Nexus BetweenTrade Liberalization and Unemployment: An Investigation in the Context of Pakistan

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Abstract

Economic vulnerabilities such as unemployment, inflation intensify downward trends of economic and productive activities in the economies. Economic theories are evident that trade improves social and economic conditions in a country through creating employment opportunities, increasinghuman capital, specialization of labour, improvements in living standard of people. Being an important component of growth, trade is always one of the glitters in development for the policy formulators. In Pakistan, policy makers introduced trade reforms in 1989 with the intention to open the doors of progress and to narrow down economic hazards. The objective of this study is to capture the impact of trade openness (proxy of trade liberalization) on unemployment in Pakistan. Using time series data for the period 1995 to 2015, we have applied ARDL to Cointegration approach. Trade liberalization has negative and significant impact on unemployment. Government may play a role to improve trade sector which has significant impact in reducing unemployment.

Introduction

Trade liberalization refers to decrease in trade barriers whether tariff or non-tariff. More trade to GDP or low import duties means liberalized economy of the respective country. Trade liberalization has enabled the world to shape into a global village, which shrink distances in trade and has improved growth. Economies have witnessed economic growth and welfare as a result of trade liberalization. Macro-economic problems like inflation, unemployment and BOP also being reduced. In Pakistan, measures to reduce formalities on trade have been taken in 1989. Free trade not only increases economic growth but also bridges the gaps in socioeconomic structure of countries (Bushra Yasmeen et al 2006).Trade reforms of 1989 have drawn positive impact on economy of Pakistan and most of the economic sectors grown as a result of these reforms. A part from the growth in different sectors, it has also helped reducing macroeconomic problems in the country. Maximum tariff rate was 225 percent for some commodities in 1990-1991 which has been dropped to 25 percent and average tariff rate was 65 percent in 1990's, which shrank to 11 percent. Trade liberalization had been hindered in three aspects; dependence of country on tariffs as it is a valuable source of revenue, ii) prevalence of illegal trade and iii) reliance on intermediate goods imports. Pakistan has taken several steps towards a free trade economy and also announced comprehensive structural reforms for the macro economy. Such as policy of flexible exchange rate, privatization policy, subsidy removal, tariff reduction etc. Since 1999, exports led growth strategy has been adopted. Aswe know that trade increase economic growth and improves other economic problems, in the same manner we can expect influence of trade liberalization on unemployment.Unemployment is a socio and macroeconomic indicator which states the labour market condition. Unemployment is a persistent problem in the line of growth and all other measures of development and welfare of the population. Unemployment means working force with ability and willingness to work is out of labour market. Population of Pakistan is more than 188 million and labour force is 54 percent, which means rest of the population is dependent. When a significant part of the working force is out of work with a huge percentage of dependents, this implies the invasion of social and economic hazards. Government has taken various policies to reduce unemployment in Pakistan. Such as increase in development expenditures, encouraging private investment, better relations with Gulf countries, youth development programmes etc.

Our study has distinguished itself from other studies that it is the first to take trade openness to find the impact on unemployment. We have undertaken Government trade policy (trade liberalization) in order to cure unemployment in the context of Pakistan. Additionally, we also have applied correlation technique on inflation and economic growth to detect the direction of flow with trade openness. This study is structured as follows: Section II; Historical review of trade liberalization, section III; theoretical literature, section IV; empirical literature, section V; data source, model and methodology, section VI; results, section VII; conclusion and section VIII; references.

Several studies have found positive effect of trade liberalization on economic growth such as McKinnon (1973), Shaw(1973), Jin (2000), Fry (1995, 1997) Levine (1997),Darrat (1999) and World Bank (1989)].

Historical Review of Trade Liberalization in Pakistan

Economic policies at the time of independence were different from that of today. At the time of independence and after some years newly born country was surrounded by lots of problems. All these problems stalled the economy to grow well for many years. These problems include lack of infrastructure, fragile industrial base, and political

instability. Above all, dominance of agriculture sector was one of these difficulties. Policy emphasis of that time was to make a strong industrial base. For the purpose, Pakistan has adopted restricted trade regime and with high tariff and non-tariff barriers tried to protect its domestic industry.

The Period of 1960's was Ayoubian Era which is also known as "Green Revolution". Pakistan has experienced its first trade surplus, expansion in the large scale manufacturing industries, with the effective and fruitful benefits of the protected trade in that era. Some additional policy initiatives have been taken to enhance domestic industrial exports. These embrace over an overvalued exchange rate, bonus schemes to exports sector, special credit access to exports potential industries and renewal of import license automatically. As a result of these policies, industrial output and exports sector filed significant increase. In the next decade, nationalization policy of the next government effected industrial growth. Besides nationalization policy, the government announced three supplementary policies to promote exports, which are i) devaluation of the foreign currency, ii) removal of export bonuses and iii) termination of import licensing scheme. These policy measures significantly amplified exports of manufactured output.

However different policy measures have been taken throughout the history, a policy was announced in 1987. Tariff slabs has been reduced from 17 to 10, a uniform tax has been introduced replacing commodity-based sales tax. Indeed, in this decade the government emphasized at the encouragement of private sector's role and promoted exports through competent and efficient industrial sector. Different fiscal incentives have also been provided to the   exports sector such as tariff cuts, tax holidays and other profit enlarging opportunities. In 1994-95, a significant tariff cut has been observed from 225 percent in 1987 to 70 percent. Custom duty slabs were decreased to 5 along with the introduction of flexible exchange rate system.

In 2000's few policies has been announced that have led to a stable macro-economic framework in terms of inflation, exchange rate and interest rate. These policies are liberalization, diminution in the cost of doing business and deregulation. Ignored services sector also been highlighted as it was not given proper attention in the past. More emphasis was given on the export of services and for the first time this sector was the essential part of the trade policy. In 2002, Revivalprogrammes have been announced which have attracted investors and improved services sector.Focus on intangible sector can be seen through the target of 24.9 billion US dollars for the year 2004.A comprehensive Trade policy has been announced through the period 2003 to 2008. This policy has contributed in reducing unemployment and poverty and in also increased economic growth through open trade and investment regimes, (WTO). During the period 2001-2002 and 2007-2008 nominal tariff protection for agriculture products decline to 15.4% as compared to 8.7 % in 2002. Maximum tariff rate for agricultural commodities diminished to 25 per cent in 2008. No regulatory duties were levied on imports in 2008.

Theoretical Literature

According to Endogenous Growth Theory, lowering economic barriers will pace the process of growth and development in the long run. Through absorbing technology from developed nations, amplifying benefits from Research and Development (R&D), endorsing economies of scale, minimizing price instability and efficient allocation of domestic resource reservoirs, specialization and efficiency in the production of intermediate inputs and introduction of new products.

There are arguments in the new growth theory that trade liberalization develop markets, persuades research and development, helps reallocation of employment in innovative activities which involve more human capital. Along with benefits, there are also some costs associated with trade liberalization. One of the costs is decrease in revenue when import tariff has been reduced. Trade liberalization accounts for 12 to 20 percent of revenue for the developing countries' government. If these trade barriers are removed governments have to impose large increases on other taxes in order to maintain their budget and to avoid economic distortions. The likely impact of trade liberalization policy will be on the agriculture sector, free trade will allow agricultural imports inflow in the economy. It can result into displacement of rural population at a large scale. As in standard economic models it is assumed that portion of population will be re-employed in other sectors, however rapid liberalization step may leads to extensive unemployment and under employment. Social and economic instability will lump in the economy.

Empirical Literature

Various studies such as (Alexander and Warwick (2007), Sarkar (2005), Hassler (2004), Marhubi (2000) and Tanaka (2007) showed the positive association among the trade liberalization, trade openness and economic growth.The export performance of any sector of a country can be measured through estimating growth, the change in market shares and commodity composition of that sector(Authukorala, 1991).

MichaelFerrantino (1997) reviewed the existing literature on trade liberalization policy. Author found positive impact of trade liberalization on economic growth in the existing literature. The empirical research has found a positive and strong bond between liberalization and rate of investment creating an association between growth and trade indirectly.

Hudson and Ethridge (1998) narrated that Pakistan cotton exports decreased by 58 % from 1988 to 1995, due to imposition of tax on export of cotton lint.

Mwaba (2000) found that adoption of trade policies in African economies promote exports. The persistent export performance required the export diversification, Product promotion and quality improvement in Algeria, Tunisia and Morocco (Mouna and Reza, 2001).

Lardy (2003) studied to find the impact of trade liberalization and economic growth in the context of China. Author has found an optimistic association between trade openness and economic growth. China has improved her manufacturing sector as well as services sector and is regarded as one of the most liberalized emerging economy According to Bashir (2003), agriculture sector of the Pakistan is very elastic to economic policies and amplified agriculture exports.

Blom*et al* (2004) has undertaken the dynamics of Brazilian labour market to determine the effect of trade liberalization on wages. Data for the period 1988 to 1994 has been employed. Model comprises the variables of wages, workers characteristics like age, education, gender, geographical location, an indicator of whether worker is employed or self-employed and wage premium etc. Authors have found that trade liberalization do no contribute to worsening the wage inequalities among skilled and unskilled labour through industry wage premium.

Shirazi and Manap (2004) found the long run relationship among the exports, imports and growth of Pakistan. Mishra and Kumar (2005) have calculated wage impact of trade liberalization in India. They found a strong negative association between trade policy and wage changes in industry. It has been found that trade liberalization diminishes wage inequality in case of India because tariff has been reduced in the sectors which employ unskilled labour force.

Pakistan is expected to maintain its competiveness in the context of free trade through quality production and marketing mechanism alongwith reduction in cost (Husain, et al. 2006). Edwards and Alves (2006) found the positive impact of trade liberalization on the export growth of South Africa. The exporters were responsive to trade policies and favorable economic environment.

Bushra Yasmeen *et al* (2006) analyzed the impact of trade liberalization on economic development of Pakistan. Four measures of economic development have been employed in the study per capita GDP, income inequality, poverty and employment for the period 1960 to 2003. Simultaneous equation model has been employed in the study. Uniform impact of the trade liberalization on all four variables has not been found. Positive effect on employment and negative effect on income distribution and GDP per capita of trade liberalization has detected. Poverty has been found unaffected by liberalization.

Saleem and Sheikh (2009), in their study intended to explore the effects of SAFTA (South Asian Free Trade Agreement) on the global economic economy. Authors have applied CGE model for the analysis of policy implication, and successfully find that Pakistan will enjoy a greater benefits of trade with India when tariff barriers will be reduced. The benefits will be in the shape of consumer surplus and valuable foreign exchange as well as peaceful borders.

RaoAtif *et al*(2010)have used annual data series since 1980 to 2009 on economy of Pakistan to capture the effect of trade openness and financial development on the growth of economy. ARDL bound testing approach has been applied on the data to obtain results. It has been found that there is a significant positive impact of financial development and trade on economic growth. Long run and short run relationship has also been confirmed in the model. Granger Causality test also provided evidence of causality between GDP growth, financial development and international trade.

Sofia Anwar *et al* (2010) investigated impact of trade liberalization on agricultural trade for the period 1971 to 2008. Trade policy has been evaluated in terms of competitiveness, openness oftrade of agricultural output and concentration of exports. Significant impact of trade policies has been detected on cotton exports. Along with this, it has been found that trade openness and competitiveness in exports amplify cotton lint exports.

Bhatti *et al*(2011) studied the issue of liberalization and economic growth in the context of new growth theory. Time series data has been utilized in the study for Pakistan, India and Sri Lanka. GDP, GDP per capita, no. of scientists and engineers per million people (as proxy for research & development), production gap, population, population density and trade openness are variables employed in the study. Findings of the study re in line with the theory.

Zara and Marium(2011) examined the role of trade liberalization on wage structure of Pakistan. They have used manufacturing workers data over the period 1996 to 2006. Trade liberalization has been measured by import penetration ratio;export penetration ratio and relative price of both industries. Through the econometric analysis, it has been found that trade liberalization has increased wage inequality among skilled workers. Findings of the study are against Stolper- Samuelsson Theorem.

Imran and Fatima (2013) examined the poverty and income inequality outcomes of trade liberalization in Pakistan. By applying regression technique, results of the study depicted that trade liberalization has no significant impact on poverty and income inequality in the short run while resulted trade reduction in tariffs has strong impact on both issues. Workers' remittances and gross capital formation which are control variables have statistically

significant impact on poverty and income inequality in the short run.

Data sources, Model and Methodology
Data has been obtained from the website of the World Bank. Data is time series in nature and spans from 1995 to 2015. Although, trade has been liberalized in 1990 but a policy like this has changed the structure of the economy, take some time to impact economic indicators. That is why we have taken the data from 1995 in order to capture a clear picture. For liberalization, we have taken two variables to find their impact in the context of unemployment. Trade openness is used as proxy for trade liberalization.

Model
Our model consist of following equation
Un= f(trade openness)
Un= α1+α2top+ε
Where
Un= unemployment rate in Pakistan
Top= Trade openness

Methodology
Unit Root Test
Economic data or series demonstrate trending behavior or non stationarity in mean. Stationarity of data is a pre requisite to apply any econometric technique. In other words, it is an important task to measure the stationarity of data or de trending data. There are two techniques to de trend data; i) Augmented Dickey Fuller (ADF) Test and Phillip-Parren (PP) test.
To check the stationarity of the data, we have applied Augmented Dickey Fuller (ADF) technique on the data.

ARDL to Cointegration
Auto regressive distributed lag to Cointegration method has been employed in this study to obtain unbiased estimates. This method is developed by Shin and Pesaran in 1999 and extended further in 2001 by Pesaran *et al*., has various significant features. It demonstrates long run and short run association between the series of a model. ARDL is useful for the small number of observations and givesimpartial results. Single equation can measures the long run and short run dynamics, no further equations are needed for both these processes. Different variables can be assigned different lag lengths in the model.
Equation of the ARDL model can be written as:
$Y_t= β_o+β1Y_{t-1}+……..βkY_{t-p}+α_oX_t+α1X_{t-1}+α2X_{t-2}+……αqX_{t-q}+e_t$
ECM equation looks like:
$ΔY_t=β_o+Σβ_iY_{t-1}+ΣY_jΔX_{1t-j}+Σγ_kΔX_{2t-k}+φZ_{t-1}+ε_t$
Where, Z_t is the error correction term. Error correction mechanism depicts the characteristics of convergence and divergence in the short run toward long run equilibrium. Negative and significant value of ECM term reports convergence of the model towards equilibrium.

Results
Table 1: Unit Root

Variable	Level		First difference	
	Intercept	*Trend & intercept*	*Intercept*	*Trend & Intercept*
Unemployment	*-0.933255* *(4)*	*-2.395077* *(5)*	*-4.060488** *(3)*	*-3.929848** *(3)*
Trade openness	*-0.933255* *(4)*	*-4.448748** *(3)*	*-4.060488** *(3)*	*-3.929848** *(3)*

*shows significance of variables at 5% level of significance.

ADF unit root test is applied on the variables to check the stationarity of variables. The result is reported in table 1. Schwarz Info Criterion (SIC) has been to select appropriate lag length.

From this table it can be clearly seen that our model is mix of variables which are I (0) and I (1). Unemployment is significant at 1st difference in the 3dr lag; it is not significant at levels while trade openness is significant at both levels and first difference. All variables are tested against critical values at 5% level of significance. As all variables in our model are a mix of Levels and 1st Difference and number of observations are also small. So, we are justified to apply ARDL Cointegration method.

Table 2: ARDL to Cointegration

Variable	Co efficient	Standard error	T. Ratio
UNEMP (-1)	0.535	0.095	5.592
Trade openness	-75.197	117.141	-0.641
Trade openness(-1)	-338.844	140.112	-2.0418
Constant	7.112	1.216	5.845
R- square 0.95		F. Statistics 71.219 (.000)	
D. W 2.303			
This table represents the OLS estimation of our mode. Unemployment and trade to GDP ratio are negatively related. This implies that trade openness will reduce unemployment in the first year of the policy. Goodness of fit is .95 which means. F statistics are 71.219, representing the significance of the model.			

Table 3: Long Run Estimates

Variable	Co efficient	Standard Error	T.Ratio
Trade openness	-890.934	154.921	-5.750
Constant	15.305	1.391	10.998
Time	-0.415	0.0586	-7.092
Long run ARDL estimates of the model embody that there is long run association between trade liberalization and unemployment. Trade openness will reduce rate of dependency in the long run.			

Table 4: Error Correction Representation

Variable	Co efficient	Standard error	T. Ratio
d Trade Openness	-75.197	117.141	-.6419
d Constant	7.112	1.216	5.845
d time	-.193	0.0318	-6.068
Ecm(-1)	-0.464	0.095	-4.855
Error correction mechanism represented in this table portrays that this model will converge towards long run equilibrium. Speed of convergence is 0.46 which means 46 percent of the deterioration will be eliminated in the first year.			

Additionally, we also have employed correlation technique on the macro economic variables such as inflation and GDP growth to uncover the relation among trade openness and these variables.

Conclusion

Trade liberalization means liberalizing an economy trade form the tariff and non-tariff barriers. Trade policy of Pakistan has been liberalized in 1989, which brought structural changes in the economy of Pakistan. Trade openness has affected many socioeconomic and macroeconomic indicators resulting in the creation of wide areas for researchers and economists. Poverty, economic growth, inflation and income inequality etc. are few of them. Unemployment is also one of the factors that have been affected by the trade liberalization. In this study, we have captured the nexus between trade liberalization and unemployment, through the variables of tariff rate, trade openness. Auto- Regressive Distributed Lag (ARDL) model technique has been applied on the data ranging from 1995 to 2015. We have found that trade liberalization has significant impact in reducing unemployment in Pakistan, which means trade sector bring even batter output to reduce unemployment. These results are inline with the results of Mitra et al (2009). We also have applied correlation technique on economic growth, inflation with trade openness to find their direction of flow between the variables of interest. Economic growth is negatively correlated with trade liberalization while inflation is positively correlated with trade openness. Government might play a role to improve trade sector through export competitiveness, encouraging entrepreneurship, mobility of labour force within and outside the country. Policy implications are as follows:

Liberalize economy as much as possible and earn revenue from other sector of the economy like, agriculture sector, services sector etc. Diversification of traded goods will increase income heads and will also increase domestic production and consumption; which will automatically increase job openings. Export sector should be promoted at priority bases, value added of the agriculture sector might be a good source of earning as well as it will also induct more labour force.Import tariff, has no impact on unemployment which means import tariff should be reduced more to increase volume of trade. Growth oriented policies are valuable as these are helpful in reducing unemployment. Good law and order situation in the country will improve trade and investment environment which have forward linkages with employment as well other macro-economic indicators.

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