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The Impact of Credit Facilitation on Economic Misery in Case of Pakistan

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Abstract
In this study, we examine the impact of credit facilitation on economic misery in case of Pakistan over the period 1973-2013. Credit facilitation, foreign direct investment, domestic savings, domestic credit, workers remittances and population density are selected variables for empirical analysis. This employed different econometric techniques and tests like ADF and PP unit root test to estimate the stationary of the variables of the model. The ARDL bound testing approach is used to examine the co-integration among the variables of the model. The results of the study show that FDI has a positive and significant on economic misery. Worker remittances have a significant and positive relationship with economic misery in case of Pakistan. Domestic saving has a positive, but an insignificant impact on economic misery. Domestic credit to the private sector has a significant, but negative relation with economic misery.

Keywords: credit facilitation, economic misery.
JEL Codes: E51, E24, E31

I. Introduction

The misery index is an economic indicator, created by economist Arthur Okun. The index helps determine how the average citizen is doing economically and it is calculated by adding the seasonally adjusted unemployment rate to the annual inflation rate. It is assumed that both a higher rate of unemployment and a worsening of inflation create economic and social costs for a country. The original Misery index was created by economist Arthur Okun during the Johnson administration in the 1960's, not by Robert Barro as some people mistakenly believe. Barro created the "Barro Misery Index" (BMI) in 1999, which also includes interest rates and Gross Domestic Product (GDP) trend into the mix. Economic Misery is the index of unemployment and inflation. Since both high unemployment and high inflation are major factors to the average wage earner, it's a quick and dirty metric to gauge the health of the economy because as inflation rises the cost of living increases and as unemployment rises more people cross the economic line into poverty. Unfortunately, although data for the annual inflation rate is available back to 1914 (the CPI index began in 1913) data for the misery index is only available back to 1948 due to the lack of unemployment numbers prior to 1948.

Economic misery in a country causes many problems. Economic misery causes lower consumer expenditure and slow down the economy. Thus, it is a curse which needs to be uprooted. Economic misery is of main concern to the nations of the world. The countries in the world are trying hard to get rid of economic misery as with economic disadvantages it is also the cause of many social unrest and is the cause of increasing crime rates in the countries. The developing countries are badly suffering from economic misery that's the reason why it is of much bigger concern for the developing countries of the world. To curb this curse of economic misery the relationship of many factors which can influence or help to control the problem of economic misery are introduced in this study. As the impact of FDI is of vital importance in controlling economic misery as it brings capital, employment opportunities and can bring out the country out of the poverty circle. Thus, countries, especially the developing countries promote FDI in their country and offer certain policies to attract more and more FDI. The economic misery can be controlled on a large scale with the help of FDI. Economic misery can also be controlled with the help of increased speculations in a country. For this purpose, the credit facilitations play a vital role in a country. As it helps to increase investment in a country with the increased investment the unemployment decreases and so as inflation can also be controlled. Economic misery can be controlled in this way, moreover social structure will not only develop but also helps in crime reduction in the society. In this regard workers' remittances have a direct effect on the economic misery as with the increase remittances the capital in the country increases demand which is helpful to increase investment. Thus, economic misery can be controlled on a large scale if worker remittances are spending for speculation purposes because increased speculations are key to control the economic misery by generating more and more employment in the country. In this study, we have tried to focus on the impact of different economic variables on the economic misery which will give a complete picture that how these variables effect economic miseries along with suggestions to cure this curse of Economic misery.

The rest of this paper demonstrates the theoretical background of this study. The latter describes the econometric framework along with the data set, followed by the discussion of the results. The last section summarizes findings and concludes the paper along with recommended policies.

Literature Review:

Mahawiya (2015) explore the determinants of financial market development in nine Middle East and North Africa (MENA) countries during the period 1991–2009. A comparative panel study of ECOWAS and SADC are employing data from 1980 to 2011 and using the dynamic panel approach. The empirical results based on the Fully Modified Ordinary Least Squares (FMOLS) method indicate that financial development is affected by economic growth, trade openness, bank concentration, institutional quality and the government ownership of banks, while the findings from the dynamic ordinary least squares (DOLS) technique only support trade openness and bank concentration as promoting financial development. The results show that inflation has a strong negative effect in both regions on financial development and opening of the financial sector and trade have a positive effect on financial development in SADC.

Falahaty & Hook (2000) investigate the Determinants of Financial market development in nine Middle East and North African region countries employing data from 1991 to 2009. Fully Modified Ordinary Least Squares (FMOLS) method shows that financial development is affected by economic growth, trade openness, bank concentration, institutional quality and the government ownership of banks, while the findings from the dynamic ordinary least squares (DOLS) technique only support trade openness and bank concentration as promoting

financial development. These findings suggest that improving the business environment and quality of institutions as well as macroeconomic stability and improving the banking system concerning inflation control, monetary policies and privatizing banks, can enhance financial development in the (MENA).

Alam, et al (2015) explore the impact of Financial Development and Economic Misery on Life Expectancy from Post Financial Reforms in India and employing data from 1990 to 2013, using the combined cointegration approach. The results show long-run equilibrium relationship between life expectancy, economic growth, economic misery, education expenditure, financial development and rural–urban income inequality. Results on the long-run impact suggest that financial development, economic growth and education expenditure have a significant and positive impact on life expectancy while economic misery and rural–urban income inequality have a substantial negative impact.

Almalki & Batayneh (2015) studied the relationship between inflation and financial development in Saudi Arabia using ARDL bounds testing approach for the period of 1982-2013. The results show that there is a statistically significant negative relationship between inflation and financial development in long-and-short run.

Aboutorabi (2012) studied the impact of Inflation on Financial Development in Case of Iran, using the data from 1973 to 2007 and applying the ARDL approach. The empirical findings revealed that high inflation rates in Iran made financial intermediaries not perform at their highest level. In fact, inflation had had a significant negative effect on financial development, so it can be considered as one of the critical challenges of financial intermediaries in Iran.

Zaman et al (2010) investigate the impact of Financial Development on Inflation in case of Pakistan in the period 1974 to 2007 using the Johansen approach and F-bound cointegration test. The result suggests that inflation and financial development indicators are cointegrated. There is unidirectional relationship, running from inflation to financial development indicators, both in the long-run and short-*run*, show that inflation and financial development are cointegrated.

Shabbir et al (2012) examines the Contribution of Financial Sector Development in Reducing Unemployment in Pakistan employing the data from 1973 to 2007. Auto Regressive Distributed Lag (ARDL) bound testing technique for cointegration is applied to estimate the long run relationship. The results show a stable cointegration relationship among the variables of the financial sector and unemployment. Increase in money supply in the economy has negative impact on employment rates as it increases the unemployment rate by 2.3 percent for a one percent increase in M2 minus currency in circulation/GDP.

Mbulawa (2015) examines the impact of determinants of financial development in southern Africa developing community (SADC) employing the data from the period of 1996 to 2010, using both the fixed effects and dynamic model based on GMM estimations. The results indicate that Financial development was significantly and positively influenced by credit to the public sector, per capita gross domestic product, gross fixed capital formation, financial openness, interest rates and institutional factors while savings and government debt have a negative influence.

Nejad (2010) investigates that how the financial repressive policies hinder Financial Development in Iran? Employing the data from the period of 1965 to 2006, by using the technique of time-series Johansen cointegration analysis. The results show that trade openness, savings and economic growth are statistically significant and have a positive impact on financial development. Financial repression index and the reserve requirement ratio have a negative coefficient. While, inflation has a positive impact on financial development.

Elsherif (2015) investigate the determinants of financial market development in Egypt using a time series analysis for the period 1974–2012. The empirical results based on two investigating approaches, ARDL (Autoregressive Distributed Lag Model) and Johansen Test for Cointegration, shows that financial development is affected by economic growth, trade openness, investment, human capital, and per capita GDP, while inflation adversely influences financial development in Egypt.

Ayadi et al (2013) empirically assesses the reasons underlying behind the financial systems in the southern and eastern Mediterranean that are unable (or unwilling) to divert the financial resources that are available to them as

funding Using a sample of both northern and southern Mediterranean countries for the years 1985 to 2009. The results show that strong legal institutions, good democratic governance and adequate implementation of financial reforms can have a substantial positive impact on financial development only when they are present collectively. Moreover, inflation appears to undermine banking development, but less so when the capital account is open.

Wang et al. (2008) studied the impact of international financial crises on china's GDP and Employment. The study analyses the influence of financial crises on China's export and investment, by using an input-output model of the non-competitive import type capturing china's processing exports to calculate how much china's GDP and employment effects of the international financial crises. Results show that the impact of these crises was more serious during the fourth quarter of the 2008 and the third quarter of 2009. The Loss of GDP, which shows the actual impact of the crises, of the fourth quarter of 2008 was 373.7 billion RMB and that of the third quarter of 2009 was 649.1 billion RMB accounting for 8.3% of the GDP of the third quarter of 2009. In the fourth quarter of 2008, 12.5 million people were unemployed the number increased to 21.7 million in the third quarter of 2009.

Alerio et.al (2013) investigates the relationship between financial sector development and unemployment in Nigeria. A time series data was generated for the period of 1980 to 2011. Autoregressive distributed lag (ARDL) bond testing technique for Co integration was applied to estimate the long run relationship. The results show that there has been persisting unemployment in Nigeria, while formal credit allocation In rural areas of both short run and long run effects reducing unemployment. The study also shows that the expansionary monetary policy at that time was not effective, so the monetary authority should strengthen financial services industry, particularly deposits money banks, to provide necessary financial supports to the unemployed youth of the country.

Denfeld (2012) studies the impact of financial sector's development on micro finance and employment. The paper shows that the financial sector significance is particularly more important during crises. If the financial sector is unstable and does not provide adequate financing and if the framework conditions for investment and economic decisions are uncertain, this considerably restricts the real economy and result as a lack of investment, low or no growth, unemployment and underemployment. The 1997 Asian crisis, the 1998 Russian crisis and the current financial and economic crisis show that weak and under-regulated financial systems trigger or intensify economic crises and can cause high unemployment and poverty.

Vaubourg and Gatti (2010) investigate the financial determinants of unemployment and analyze the way they interact with labor market institutions. Paper use macroeconomic data for 18 OECD countries over the period 1980-2004. Results show that the impact of financial variables strongly depends on the labor market context. These results indicate that, when the labor market is deregulated and weakly coordinated, boosting financial markets as well as reducing banking concentration and intermediated credit allow to decrease unemployment. However, when labor markets are highly regulated and strongly coordinated, fostering intermediated credit is the only employment increasing policy.

Allen et.al (2014) investigates the African financial development and financial inclusion gaps relative to other developing countries. The paper uses different variables related to financial development and inclusion. It is first estimated the gaps between African countries and other developing countries with similar degrees of economic development. Then, it explores the determinants of financial development and inclusion. The results show that population density is considerably more important for financial development and inclusion in Africa than elsewhere. Finally, the paper shows evidence that a recent innovation in financial services, mobile banking, has helped to overcome infrastructural problems and improve financial access.

Atya and Salman (2014) determine the role of financial development and energy consumption in economic growth. The study employs an error correction model and granger causality test to analyze a data set of three North African countries Algeria, Egypt and Tunisia from 1980 to 2010. The model is based on demand function for energy to determine the existing relationship of energy with financial development and economic growth in these countries. The empirical results show a positive significant relating financial development and energy consumption in Algeria and Tunisia while negative significant relationship in the case of Egypt. The papers also suggest to the policy makers of North African countries to introduce financial developments reforms for achieving economic growth and prosperities.

Kejak and Ghilman (2007) study the endogenous growth which is based on inflation, financial development and Human capital. The model is an endogenous growth, monetary economy in which inflation causes the investment rate to decrease. With the savings-investment intermediation process assumed to be costless, financial development is defined relative to the parameters of the production of exchange credit that enables inflation-tax avoidance. There are two channels for financial development, the total factor productivity in the finance sector, and the degree of scale economies of normalized capital and labor in producing exchange credit. An increase in the total factor productivity causes an increase in growth rate while an increase in the labor and normalized capital leads to the opposite.

Boyd H. et al (2000) study the Impact of Inflation on Financial Sector Performance. To investigate the inflation-finance relationship, they use two datasets based on longitudinal availability, Banking, Data set 1970–1995, maximum of 97 countries and Stock Market Data Set: 1960–1995 maximum of 49 countries. The evidence indicates that there is a significant, and economically important, negative relationship between inflation and both banking sector development and equity market activity this relationship is nonlinear. As inflation rises, the marginal impact of inflation on banking, lending activity and stock market development diminishes rapidly. Moreover, the paper Finds evidence of thresholds. For economies with inflation rates exceeding 15 percent, there is a discrete drop in financial sector performance.

Johnson and Wang (2013) measure the impact of financial development on poverty and income inequality, using data for 66 countries for the period 1981 to 2005. The study uses the repression financial policies as index of the financial sector and analyzes the relationship between repressive financial policies and inequality across countries. We show that financial repression tends to increase income inequality. IV regression and modeling average method have been used to confirm the robustness of positive relations between financial repression and income inequality. They also find that this relationship with credit control and entry barriers in the banking sector are the two most important financial policies influencing inequality. Moreover, GDP per capita growth and urbanization serve as two important factors that might enhance income inequality. These results have important policy implications, not the least so in China, where rising inequality poses a significant problem for the government.

Zakria et al., (2015) study the impact of banking deregulation on unemployment in South Asia using the panel data for the period 1991 to 2005. The results show that banking deregulations have decreased the youth unemployment rate in the region. The results also reveal that high consumption level, per capita income and bank credit have reduced the unemployment rate, while banking crisis and high wage rates have increased the unemployment rate in the region. The results suggest that banking liberalization may help to reduce unemployment, particularly youth unemployment in South Asian countries.

Levine (2001) studies the legal theories of financial development the results show that political channel stresses that the civil law tradition supports the creation of a powerful State that tends to protect society's elite from competition by limiting, among other things, the development of free, competitive financial markets. Legal tradition, however, helps explain differences in financial development even after controlling for the power and competitiveness of the political system and policies toward competitiveness as reflected in the international trade measure. The findings highlight that the legal laws are much important for financial development.

Levine and Kunt (2008) studies the relationship between financial sector policies and economic development. Results show that Countries with a better-developed financial system tend to grow faster. Specifically, both financial intermediaries and markets matter for growth. The size of the banking system and the liquidity of stock markets are each positively linked to economic growth. Better-functioning financial systems make it easy for external financing that impede firm and industrial expansion. Thus, one channel through which financial development matters for growth is by easing the ability of constrained industries and firms to access external capital and expand.

III. Theoretical Background

Domestic Saving is an important part of an economy to grow. Several researches have been done in explaining the domestic behavior magnitude within a nation. Dodger (2012), Mamun (2011), Obeng (2011), Zaman (2010), Shabbir (2012) et al investigated the impact of credit facilitation on economic misery by using different functional forms. Since Economic Misery (high unemployment and high inflation) are major factors to the average wage earner, it's a quick and dirty metric to gauge the health of the economy because as inflation rises the cost of living increases and as unemployment rises more people cross the economic line into poverty. The model that is used in this study is a Model and predicts that Economic misery is determined by Domestic credit to the private

sector, domestic savings, Population density, workers' remittances and Foreign direct Investment. Following the methodologies of Ali (2015), Shahid and Ali, (2015), Ali and Rehman (2015), Ali and Bibi (2016), Ali and Ahmad (2016) and Ali (2018), the model of the study becomes

$$ECOM = f(DCPS_t, DS_t, POPD_t, WR_t\, FDI_t)$$

Where,
ECOM= Economic Misery
DCPS= Domestic credit to private sector
DS= Domestic Saving
POPD= Population Density
WR= Worker Remittances
t= Time period

For finding the responsiveness of dependent variable to independent variables, the equation can be written in the following form:

$$ECOM_t = \alpha_0 LDCPS_t^{\alpha_1} LDS_t^{\alpha_2} Popd_t^{\alpha_3} WR_t^{\alpha_4}\ FDI_t^{\alpha_5} e^{t\alpha_6}$$

$\boldsymbol{e}$ = represent for the base of log
Following the log linear form of the function the model becomes as:

$$ECOM_t = \alpha_0 + \alpha_1 LDCPS_{t-2} + \alpha_2 LDS_{t-2} + \alpha_3 LPopd_{t-2} + \alpha_4 LWR_{t-2+} + \alpha_5\ LFDI_{t-2} + e_t$$

The main objective of this study is to analyze the impact of credit facilitation on economic misery form 1973-2013. The data for all variables is taken from various issues of *Pakistan Economic Survey* and *World Development Indicator* databases maintained by the World Bank.

IV. Econometric Methodology

The use of econometric tools on macroeconomic models is one of the most important aspects within the quantitative economic analysis. In most of macroeconomic data, the involvement of time trend makes the time series data non-stationary and the regression results of this data may be spurious. Nelson and Plosser (1982) mention that mostly time series data of macroeconomic variables have a unit root problem. They conclude that existence or non-existence of unit root helps to check the authenticity of the data generating process. Stationary and non-stationary data have some different features. The stationary time series data have temporary shocks which disappear over the time series and move back to their long-run mean values. Whereas, shocks are permanently in non-stationary time series data. As a result, the variance and mean of a nonstationary time series depend upon the time trend and the series has: (a) no long-run mean to which the series returns, and (b) variance will depend on time and approach infinity as time goes to infinity. In case if the time series data has only negative or positive shocks, the time series data is nonstationary (for details see, Dickey and Fuller, 1979). In the literature, several unit root tests are available for making data stationary. For this purpose, the study uses Augmented Dickey-Fuller (ADF) unit root test (1981). The general forms of the ADF can be written as:

$$\Delta X_t = \delta X_{t-1} + \sum_{j=1}^{q} \phi_j\, \Delta X_{t-j} + e_{1t}$$

$$\Delta X_t = \alpha + \delta X_{t-1} + \sum_{j=1}^{q} \phi_j\, \Delta X_{t-j} + e_{2t}$$

$$\Delta X_t = \alpha + \beta t + \delta X_{t-1} + \sum_{j=1}^{q} \phi_j\, \Delta X_{t-j} + e_{3t}$$

Xt is a time series for testing unit roots, t is the time trend and et is error term having white noise properties. If j = 0, it represents the simple DF test. The lagged dependent variables in the ADF regression equation are included until the error term becomes white noise. For checking the serial correlation of error terms LM test is used. The null and alternative hypotheses of ADF unit roots are:
H0: $\delta = 0$ non-stationary time series; So, it has a unit root problem.
Ha: $\delta < 0$ stationary time series.

Applying OLS and computing τ statistic of the estimated coefficient of Xt-1 and comparing it with the Dickey Fuller (1979) critical τ values, if the calculated value of τ statistic is greater than the critical value then reject the H0. In this case the time series data is stationary. On the other hand, if we fail to reject H0, the series is non-stationary. In this way of applying this procedure on all variables, we can easily find their respective orders of integration.

IV.I. Auto Regressive Distributed Lag Model (ARDL) Approach to Co-integration

In literature, a number of co-integration tests for econometric analysis are available. Most famous and traditional co-integration tests are the residual based Engle-Granger (1987) test, Maximum Likelihood based on Johansen (1991/1992) and Johansen-Juselius (1990) tests. One thing common in these tests is that they require same order of integration for their analysis. These co-integration tests become invalid and inefficient when the variables of the model have different level of integration. Moreover, the analysis based on these tests of co-integration do not provide information about the structural breaks of time series data and also have low power of prediction. With the passage of time structural changes have occurred in time series such as economic crises, new institutional arrangements and changes in the policy regime. The problem with these traditional methods is that the testing of the null hypothesis of structural stability against the alternative of a one-time structural breaks only. If such structural changes are present in the data generating process, but not allowed for in the specification of an econometric model, results may be biased. The ARDL bound testing approach presented by Pesaran and Pesaran (1997), Pesaran and Shin (1999), and Pesaran, Shin and Smith (2001) has numerous advantages over traditional methods of cointegration. Firstly, ARDL can be applied regardless of the order of integration. Secondly, ARDL bounds testing approach to cointegration can be used for small sample size (Mah, 2000). Thirdly, this approach allows taking a sufficient number of lags for capturing the data generating process in a general to specific modeling framework (Laurenceson et al., 2003). Lastly, ARDL gives efficient and valid detailed information about the structural breaks in the data. This technique is based on Unrestricted Vector Error Correction Model (UVECM) which have better properties for short and long-run equilibrium as compared to traditional techniques (Pattichis, 1999). Pesaran and Shin (1997) and later on Pesaran et al. (2001) mention that under certain environment long-run correlation among macroeconomic variables can be found with the help of the Autoregressive Distributive Lag Model (ARDL). After lag order selection for ARDL procedure, simply OLS can be used for identification and estimation. Valid estimates and inferences can be drawn through the presence of unique long-run alliance that is crucial for cointegration.

$$\Delta lnY_t = \beta_1 + \beta_2 t + \beta_3 lnY_{t-1} + \beta_4 lnX_{t-1} + \beta_5 lnZ_{t-1} + \cdots + \sum_{h=1}^{p} \beta_h \, \Delta lnY_{t-h} + \sum_{j=0}^{p} \gamma_j \, \Delta lnX_{t-j} + \sum_{k=0}^{p} \phi_k \Delta lnZ_{t-k} + \cdots + u_{it}$$

At first the study will find the direction of the relationship among the variables in case of Pakistan by applying the bounds test using Wald test. This study uses different proxies for social progress as dependent variable and every model has different control variable with macroeconomic instability.

H0: $\beta 3 = \beta 4 = \beta 5 = 0$ (no cointegration among the variables)

HA: $\beta 3 \neq \beta 4 \neq \beta 5 \neq 0$ (cointegration among variables)

If there exits long-run cointegration relationship among the variables, then for the finding short-run relationship the study uses the Vector Error Correction Model (VECM). The VECM is explained as under:

$$\Delta \ln Y_{it} = \beta_1 + \beta_2 t + \sum_{h=1}^{p} \beta_h \, \Delta \ln Y_{it-h} + \sum_{j=0}^{p} \gamma_j \, \Delta \ln X_{t-j} + \sum_{k=0}^{p} \phi_k \Delta lnZ_{it-k} + \omega ECT_{t-1} + u_t$$

V. Empirical Results and Discussion

Table 1 presents descriptive static of the variables. Skewness and Kurtosis help to overview the volatilities among the variables of the model and descriptive statistic also explain the normality of the variables. The estimated descriptive statistics reveal that all independent and depended variables are negatively skewed. This estimated descriptive statistics show that all variables of the model have positive kurtosis values. The estimated results of the Jarque-Bera specify that economic misery, FDI, Domestic savings, Workers remittance and population density of the model is normally distributed and Domestic credit to the private sector is not normally distributed.

Table 1 Descriptive statistics

	LNECO	LNFDI	LNDS	LNDCPS	LNREM	LNPOPD
Mean	1.090550	-0.275559	1.026358	1.376656	3.324732	2.169287
Median	1.108203	-0.242214	1.027401	1.384041	3.296042	2.185126
Maximum	1.431734	0.564468	1.245801	1.474013	4.143753	2.371154
Minimum	0.655754	-1.341090	0.671055	1.207317	2.143452	1.925082
Std. Dev.	0.178939	0.435394	0.161823	0.059845	0.431246	0.134789
Skewness	-0.391346	-0.335090	-0.223215	-0.892284	-0.422199	-0.252109
Kurtosis	2.684474	3.080929	1.929565	3.898918	3.790965	1.838882
Jarque-Bera	1.186939	0.759484	2.241887	6.654562	2.231058	2.670717
Probability	0.552407	0.684038	0.325972	0.035891	0.327742	0.263064
Sum	43.62201	-11.02235	41.05432	55.06625	132.9893	86.77149
Sum Sq. Dev.	1.248745	7.393136	1.021279	0.139675	7.252961	0.708553
Observations	40	40	40	40	40	40

Table 2 Covariance Analysis: Ordinary

Probability	LNECO	LNFDI	LNDS	LNDCPS	LNREM	LNPOPD
LNECO	1.000000					
	0.394727	1.000000				
	2.648311	-----				
LNFDI	0.0117	-----				
	0.198495	0.550730	1.000000			
	1.248444	4.067325	-----			
LNDS	0.2195	0.0002	-----			
	-0.337437	0.303256	0.234027	1.000000		
	-2.209706	1.961781	1.483849	-----		
LNDCPS	0.0332	0.0571	0.1461	-----		
	0.052336	0.577291	0.104205	-0.020147	1.000000	
	0.323065	4.358227	0.645882	-0.124220	-----	
LNREM	0.7484	0.0001	0.5222	0.9018	-----	
	0.397319	0.799783	0.536151	-0.088337	0.749988	1.000000
	2.668943	8.213020	3.915373	-0.546685	6.989534	-----
LNPOPD	0.0111	0.0000	0.0004	0.5878	0.0000	-----

The Table 2 shows the correlation matrix among the variables of the model. Economic Misery has a positive and significant correlation with FDI, Domestic Saving, Workers Remittances and Population density. Economic Misery has a negative, but significant correlation with Domestic Credit to the private sector. FDI has a positive and significant correlation with Domestic credit to the private sector, domestic saving, workers remittances and population density. Domestic saving has a positive and significant correlation with domestic credit to private sector and population density and positive but insignificant correlation with worker remittances. The overall results show that most of our independent variables have a positive correlation with our dependent variable.

The augmented Dickey-Fuller (ADF) test is used for checking the stationarity of the variables. The results in the table show that population density is stationary at level. Whereas domestic saving, domestic credit to the private sector, FDI, worker remittances are stationary at first difference. But at first difference all variables are stationary. Hence there is mix order of integration among the variables of the model so we are applying Auto-regressive Distributed lag (ARDL) bound testing approach to Co integration.

Table 3

At level		
Variables	T-Statistic	Prob.
LNDCPS	-1.268514	-1.268514
LNDS	-1.869257	0.3429
LNECOM	-2.736960	0.0768
LNFDI	-2.775594	0.0711
LNPOPD	-3.137917	0.0325
LNREM	-1.875744	0.3400
At first difference		
LNDCPS	-5.852047	0.0000
LNDS	-7.006472	0.0000
LNECOM	-7.084157	0.0000
LNFDI	-7.768387	0.0000
LNPOPD	-1.707287	0.4192
LNREM	-3.684834	0.0082

Table 4

ARDL Bound Testing Approach		
Dependent Variable ECOM ARDL (1,2,2,2,2,2)		
Critical values	**F-Statistic** 9.192570	
	Lower Bound	Upper bound
95%	2.62	3.79
90%	2.26	3.35

The results of the bound testing approach show that F-statistic is greater than the upper bound value at 5% percent so we accept the alternative hypothesis that there is co-integration among the variables of the model.

Table 5

Estimated Long Run Coefficient using the ADRL Approach ARDL (1,2,2,2,2,2) Dependent variable is ECOM			
Regressor	**Co-efficients**	**Standard-Error**	**T-Ratio (Prob)**
LNFDI	0.558501	0.096990	5.758314 (0.000)
LNDS	0.210285	0.154447	1.361535 (0.1855)
LNDCPS	-1.923626	0.377294	-5.098478 (0.000)
LNREM	0.369801	0.124292	2.975267 (0.0064)
LNPOPD	-4.144903	0.873173	-4.746943 (0.0001)
C	13.190274	2.084698	6.327187 (0.000)

Next, we examine the long run results of the study, which are presented in the table 5. The results of this paper highlight that FDI has a positive and significant on economic misery. As FDI increases by one percent the economic misery will decrease by 5.75percent. Worker remittances have a significant and positive relationship with economic misery in case of Pakistan. If workers' remittances increase by one percent, then economic misery will increase by 2.97 percent. According to our finding if the population density increases by one percent than economic density will decrease by 4.74 percent in the case of Pakistan. Domestic credit to the private sector has a significant and negative impact on economic misery. As a Domestic credit to private increases by 1 unit economic misery decreases by 5.09units.

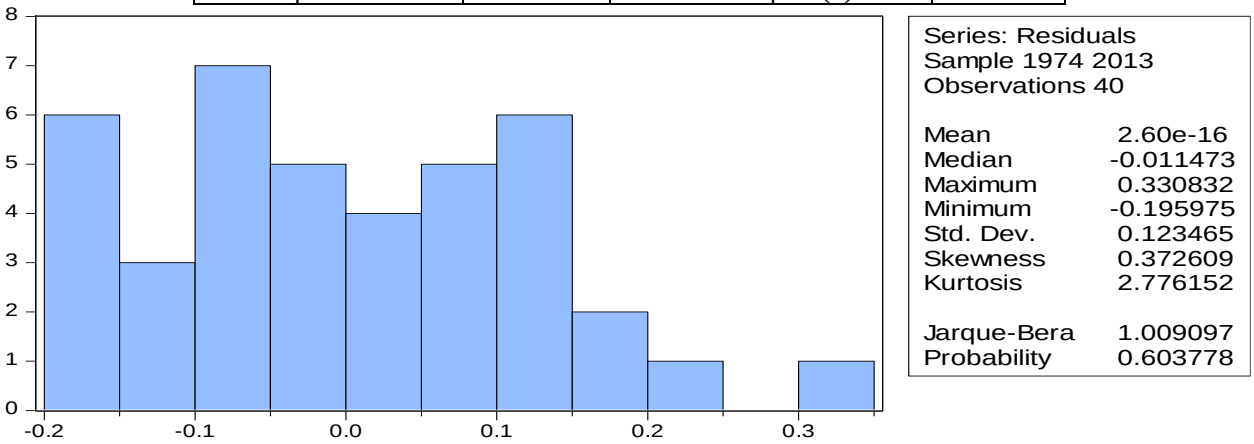
Table 6

Vector Error-Correction Model (VECM) Dependent variable is LNECOM			
Regressor	**Co-efficients**	**Standard-Error**	**T-Ratio (Prob)**
D(LNFDI)	0.260547	0.085322	3.053692 [0.0053]
D(LNFDI(-1))	-0.286373	0.077800	-3.680901 [0.0011]
D(LNDS)	0.229290	0.170122	1.347799 [0.1898]
D(LNDCPS)	-1.339162	0.532126	-2.516624 [0.0186]
D(LNREM)	-0.100119	0.179985	-0.556264 [0.5830]
D(LNREM(-1))	-0.468355	0.229432	-2.041367 [0.0519]
D(LNPOPD)	-166.695876	50.669080	-3.289894 [0.0030]
CointEq(-1)	-1.090376	0.167865	-6.495544 [0.000]

The above table shows the results of short run. In short, run phenomena foreign direct investment has a positive relation and significant impact on economic misery in Pakistan. If FDI increases by a percent economic misery also increases by a 0.26 percent. Domestic saving has a positive, but an insignificant impact on economic misery. If domestic saving increases by a percent, then economic misery decreases by a 0.23 percent. Domestic credit to the private sector has a significant, but negative relation with economic misery. If domestic credit to private sector increases by a percent, then economic misery decreases by a 1.34 percent. Remittances have a negative, but a significant relation with economic misery in the short run. If remittances increases by a percent, then economic misery decreases by 0.47 percent. Population density has a negative, but significant impact on economic misery in case of Pakistan. As population density increases by a percent, then economic misery decreases by a 166.69 percent. The negative and statistically significant value of ECM_{t-1}, -1.090376 leads to support a long run relationship between the series in case of Pakistan. The coefficient is statistically significant at the 5 % level and the significant value of ECM shows the speed of adjustment from short run to long run. The short run deviations from long run equilibrium are accorded by 109% towards the long run equilibrium path each year.

Table 7

Heteroskedasticity Test: ARCH			
F-statistic	0.419960	Prob. F(1,37)	0.5210
Obs*R-squared	0.437693	Prob. Chi-Square(1)	0.5082
Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.902287	Prob. F(2,32)	0.1657
Obs*R-squared	4.250378	Prob. Chi-Square(2)	0.1194



Following table shows the serial correlation and heteroscedasticity test of our model. The results of the LM test of residual serial correlation show that there is no serial correlation between the variables. White test for heteroscedasticity is applied, which shows that there is no heteroscedasticity problem in our data.

Figure 1

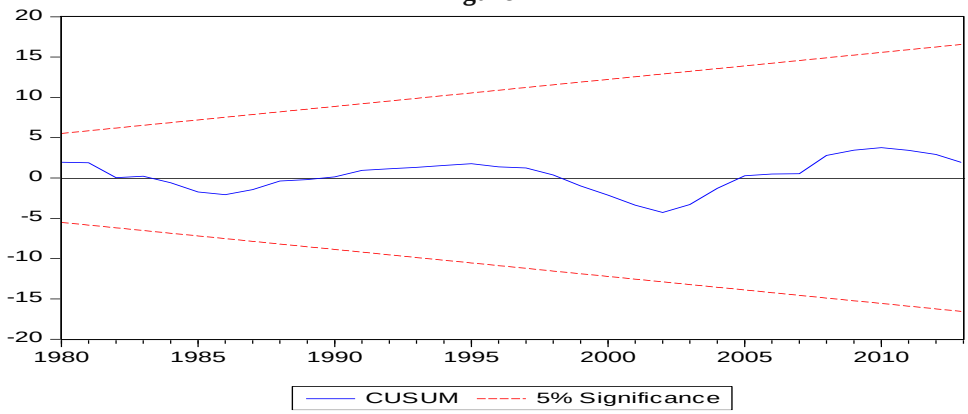
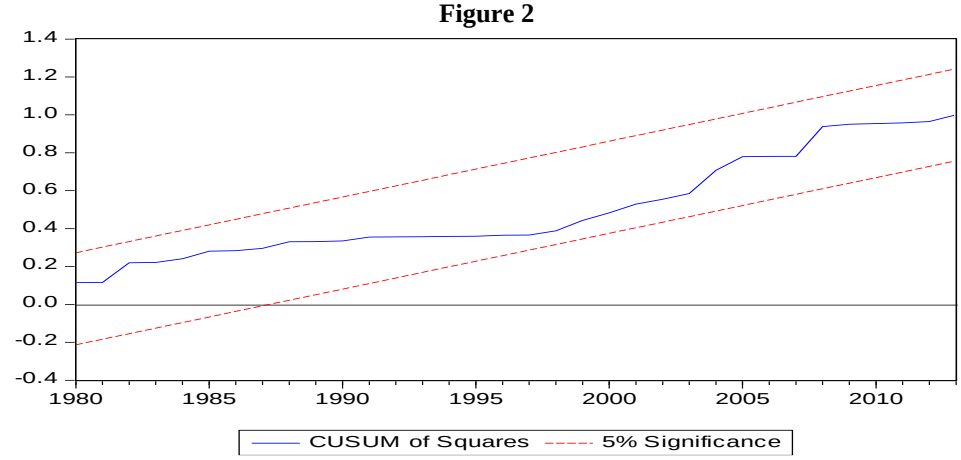


Figure 2



VI. Conclusions and Policy Recommendations

The main objective of this paper is to study the impact of credit facilitation on economic misery in Pakistan. It is analyzed for a period from 1973-2013. Domestic saving, Domestic credit to the private sector, population density and worker remittances variables are used to see the impact on economic misery in Pakistan's. This study uses the ADF unit root test for stationarity of our variables. Auto Regressive Distributed Lag (ARDL) model has been used to see the co-integration among the variables of the model and Vector Error-Correction model is used for short run phenomena. In this study domestic savings, domestic credit to the private sector, population density and worker remittances are used as explanatory variables whereas economic misery as an explained variable. The results of unit root tests show that there is a mixed order of integration among the variables of the model. In the short run, phenomena foreign direct investment has a positive relation and significant impact on economic misery in Pakistan. Domestic saving has a positive, but an insignificant impact on economic misery. Domestic credit to the private sector has a significant, but negative relation with economic misery. Remittances have a negative, but a significant relation with economic misery in the short run. In the long run the results of this paper highlight that FDI has a positive and significant on economic misery. Worker remittances have a significant and positive relationship with economic misery in case of Pakistan. On the basis of empirical results some policies are suggested to control and handle the economic misery in Pakistan. As suggested by the results of the study the increase in FDI increases economic misery in Pakistan, the reason behind this is that FDI is for skilled labor force while in Pakistan, most of our labor force is unskilled thus when FDI increases in Pakistan the economic misery increases. So, the policy makers should focus on making the labor force skilled on priority basis. The domestic credit to private sector shows that when the private sector is given credit then there should be solid policies of check and balance on that credit so that economic misery decreases as it helps to increase investment and further decrease unemployment and more credit is given more domestic products are produced whose price is low as compared to imported products thus credit facilitation policies should be of the main focus by policy makers. As workers remittances increase this in turn increase economic misery the reason is that with the increase in the workers remittances the demand for goods increases, causing inflation and unemployment of the people living in the country and are dependent on remittances coming from abroad. Thus, policies should be adopted to convert these remittances into productive activities like

investment, so that unemployment reduces in the country and domestically produced goods reduce inflation thus economic misery should be reduced. Most importantly, population density control policies should be adopted as increase in a population decreases economic misery in case of Pakistan.

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