

OPENNESS AND DEMOCRACY: SOME EVIDENCE FROM PAKISTAN

The paper empirically examines the relationship between trade openness and the level of democracy in Pakistan using annual time-series data for the period 1947-2009. The analysis shows that trade openness positively affects democracy in Pakistan. The results are robust to controlling for other democracy determining variables and various model specifications. The results also show that the effect of trade openness on democracy increases with the increase of the economic development. Other control variables, i.e. political constraints, human capital, government expenditures, physical capital, inflation and urbanization significantly affect democracy in the theoretically expected directions.

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1. Introduction

In modern political science, the relationship between economic and political liberalization is one of the foundational topics of the subfield of international political economy. Mainly there are two propositions in literature. One proposition argues that democracy affects economic liberalization, while the other proposition argues that it is economic liberalization that affects political freedom. Proponents of the first proposition argues that democratization increases trade openness (De Haan and Sturm, 2003; Milner, 2005). Other authors, however, argue that democracy hinders trade openness as democratic countries are unable to enact trade reforms, since they are unable to defeat opposing interest groups (Giavazzi and Tabellini, 2005). Further, uncertainty about the impacts of economic reforms on part of the population could lead voters to vote against reforms, even though they would benefit a majority of the electorate (Fernandez and Rodrik, 1991).

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Similarly, theoretical literature presents conflicting views about the effect of trade openness on democracy. It posits three competing theoretical positions: (a) trade openness promotes democracy, (b) trade openness obstructs democracy, and (c) trade openness has no systematic effect on democracy. The first view, i.e. openness promotes democracy, is posited since open countries have consistently been found more strongly democratic than the closed countries (Rodrik, 1998; Lopez-Cordova and Meissner, 2005; Rudra, 2005). The idea that openness intensifies the diffusion of democratic ideas across borders goes back to Kant (1795). This interplay is based on the argument that free trade, by enhancing the efficiency of resource allocation, raises incomes, increases the size of the middle class, promotes education, reduces income inequality, and lead to the economic development that fosters demands for democracy (Schumpeter, 1950; Lipset, 1959; 1994; Hayek, 1960; Muller, 1995; Bhagwati, 1994). In turn, according to the second view, openness reduces state policy autonomy and brings about public policies that please foreign investors instead of the common people. Governments satisfy global investors and firms, who may not act in the best interest of, nor be held accountable to, the voters. It follows that the level of democracy declines with trade openness (Cammack, 1998; Rigobon and Rodrik, 2004). Some authors argue that the adverse effects of trade openness on democracy are stronger in developed countries than in less developed countries (Li and Reuveny, 2003). Finally, the third view argues that the extent of openness on democracy (positive or negative) is often greatly exaggerated. This argument is based on the premises that most of the international trade takes place within geographical regions. Since the less-developed countries generally do not participate in the global economy, the effect of their economic openness on their democracy should not be large to begin with. Similarly, the developed countries are already stable democracies, openness will not further affect their levels of democracy (Hirst, 1997). Further, the effects of globalization vary across countries, depending on government policies, country's location in the global pecking order, the domestic political institutions, the identity of the domestic winners and losers, the extent of private ownership of economic sectors, and the current level of democracy (Frieden and Rogowski, 1996). Hence, the effects of trade openness on democracy may not be uniform across countries. Thus, the theoretical effect of trade openness on democracy is ambivalent and stands for an empirical test.

Empirically, studies have mixed findings on how trade openness affects democracy. For instance, Lopez-Cordova and Meissner (2005), Rudra (2005), Papaioannou and Siourounis (2005) and Yu (2005) found a positive impact of trade openness on democracy. In contrast, Li and Reuveny (2003) and Rigobon and Rodrik (2004) found that the trade openness has a negative effect on democracy. Bussmann (2001) and Giavazzi and Tabellini (2005) do not find significant impact of trade openness on democracy. Similarly, Wu and Otto (1999) and Dawson (2003) do not find clear correlation between economic and political freedom. It may be concluded that early studies generally reported no significant relationship between trade openness and democracy, while more recent work favored a positive link. Thus, like theoretical debate, empirically, the link between trade liberalization and democracy is far from settled.

Although these studies make important contributions in the empirical literature on the effect of trade openness on democracy, however they have some important shortcomings. Firstly, most of these studies are restricted to developed countries only and they have overlooked the effect of trade openness on democracy in less developed countries. Secondly, these studies use cross-section and panel data analysis and ignore the country specific time-series analysis. The disadvantage of cross-section and/or panel data analysis is that it provides ambiguous results as negative effects of trade openness on democracy in some countries may cancel out the positive effects in some others. Thirdly, and the most importantly, the previous studies have not tackled the endemic problem of endogeneity properly. Thus, considering the case study of a single country is more appropriate as it provides a clear picture of the effect of economic reforms on political reforms. This is important because a better understanding of the relationship between the two types of reforms is crucial in designing better development strategies for the particular country under consideration. The purpose of this paper is to explore the relationship between trade openness and democracy in Pakistan using annual time-series data for the period 1947 to 2009. To the best of our knowledge, this study is the first attempt to assess the effects of trade openness on democracy in Pakistan in a systematic way.

The rest of the paper is organized as follows. Section 2 presents analytical framework. Section 3 discusses overview of the data and presents the empirical findings along with their interpretations. Final section concludes the paper and evaluates the policy implications of empirical findings.

2. Analytical Framework

This section examines openness–democracy linkages using regression analysis. The approach followed here is to add trade openness variable to the right-hand-side variables of a standard democracy equation as an explanatory variable. Here the proposition is that trade openness is likely to significantly affect the level of democracy. In order to be consistent with previous studies, we utilize a conventional model. In what follows we estimate the model given by:-

$$DEMOC_t = \theta_0 + \theta_1 open_t + \theta_2 POLCON_t + \theta_3 h_t + \theta_4 g_t + \theta_5 k_t + \theta_6 INF_t + \theta_7 urb_t + \nu_t$$

where the lowercase letters denote that the underlying variables are in natural logarithmic form. Various variables are defined as follows:-

$DEMOC_t$ = democracy

$open_t$ = trade openness

$POLCON_t$ = political constraints

h_t	= human capital
g_t	= government expenditures
k_t	= physical capital
INF_t	= inflation rate
urb_t	= urbanization rate

θ 's are the parameters to be estimated, and v_t is the stochastic disturbance term such that $v_t \sim N(0, \sigma^2)$. Democracy is considered to be function of a set of control variables. These control variables include political constraints, physical and human capital accumulations, government size, domestic inflation and urbanization. Changes in any of these control variables are expected to alter the level of democracy. Democracy is expected to increase with the increase in political constraints on executive's powers. Both human and physical capitals are expected to improve democracy. The effects of government expenditures and inflation on democracy are theoretically equivocal. Urbanization should lead to more democracy.³

3. Data and Empirical Results

3.1. Overview of the Data

Annual time-series data are collected for Pakistan for the period 1947 to 2009. Some variables are directly taken from the data source. These variables include democracy, political constraints, inflation and urbanization. To measure democracy level, the Polity2 score from Marshall and Jaggers (2009) Polity IV project is used. Precisely, the Polity2 variable is defined as the difference between the democracy indicator and the authoritarian indicator. Since each indicator is an additive eleven-point scale (0 to 10), the variable Polity2 is scaled between -10 (full autocracy) and +10 (complete democracy). The higher the number, the higher will be the level of the political liberalization. Political constraint is proxied by POLCONV score, which is taken from POLCON dataset described by Henisz (2000). POLCONV is an index ranging from 0 (no constraints on executive's powers) to 1 (full constraints on executive's powers). The remaining variables are constructed using secondary data. For openness measure, we use the ratio of total trade (exports plus import) to GDP. Human capital is defined as secondary school enrollment rate; physical capital is proxied by gross fixed capital formation as a share of GDP; while government

³ For detail on the theoretically expected effects of these variables on democracy, reader is referred to Rudra (2005).

expenditure excludes defense and education expenditures and is taken as a share of GDP. The data are taken from *International Financial Statistics*, *World Development Indicators*, *Pakistan Economic Survey* and *Pakistan Demographic Survey*.

Table 1 contains summary statistics for the variables used in this study, which will help us in the interpretation of the coefficient estimates by providing the scale of the relevant variables. Table 2 presents the correlation matrix for the variables. Column (1) of Table 2 correlates democracy with all independent variables. The value of correlation coefficient 0.13 indicates that democracy is positively correlated with trade openness. This suggests that trade openness is an important correlate of the level of democracy. Figure 1 plots the simple regression between democracy and trade openness. The figure displays an apparent positive relationship between democracy and trade openness for Pakistan. The correlation and simple regression exercises, being essentially bivariate and simplistic, call for exploration in a more rigorous framework. This is what the next section of the paper attempts to do.

Table 1

Summary Statistics for the Variables (1947-2009)

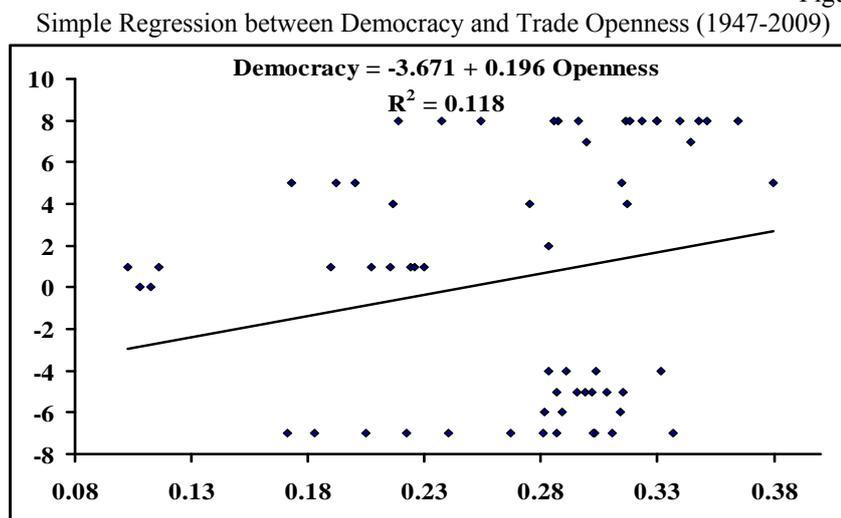
	Mean	Median	Std. Dev.	Minimum	Maximum	Count
Democracy	0.54	1.00	5.97	-7.00	8.00	62
Trade Openness (% of GDP)	26.78	28.69	6.60	10.24	37.95	62
Political Constraints	0.20	0.20	0.21	0.00	0.76	62
Human Capital (ln)	3.25	3.36	0.30	2.33	3.64	62
Govt. Expenditures (% of GDP)	0.04	0.03	0.01	0.01	0.07	62
Physical Capital (% of GDP)	14.33	15.46	4.12	3.82	19.24	62
Inflation Rate (%)	6.37	5.47	4.64	-3.52	23.56	61
Urbanization Rate (% of Total Population)	25.71	27.63	6.29	8.30	34.40	62
Per Capita Income (ln)	9.74	9.65	0.38	8.74	10.30	62

Table 2

Correlation Table for the Variables Included in the Regressions (1947-2009)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trade Openness	0.13	1						
Per Capita Income	-0.09	0.40	1					
Political Constraints	0.70	0.07	0.09	1				
Human Capital	0.10	0.98	0.37	0.04	1			
Govt. Expenditures	-0.01	0.28	0.77	0.12	0.27	1		
Physical Capital	-0.20	0.15	0.78	0.08	0.14	0.68	1	
Inflation	0.41	0.43	0.17	0.22	0.41	0.02	0.18	1
Urbanization	-0.16	0.34	0.97	-0.01	0.31	0.73	0.84	0.27

Figure 1



3.2. Empirical Analysis

We have applied Generalized Method of Moments (GMM) estimation technique of Arellano and Bond (1991), and Arellano (1993) to estimate democracy equation. The GMM estimators control for the endogeneity of the lagged dependent variable and for the potential endogeneity of other explanatory variables. Lagged values of the variables are used as instruments.⁴

The corresponding regression is reported in Table 3. The *t*-statistics on openness (2.652) indicates that there is a statistically significant positive relationship between openness and democracy.⁵ The coefficient for the openness stood at 0.106, which would imply that a one-standard-deviation increase in openness (6.60) leads to about 0.70 percent increase in the level of democracy. In other words, outward orientation promotes egalitarian system in Pakistan. This is possibly due to the importance of high trade of Pakistan with developed countries, which has an enhancing effect on political freedom. This result is consistent with the well-known tendency of trade to generate economic winners and losers. The result shows that the overall gain from

⁴ Using ADF unit root test, stationary properties of the variables are checked. The results show that most of the variables are nonstationary at levels and stationary at first difference. The only exceptions are inflation rate and democracy index, which are found to be stationary at levels. To conserve space ADF test results are not reported here. However, results may be obtained from the authors upon request.

⁵ To check the non-linear effect of openness on democracy, a squared term of openness was included in democracy equation. However, its effect on democracy turned out to be insignificant and hence it was excluded from the estimation.

trade outweighs the cost of trade. The fraction of the variation in democracy due to openness, as explained by column (2), is fairly substantive. The remaining columns of the table investigate the robustness of these results to some simple changes in specification. These changes alter the results only trivially as in only two out of the eleven specifications openness has a negative effect on democracy index. Thus, the estimated impact of openness on democracy is robust to alternative equation specifications with reasonable values of overall R-square. This finding is consistent with the notion that economic freedom promotes political freedom in less developed countries. The results show that openness is a constraint on authoritarians' plans to derail the democratic system in Pakistan.

Other determining variables affect the democracy in theoretically expected directions. Political constraint has a significant positive effect on democracy, which means that the increase in constraints on the executive's power would improve democratic structure in the country. Significant positive coefficient on the human capital indicates that an increase in the education level will increase democracy level. This shows that political constraints and literacy remain important determinants of democratic process in Pakistan. Further, as expected, democracy increases with the increase in government expenditures. Physical capital accumulation significantly positively affects democracy. However, this result is not robust to alternative equation specifications. Inflation is found to have significant positive influence on democracy. Finally, the significant positive coefficient on urbanization indicates that democracy increases with the increase in urbanization rate. This finding is consistent with the previous results in literature that greater percentage of urban population leads to more democracy. However, this result is not robust to alternative equation specifications.

To remove autocorrelation from the model autoregressive (AR) process is applied. The values of Durbin-Watson (DW) are closed to the desired value of 2, which indicates the absence of autocorrelation problem. The values of R^2 and adjusted R^2 are reasonably high, indicating that the model explain most of the observed variations in democracy. In fact, all the effects are statistically significant, which supports our model specification.

Table 3

Relationship between Democracy and Trade Openness [1947 to 2009]

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Constant	2.691 (1.677)	2.459 (3.888)*	1.117 (1.380)	4.086 (1.221)	-1.076 (-1.796)**	-6.143 (-0.213)	5.744 (1.569)	1.092 (1.316)	-1.658 (-1.373)	1.091 (1.371)	1.275 (1.086)
Trade Openness	0.106 (2.652)*	0.145 (4.900)*	0.104 (1.656)**	0.172 (1.780)**	-0.109 (-1.833)**	0.121 (3.905)*	0.122 (1.413)	0.198 (4.071)*	-0.128 (-1.752)**	0.165 (3.131)*	0.187 (2.509)*
Political Constraints	0.166 (6.128)*	1.536 (3.546)*				0.540 (3.474)*					
Human Capital	-2.297 (-0.241)	0.172 (3.304)*					0.563 (1.764)**				
Govt. Expenditures	1.268 (4.750)*		1.194 (2.681)*					1.985 (3.802)*			
Physical Capital	0.520 (2.242)*		-2.055 (-1.122)						0.375 (0.592)		
Inflation	0.389 (4.657)*			1.816 (2.242)*						-0.729 (-1.155)	
Urbanization	0.291 (2.022)*			0.130 (1.167)							-0.477 (-1.210)
AR(1)		0.838 (5.230)*	0.990 (3.853)*	0.925 (7.285)*	0.993 (4.608)*	1.010 (2.768)*	0.969 (4.907)*	1.028 (4.433)*	0.993 (5.595)*	1.094 (3.194)*	0.961 (3.072)*
R ²	0.585	0.666	0.605	0.606	0.572	0.630	0.575	0.601	0.571	0.346	0.606
Adjusted R ²	0.524	0.640	0.574	0.576	0.556	0.609	0.550	0.578	0.547	0.308	0.585
DW	1.830	2.356	1.991	2.099	1.948	2.240	1.924	2.046	1.946	1.826	2.039

Note: Values in parentheses denote underlying student-*t* values. The *t* statistics significant at 5 % and 10 % levels of significance are indicated by * and ** respectively.

3.3. Inclusion of Per Capita Income Variable

Economic development is the most widely proclaimed facilitator of democracy, a relationship first suggested by Lipset (1959). The economic development thesis has been refined, however, by Przeworski *et al.* (2000) who found that it is the survival of democracy that is likely to occur if the society is better off. The prediction is that the effect of trade openness on democracy will decrease as economic development increases. To test this prediction an interaction term ‘Trade Openness*Per Capita Income’ is included in the model. Per capita income is taken as a proxy measure for economic development. If the link between openness and democracy lessens as economic development increases, the coefficient on the interaction term will be negative. As is evident from Table 4 the interaction term appears with a significant positive coefficient (0.415), which indicates that there is no evidence that the relationship between openness and democracy becomes weaker as economic development increases. Thus, our results are contrary to the prediction of the economic development view of the link between democracy and trade openness. However, the results are not robust to alternative equation specifications.

Table 4
Relationship between Democracy and Openness: Inclusion of Per Capita Income
[1947 to 2009]

Variables	(1)	(2)	(3)	(4)
Constant	0.340 (0.916)	0.891 (3.087)*	0.759 (0.955)	0.789 (1.145)
Trade Openness	0.852 (1.891)**	0.898 (4.257)*	0.461 (2.449)*	0.122 (3.325)*
Political Constraints	0.129 (1.784)*	1.488 (3.611)*		
Human Capital	-0.982 (-0.447)	0.862 (2.762)*		
Govt. Consumption	0.329 (3.269)*		1.271 (3.401)*	
Physical Capital	-0.540 (-1.371)		-2.022 (-1.558)	
Inflation	0.703 (3.075)*			0.452 (1.649)
Urbanization	0.058 (1.766)**			-0.105 (-1.103)
Trade Openness*Per Capita Income	0.415 (3.236)*	0.944 (3.663)*	-0.132 (-0.592)	-1.403 (-0.980)
AR(1)		0.869 (7.848)*	0.993 (2.199)*	0.941 (2.832)*
R ²	0.587	0.665	0.611	0.606
Adjusted R ²	0.517	0.632	0.572	0.567
DW	2.492	2.333	1.975	1.967

Note: Values in parentheses denote underlying student-*t* values. The *t* statistics significant at 5 and 10% levels of significance are indicated by * and ** respectively.

4. Conclusion

The paper empirically examines the impact of trade openness on democracy in Pakistan using annual time-series data for the period 1947 to 2009. Since Pakistan's economy has a considerable degree of openness to foreign trade, the democratic institutions cannot remain immune to external shocks. This hypothesis is supported by our study. The results show that trade openness has a significant positive effect on democracy in Pakistan. In other words, undergoing trade liberalization makes Pakistan more democratic. This result is found to be robust to alternative equation specifications. Thus, the results in this paper substantiate the existing empirical literature, which reveals a positive relationship between democracy and openness. Political constraints on executive's power, human and physical capital, government expenditures, inflation, and urbanization are also found to be important explanatory variables affecting democracy. An increase in the level of development of the country is also predicted to add to the country's democratic process.

The positive relationship between openness and democracy is bound to have far-reaching implications for policy makers in Pakistan including some for the optimum strategy for economic development since trade openness supplemented with economic well-being produces better outcomes as compared to openness alone. Specifically, it will have implications for the optimal trade policy (inward-looking vs. outward-looking policies). Our research could be extended in several directions. One possibility is to explore the channel variables that derive openness to increase the process of building and consolidating democracy in Pakistan. It requires applying a simultaneous equations model with several endogenous variables.

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