertainty in economic policy and the economic prosperity over the last 35 years, individuals are not satisfied and necessarily feel better as communities and individually (Medar 2011). Due to high trade policy uncertainty exporters prefer to wait rather than invest. This adversely affects the trade and economic growth of a country's overall economic welfare. According to the Economic Survey of Pakistan (2017-18), the growth rate of Pakistan was 5.4% in 2016 but due to policy uncertainty, it decreased to 2.9% in the recent year, which affects the overall welfare of Pakistan adversely.

Numerous scholars analyzed the impact of policy uncertainty on trade which was negative showing thereby that uncertainty is a major obstacle to trade (Osnago et al (2018), Coeli (2018) and Feng et al(2017). With the downfall of the trade, the country's economic growth is affected. With the minimization or removal of the trade barriers between different tradable partners, the economic growth of all the countries including Pakistan boosts (Gul, 2011). In a nutshell, economic growth is the best-suited solution in developing countries and the best solution for poverty and unemployment because it produces jobs and raises the purchasing power parity which fulfilled the necessary needs of people (Medar et al; 2011). To analyze policy uncertainty, trade, and economic welfare simultaneously for the developing countries, especially in the case of Pakistan it will be the first study. The main objectives of the study are; to assess the impact of trade policy uncertainty on the trade of Pakistan with China; to analyze the impact of trade on the overall welfare of the country; to study the causes of policy uncertainty affecting trade and welfare between Pakistan and China, to provide policy-relevant implications for boosting the trade and welfare between Pakistan and China.

### **Literature Review**

Coeli (2018) examined the impact of trade policy uncertainty on innovation evidence from China by using the secondary data, the estimated results of this study shows a significant effect both statistically and economically by eliminating the related trade policy uncertainty and increasing tariff on the investment of new technologies and on innovation by Chinese firms because due to policy uncertainty investors prefer to wait and delay their investment even the effective tariffs are low. Constantinescu, Mattoo and Ruta (2019) study the impact of trade policy uncertainty on the trade and trade related linked to the global chains. It is

concluded that trade policy uncertainty adversely affected trade growth, the statistically estimation show that trade volume of goods and services decrease to 0.02 percent by 1 percent increase in trade policy uncertainty , the estimation result also show that in mid-2018 increase in trade policy uncertainty may cause to decrease 1% the world trade growth. Heise, Pierce, Schaur, and Schott, (2017) explored the impact of trade policy uncertainty on the chains of supply and also study the impact of trade war on Japanese economy. Hamid and Hayat, (2012) analyzed the impact of pitfall and opportunities of the trade of Pakistan with China and other neighbors countries. They took secondary data and argued that aspect of promoting and regional trade of our country (Pakistan) with their neighbors has a positive and significant impact on the country growth. Choudhri, Marasco and Nabi, (2017) analyze the impact of international trade on Pakistan. Several obstacles are faces by Pakistan to global trade across its western, eastern and north western boarder and concluded that transportation cost as barriers to trade with China and trade policy barriers to trade with India are long term obstacles to the expansion of exports of Pakistan. Wacziarg, Spolaore and Alesina, (2003) investigated the impact of market size on economic growth and the endogenous determination of country size. It is found that the country size and economic performance depends on public goods provision, preference heterogeneity and on free trade, if a country size will be small their economic growth will be high because their economic performance will be good and their international economic policies will be reliable and maintain for more time. Handley and Limao, (2013) explored the impact of trade policy uncertainty on trade and on the real income from the export investment of firms in general equilibrium. According to their work increase in policy uncertainty decreased technology upgrading and investment in export entry which further decreased trade flow, consumer real income and economic welfare. Duan (2019) estimated that increases in trade policy uncertainty will be reducing the entries of firms into the export market and increase the expenditure of foreign countries on intermediate goods. McKay, Milner, and Morrissey, (2000) evaluated the impact of the regional economic partnership agreement on trade and welfare. It is estimated that the impact of net welfare is negative or positive and changes from sector to sector depending on the costs of imported products from the European Union compared to the local production and rest of the world production. Bigman & Leite (1978) investigated that if the stochastic disturbances are caused by random fluctuations in the exchange rates it will affect stabilization policies in the global trade. Chipman, J. S. (2012) investigated general equilibrium of different nations rather than individuals in different time periods to assume

that preferences of individuals can be aggregated, and analyze the impact of global trade on economic welfare among citizens between two nations. The concluding results shows that due to free trade among different nations the welfare will be increase among these nations as compared to restricted trade among nations. Medar, Oun, and Loring, (2011) explored the impact of economic growth on the development of social welfare. The concluding results show that fiscal policy, structural reforms and socio economic indicators in European nations increase the redistribution of income in Europe as well as for the future preparing the society for the innovation and industrial policies for a change to a socio-ecological model. Caliendo and Parro, (2015) evaluated the impact of change in tariff on trade and welfare. the estimated results show that reduction in tariff increases the welfare gain due to the improvement of sectorial linkages and production of intermediate goods between North American Free Trade Agreement. Kali, Mendez and Reyes, (2007) scrutinize structure of trade and economic growth. It is founded that trade structure is independent from the level of trade itself and has a positive impact on the economic growth, and recommended that it is needed the global community as well as policy makers to think seriously by taking the advantage from the global trade agreements.

### **Hypotheses**

- H<sub>1</sub>: Policy uncertainty significantly affects the trade
- H<sub>2</sub>: Trade between Pakistan and China has a significant impact on the economic welfare of a country
- H<sub>3</sub>: There exist a significant causal relationship between policy uncertainty, trade, and economic welfare

### **Methodology**

The gravity model of trade is the short form of the Gravitation Law of Newton. The volume of trade between two countries is like those two objects which have gravitational force positively (directly) related to their masses (i.e. GDP is used for mass as proxy) and indirectly (negatively) proportional to the distance (to capture the cost of transportation) between these two objects. The gravity equation for international trade is thus an analogue of the mathematical form of the Universal Gravitation Law of Newton indicated as:

$$F = G \frac{m_1 m_2}{r^2}$$

This equation can be reshaped for international trade as

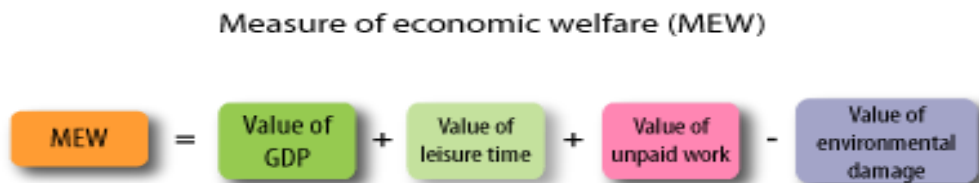
$$(Trade)_{ij} = \alpha \times \frac{Y_i \cdot Y_j}{(Distance)_{ij}^2} \quad (1)$$

For regression analysis equation number one is converted into linear form as

$$\log(Trade)_{ij} = \alpha + \beta_1 \log(Y_i \cdot Y_j) + \beta_2 (Distance)_{ij} + U_{ij} \quad (2)$$

The gravity model of trade became an augmented gravity model with several conditioning variables by the additions of primary variables such as distance and income. Trade policy Uncertainty (TPU) is the measure of the gap between effectively applied tariffs and bound rates and it is also known as water/binding overhang.

During the year 1972, James Tobin and William Nordhaus, the Yale economists, introduced the concept of MEW (Measure of Economic Welfare) to replace this with the term “crude GDP”. Later on, the welfare value of GDP was increased through revising the MEW concept with the inclusion of the value of leisure time and the extent of unpaid work. This GDP welfare, however, went down once they counted the value of the environmental damage coming from industrial production and consumption. Following efforts too were based on MEW to give a more suitable choice of the index of sustainable development.



Value of Gross Domestic Product = The data for the gross domestic product is collected from the world development indicator (WDI) from 1972 to 2018.

Value of Leisure time =To calculate the value of leisure time the health expenditure data is taken.

Value of unpaid work = Non-working population × Average daily wage

Where Non-working population = Labor force – working population

Working population = Labor force participation rate × Labor force

Value of Environmental Damage = The data of carbon dioxide (CO<sub>2</sub>) omission from 1972 to 2018 taken as the value of environmental damage.

### Econometric Model

The following augmented gravity model is used to analyze policy uncertainty regarding the trade of Pakistan with its trade partners (Gul, 2011).

$$\log(Trade_{ij}) = +\beta_1 \log(PCGDP_i.PCGDP_j) + \beta_2 \log(POP_i.POP_j) + \beta_3 \log(Distance_{ij}) + \beta_4 \log(LANG_{ij}) + \beta_5 \log(BORDER_{ij}) + \beta_6 (PU_{ij}) + u_{ij} \quad (3)$$

The Cobb-Douglas equation is used to analyze the impact of trade on economic welfare (Choudhri et al 2017).

$$W_i = f(\text{Gross capital formation, labor, human capital, Trade})$$

$$W_i = AK^{\beta_1}L^{\beta_2}H^{\beta_3}T^{\beta_4}e^{\mu} \quad (4)$$

$$\log W_i = \log A + \beta_1 \log K + \beta_2 \log L + \beta_3 \log H + \beta_4 \log T + \mu \log e \quad (5)$$

$$\log W_i = \log A + \beta_1 \log K + \beta_2 \log L + \beta_3 \log H + \beta_4 \log T + \mu \quad (6)$$

## Results and Discussion

### Descriptive Statistics

The table below shows the descriptive statistics for model 1

**Table 1: Descriptive Statistical Summary between Pakistan and China**

	<b>LOGE X</b>	<b>LOGI M</b>	<b>LOGPCGD P</b>	<b>POP</b>	<b>TC</b>	<b>TR</b>	<b>BR</b>
Mean	6.45316 5	8.17469 4	12.85337	1.62E+1 7	1152.30 5	865.863 3	593.232 5
Median	7.15206 5	8.44460 3	12.60786	1.54E+1 7	783.058 2	1067.66 4	597.000 0
Maximum	9.69510 0	10.9667 8	16.47207	3.03E+1 7	2442.34 4	1610.19 3	609.609 0
Minimum	0.81731 0	3.26341 7	9.671366	5.34E+1 6	185.942 8	69.4407 0	547.902 0
Std. Dev.	2.50285 3	1.95458 7	2.044289	7.67E+1 6	820.151 0	658.099 0	12.3644 6
Skewness	- 0.45418 5	- 0.60484 0	0.373432	0.23114 3	0.39146 0	- 0.13639 6	- 1.98658 2
Kurtosis	2.17101 5	2.80154 0	1.900770	1.76473 7	1.53468 0	1.18511 2	8.25960 5
Jarque-Bera	2.96168 6	2.94280 9	3.458637	3.40668 6	5.40524 5	6.59612 9	85.0885 8
Probability	0.22744 6	0.22960 3	0.177405	0.18207 4	0.06702 9	0.03695 5	0.00000 0
Sum	303.298 7	384.210 6	604.1082	7.61E+1 8	54158.3 3	40695.5 7	27881.9 3
Sum Sq. Dev.	288.156 7	175.739 0	192.2394	2.71E+3 5	3094179 1	1992233 5	7032.47 4
Observations	47	47	47	47	47	47	47

The mean export value between Pakistan and China is 6.453165 and the standard deviation is 2.502853. The mean imports value is 8.174694 and the standard deviation is 1.954587. The



mean per capita GDP between both countries is 12.85337 and the standard deviation is 2.044289. The mean transportation cost is 2.044289 and the standard deviation is 820.1510. The mean bound rate is 593.2325 and the standard deviation is 12.36446.

### Unit Root Test

To check the stationarity of data between Pakistan and China unit root test is used. The table below shows that export and import data is stationary at “level” while the data of per capita GDP, population, transportation cost, and policy uncertainty are stationary at “first difference”. It means that to find the impact of policy uncertainty on exports and imports Autoregressive Distributed Lag (ARDL) models will be used.

**Table 2: Data Stationarity between Pakistan and China**

Variable	At level	At 1 <sup>st</sup> Difference	
Exports	0.0146	-	I (0)
Imports	0.0081	-	I (0)
Per Capita GDP	0.9966	0.0000	I (1)
Population	0.9996	0.0000	I (1)
Transportation cost	0.6142	0.0000	I (1)
Policy Uncertainty	0.9074	0.0001	I (1)

**Table 3 Impact of Policy Uncertainty on Exports between Pakistan and China**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	35.59874	2.800551	12.71134	0.0000
LOG(PAKPOP/CHINAPOP)	12.58740	1.009611	12.46758	0.0000
LOG(PAKPCGDP/CHINAPCGDP)	0.815514	0.281863	2.893301	0.0060
Policy Uncertainty (PAK-CHINA)	-0.000117	0.017177	-0.006830	0.0346
Transportation Cost (PAK-CHINA)	0.004419	0.006292	0.702399	0.4863
R-squared	0.948844	-	-	-
Adjusted R-squared	0.943972	-	-	-
S.E. of regression	0.592429	-	-	-
Sum squared resid	14.74081	-	-	-
Log-likelihood	-39.44121	-	-	-
F-statistic	194.7563	-	-	-
Prob(F-statistic)	0.000000	-	-	-

The table above shows that when the ratio (PAKPOP/CHINAPOP) increases by 1 percent, the exports of Pakistan to China will increase by 12.58740%. The value of the population significantly affected exports between the two nations. However, looking at the population of each country individually, Pakistan's population positively affected exports between both nations while the population of China negatively affected export between Pakistan and China. The variable (PAKPCGDP/CHINAPCGDP) has a positive impact on the exports of Pakistan to China. With a 1% increase in it, the exports of Pakistan to China will increase by 0.815514%. The value of the ratio of per capita GDP of both nations significantly affects exports from Pakistan to China. However individually with an increase in per capita GDP, exports of Pakistan increased while the increase in per capita GDP of China decreases exports of Pakistan to China. The coefficient of the variable is significant. Change in policy uncertainty between Pakistan and China negatively affected exports between the two nations. High policy uncertainty adversely affected the trade of both countries. If policy uncertainty increases exports of both countries will be affected adversely. A 1% change will decrease exports of Pakistan to China by 0.000117%. The coefficient of the policy uncertainty is significant. More distance between two nations means high transportation costs for exports therefore a change in transportation cost also negatively affected exports of

Pakistan to China. If the distance between two nations increases, the transportation cost for exports will also increase respectively. A 1% increase in the transportation cost of exports between the two nations will also increase exports of Pakistan to China by 0.004419%. The coefficient of the variable is insignificant.

**Table 4 Impact of Policy Uncertainty on Imports between Pakistan and China**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	34.32424	2.659146	12.90800	0.0000
LOG(PAKPOP/CHINAPOP)	11.25414	0.958634	11.73978	0.0000
LOG(PAKPCGDP/CHINAPCD)	1.093333	0.267631	4.085227	0.0002
Policy Uncertainty (PAK-CHINA)	-0.004084	0.016310	-0.250395	0.0035
Transportation Cost (PAK-CHINA)	-0.005904	0.005974	-0.988283	0.3287
R-squared	0.924378	-	-	-
Adjusted R-squared	0.917175	-	-	-
S.E. of regression	0.562516	-	-	-
Sum squared resid	13.28981	-	-	-
Log-likelihood	-37.00609	-	-	-
F-statistic	128.3476	-	-	-
Prob(F-statistic)	0.000000	-	-	-

The table above shows that when the ratio (PAKPOP/CHINAPOP) increases by 1 percent, the imports of Pakistan from China will increase by 11.25414%. The value of the population positively and significantly affected imports between the two countries. However, looking at the population of each country individually, Pakistan's population has a positive impact on imports while China's population negatively affected imports between the two countries. The ratio (PAKPCGDP/CHINAPCGDP) has a positive impact on imports of Pakistan from China. With a 1% increase in it, the imports of Pakistan from China will increase by 1.093333%. The value of the ratio of per capita GDP of both countries positively and significantly affects imports of Pakistan from China. However individually with an increase in per capita GDP, imports of Pakistan to China are increasing while an increase in per capita GDP of China decreases imports of China to Pakistan. The coefficient of the variable

is significant. Change in policy uncertainty between Pakistan and China negatively affected exports between the two nations. High policy uncertainty adversely affected the trade of both countries. If policy uncertainty increases imports of both countries will be affected adversely. A 1% change in policy uncertainty will decrease imports of Pakistan from China by 0.004084%. The coefficient of the policy uncertainty is significant. More distance between two nations means high transportation costs for imports therefore a change in transportation cost also negatively affected imports of Pakistan to China. If the distance between two nations increases, the transportation cost for imports will also increase respectively. A 1% increase in the transportation cost of trade between the two countries will reduce the imports of Pakistan from China by 0.005904%. The coefficient of the transportation cost is insignificant.

### **Impact of Economic Welfare on Trade**

The impact of economic welfare on exports and imports (Trade) is given in table below;

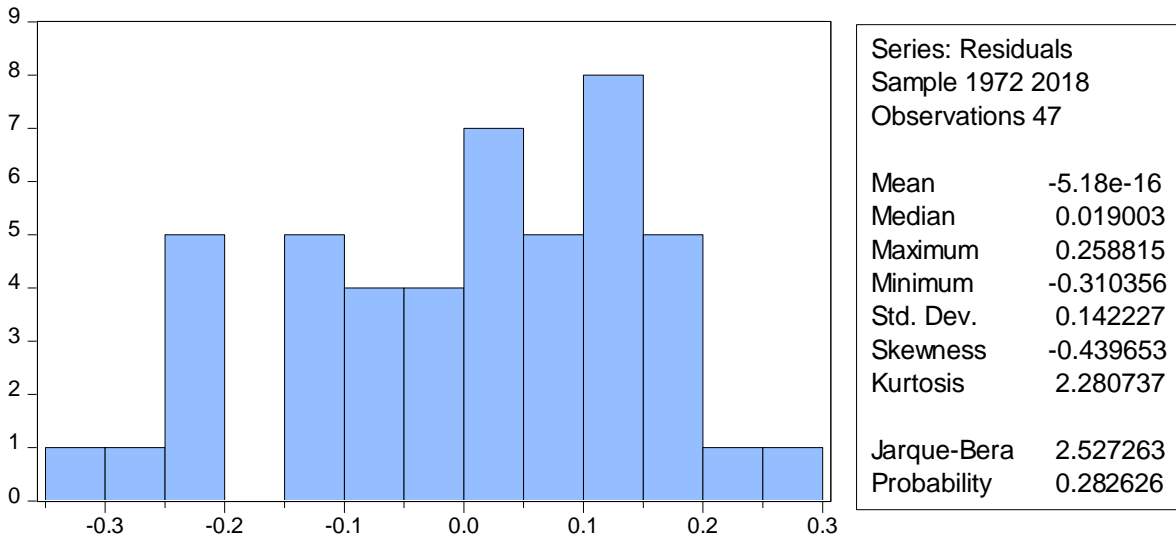
**Table 5: Impact of trade on economic welfare**

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
C	-4.453556	5.887855	-0.756397	0.4537
GCF	0.010779	0.018969	0.568212	0.5730
LOG(LF)	0.767695	0.346776	2.213804	0.0325
LOG(EDU)	-0.002392	0.117192	-0.020407	0.9838
LOG(HEALTH)	-0.243469	0.122450	-1.988325	0.0535
LOG(TRADE)	0.472445	0.105645	4.472003	0.0001
R-squared	0.962752	Mean dependent var	9.791584	-
Adjusted R-squared	0.958210	S.D. dependent var	0.696486	-
S.E. of regression	0.142380	Akaike info criterion	-0.941884	-
Sum squared resid	0.831160	Schwarz criterion	-0.705695	-
Log-likelihood	28.13427	Hannan-Quinn criter.	-0.853004	-

F-statistic	211.9466	Durbin-Watson stat	0.326178	-
Prob(F-statistic)	0.000000	-	-	-

**Diagnostic tests**

**Normality test**



**Heteroskedasticity Test: Breusch-Pagan-Godfrey.**

F-statistic	1.046606	Prob. F(4,42)	0.3948
Obs*R-squared	4.260168	Prob. Chi-Square(4)	0.3719
Scaled explained SS	2.178510	Prob. Chi-Square(4)	0.7030

**Breusch-Godfrey Serial Correlation LM Test:**

F-statistic	41.95196	Prob. F(2,40)	0.0000
Obs*R-squared	31.82695	Prob. Chi-Square(2)	0.0000

The null hypothesis shows that if the value of the F test is less than 0.05 then there is no autocorrelation problem in the data while the alternate hypothesis shows that If the value of the F test is greater than 0.05 then there is an autocorrelation problem exist in the data. As here the probability of the F test is greater than 0.05, so the autocorrelation problem exists in the data. To solve the problem of autocorrelation, the ARMA test is taken from which the

following results are obtained.

Table 6: Method: ARMA Maximum Likelihood (OPG BHHH)

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
C	-3.501983	4.238381	-0.826255	0.4138
GCF	-0.001345	0.008955	-0.150249	0.8814
LOG(EDU)	0.217348	0.073841	2.943459	0.0063
LOG(HEALTH)	0.130361	0.068090	1.914530	0.0466
LOG(LF)	0.727421	0.243955	2.981785	0.0050
LOG(TRADE)	0.188120	0.071501	2.630791	0.0084
AR(1)	0.991734	0.029522	33.59283	0.0000
MA(1)	0.456165	0.143011	3.189716	0.0029
SIGMASQ	0.001861	0.000547	3.404162	0.0016
R-squared	0.996080	-	-	-
Adjusted R-squared	0.995255	-	-	-
S.E. of regression	0.047979	-	-	-
Sum squared resid	0.087475	-	-	-
Log-likelihood	78.50055	-	-	-
F-statistic	1206.937	-	-	-
Prob(F-statistic)	0.000000	-	-	-
Inverted AR Roots	.99	-	-	-
Inverted MA Roots	-.46	-	-	-

The coefficient of Gross Capital Formation is 0.001345 which means that 1 unit change in Gross Capital formation will bring 0.001345 negative change in economic welfare here the coefficient of Gross Capital Formation is not significant. The coefficient of education is 0.217348 which means that a 1 unit change in education will bring 0.217348 positive changes in economic welfare here the coefficient of education is significant. Education plays a key role in the economic development of a country because, it is the mechanism through which skills, knowledge, and experience in different fields can be gained and ultimately

increasing the economic welfare of a country and also creating a comparative advantage for the country (Dosi et al 1994). Educated workers can more efficiently carry out tasks that require critical thinking and literacy due to which a country's economy becomes more productive as the proportion of educated workers increases as well as increasing the economic welfare of the country (Anderson 2008). The coefficient value of health is 0.130361 which shows that a 1 unit change in health will bring 0.130361 positive changes in economic welfare here the coefficient of health is significant. The glaring connection between good health and economic prosperity is one of the strong positive associations (Conger et al 2010). When people healthy they will be more efficient to do work, thus productivity will be more therefore per head income will be also high due to this economic welfare will be increasing (Piabuo et al 2017). More knowledge and skills can improve the economic value of individuals which can lead to raises productivity and can help to develop an economy that indirectly increased the economic welfare of the country (Porter; 2000). Economic welfare is positively related to human capital with an increase in human capital the economic welfare will be increased while a decrease in human capital declines the economic welfare of the country (Dakhli & De Clercq; 2004). Therefore human capital for economic welfare cannot be over-emphasized because it stimulates the economic development of a country. The coefficient value of the Labor force is 0.727421 which shows that a 1 unit change in the labor force will bring 0.727421 positive changes in economic welfare here the coefficient of the labor force is significant. Labor is one of the important factors of economic welfare, the impact of employed labor on economic welfare is positive (Basu; 2013) if more individuals are employed the number of dependent individuals will be less and the economy will be more developed, and people will be easily satisfied their basic needs and economic welfare of the country will be raised. The impact of trade on economic welfare is positive the coefficient value of trade is 0.188120 which shows that a 1 unit change in trade will bring 0.188120 changes in economic welfare; the coefficient value of trade is also significant. When a homogenous product export and import a differentiated product of some brands and also produced some differentiated product that was not traded, the trade will fall and income will be increased due to a decrease in prices of differentiated products as a result economic welfare will be increased (Sen 1998). The impact of trade on economic welfare is always positive, global trade tends to decrease the prices of consumer goods in importing nations to increase welfare gain in these nations and the households who participated in exported production may experience furthermore welfare gains by consuming cheaper commodities (Matsuyama; 2000).

## **Conclusion**

The impact of Change in Policy Uncertainty (PU) between Pakistan and China is negative and significant. When trade policy uncertainty increases the entries of firms into the export market will be decreasing due to which the expenditure of foreign countries on intermediate goods is increasing. It is concluded that when policy uncertainty increases the exports and imports (trade) between Pakistan and China will be decreasing because the home country feels insecure about their exported and imported products which impacts the exports and imports (trade) negatively. The overall size of the economy expands with faster growth in the gross domestic product (GDP), with a high gross domestic product (GDP) the per capita GDP is also high so the production of goods and services will be high which leads to increase exports of the home country (Pakistan). The impact of Change in Policy Uncertainty (PU) between Pakistan and China is negative and significant. The economic welfare ( $W_i$ ) is measured by MEW (MEW is taken as adjusted GDP to include an assessment of the amount of unpaid work and value of leisure time in an economy and also added the value of the environmental damage caused by industrial consumption and production which decreased the welfare value of GDP). The impact of trade on the economic welfare of the country is positive and significant. It is recommended that Pakistan produces sufficient and best-quality agriculture products to improve its exports to China. The bilateral trade relationship between both nations can also be increased if the nations have strengthened economic and business linkages, people-to-people ties, and common interests in promoting stability and peace in the region. If the trade relationship of Pakistan with other nations will be positive the economic growth of the country will be high so the economic welfare of the nation will increase.



**Bibliography**

- Anderson, R. E. (2008). Implications of the information and knowledge society for education. In *International handbook of information technology in primary and secondary education* (pp. 5-22). Springer, Boston, MA.
- Asghar, N., and Hussain, Z. (2014). Financial development, trade openness and economic growth in developing countries: Recent evidence from panel data. *Pakistan Economic and Social Review*, 53(2), 99-126.
- Basu, A. K. (2013). Impact of rural employment guarantee schemes on seasonal labor markets: optimum compensation and workers' welfare. *The Journal of Economic Inequality*, 11(1), 1-34.
- Bigman, D., & Leite, S. P. (1978). Welfare and Trade Effects of Exchange Rate Uncertainty. *Southern Economic Journal*, 534-542.
- Caliendo, L., and Parro, F. (2015). Estimates of the Trade and Welfare Effects of NAFTA. *The Review of Economic Studies*, 82(1), 1-44.
- Chipman, J. S. (2012). General Equilibrium and Welfare in International Trade. *Economia. History, Methodology, Philosophy*, (2-1), 15-33.
- Choudhri, E., Marasco, A., and Nabi, I. (2017). Pakistan's international trade. *Pakistan Development Review*, 56 (4), 1-49.
- Coeli, F. (2018). Trade policy uncertainty and innovation: Evidence from China. *Journal of International Economics*, 114, 1-46.
- Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of marriage and family*, 72(3), 685-704.
- Constantinescu, C., Mattoo, A., & Ruta, M. (2019). *Policy uncertainty, trade, and global value chains: some facts, many questions*. The World Bank. 1-25
- Dakhli, M., & De Clercq, D. (2004). Human capital, social capital, and innovation: a multi-country study. *Entrepreneurship & regional development*, 16(2), 107-128.

- Dash, K. C. (1996). The political economy of regional cooperation in South Asia. *Pacific Affairs*, 185-209.
- Dent, C. M. (2010). Free trade agreements in the Asia-Pacific a decade on: evaluating the past, looking to the future. *International Relations of the Asia-Pacific*, 10(2), 201-245.
- Dosi, G., Freeman, C., & Fabiani, S. (1994). The process of economic development: introducing some stylized facts and theories on technologies, firms and institutions. *Industrial and corporate change*, 3(1), 1-45.
- Duan, C. (2019). Trade policy uncertainty.1-49
- Feng, L., Li, Z., and Swenson, D. L. (2017). Trade policy uncertainty and exports: Evidence from China's WTO accession. *Journal of International Economics*, 106, 20-36.
- Gul, N. (2011). The Trade Potential of Pakistan: An Application of the Gravity Model Nazia Gul and Hafiz M. Yasin. *Lahore Journal of Economics*, 16(1), 23-62.
- Hamid, N., and Hayat, S. (2012). The opportunities and pitfalls of Pakistan's Trade with China and Other Neighbors. *The Lahore Journal of Economics* ,17, 272-291.
- Handley, K., & Limao, N. (2015). Trade and investment under policy uncertainty: theory and firm evidence. *American Economic Journal: Economic Policy*, 7(4), 189-222.
- Handley, K., and Limao, N. (2013). *Policy Uncertainty, Trade and Welfare: Theory and Evidence for China and the US* (No. w19376), National Bureau of Economic Research, 1-92.
- Heise, S., Pierce, J. R., Schaur, G., & Schott, P. K. (2017). *Trade Policy Uncertainty and the Structure of Supply Chains*. Technical Report, Working Paper.pp 1-27
- Kali, R., Méndez, F., & Reyes, J. (2007). Trade structure and economic growth. *The Journal of International Trade & Economic Development*, 16(2), 245-269.
- Khan, M. A., Qayyum, A., & Ghani, E. (2006). Trade liberalisation, financial sector reforms, and growth [with Comments]. *The Pakistan Development Review*, 711-

731.

- Matsuyama, K. (2000). A ricardian model with a continuum of goods under nonhomothetic preferences: Demand complementarities, income distribution, and north-south trade. *Journal of political Economy*, 108(6), 1093-1120.
- McKay, A., Milner, C., & Morrissey, O. (2000). *The trade and welfare effects of a regional economic partnership agreement* (No. 00/8). CREDIT Research Paper. Pp 1-36
- Medar, M., Oun, K., and Loring, M. (2011, September). Economic growth versus development of social welfare structures in Europe. *Journal of Community Medical and Health Education*, 1(112), 1-7.
- Medar, M., Oun, K., and Loring, M. (2011, September). Economic growth versus development of social welfare structures in Europe. *Journal of Community Medical and Health Education*, 1(112), 1-7.
- Osnago, A., Piermartini, R., and Rocha, N. (2018). The Heterogeneous Effects of Trade Policy Uncertainty: How Much Do Trade Commitments Boost Trade? The World Bank.1-19
- Sen, P. (1998). Terms of Trade and Welfare for a Developing Economy with an Imperfectly Competitive Sector. *Review of Development Economics*, 2(1), 87-93.
- Tang, T. L. P., & Chiu, R. K. (2003). Income, money ethic, pay satisfaction, commitment, and unethical behavior: Is the love of money the root of evil for Hong Kong employees?. *Journal of business ethics*, 46(1), 13-30.
- ul Hassan, M. (2003). Capacity-building for sustained promotion and dissemination of biogas technology (BT). *Capacity Building for Science and Technology*, 76.
- Wacziarg, R. T., Spolaore, E., & Alesina, A. F. (2003). Trade, growth and the size of countries.pp1509-1542
- Zafar, A. (2007). The growing relationship between China and Sub-Saharan Africa: Macroeconomic, trade, investment, and aid links. *The World Bank Research Observer*, 22(1), 103-130.