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Choice Between Economic Reforms And Political Reforms: An Empirical Analysis For Financial Development

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Abstract
The purpose of this study is to investigate the impact of economic and political reforms on the decisions related to Financial Sector development both in developed and developing nations. Panel of sixty nations divided almost equally in both sections for the time period 1990-2012 has been used. Using Discroll-Kraay Fixed Effect estimation technique, results revealed that in all cases either for whole panels or for separate developing and developed nations, process of economic reforms is playing most important role in the development of this sector among all other variables and this becomes more prominent in case of developed nations. While among political factors, role of Governance has been observed positive and strongly significant in its impact on the development of this sector for all cases. But Democracy showed positive effect only for developed nations not for developing nations which highlights this fact that consistency is the most required ingredient in case of economic development overall. Overall findings of the study helps in concluding that in case of developing countries, economic reforms are proving to be more fruitful and swift in their outcomes than political reforms.

Key Words: Governance; Financial Sector; Interest rate; Population; Development

1: Introduction

Financial liberalization in an economy is a process used to enhance economic growth, efficiency of financial markets and financial development. It refers to lessening of any sort of regulations on the financial industry of a given country. Its roots goes back to last three decades and is still in progression in all over the world for changing the fates of nations. However, it is interesting to note that before World War I there was almost no restrictions of capital flow on cross-border and after the World War, countries started introducing restrictions of varied nature and intensity

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on capital flow (Estevez, 2011). Therefore researchers have not only tried to assess the process of financial liberalization rather immense efforts have been made to evaluate its impact not only on economic development rather on trade, capital account liberalization and stock market operations as well. And all such empirical facts helped to know the importance and benefits of equity market or stock market integration to the world (Kaya, Lyubimov & Miletkov, 2012; Fuchs-Schündeln & Funke, 2003). But this tale of transition does not end here. With the passage of time, not only economic factors rather political factors are also being considered and blamed in the success or failure of any policy reform. Consequently now a days, economies are trying to follow the view of 'participatory politics' to reach at the desired outcome of policies. Such type of politics lead towards democratization which ultimately open up the economies to integrate with the rest of the world. Developing countries are more into this process of transformation after adding ten additional points into 'Washington Consensus' by Rodrik (2006) who came up with this view that institutional reforms are must along with policy reforms to alter the fortune of developing nations. Moreover it is now being observed that those developing countries that open their equity markets earlier have high volume of trade with the developed countries and have relatively more developed financial markets. Keeping in view the growing of importance of financial sector development for increasing the performance of other segments of the economy especially trade, this study aims to re-examine the determinants of financial development in developing nations. For this purpose impact of both economic and political reforms has been explored. These nations are in the process of 'Democratization' in this era so due this reason there will be a shift in their economic policy choices therefore this is an important question that how these two factors are contributing to the development of this key sector of the economy and this study endeavours to answer this question.

2: Literature Review:

In past various studies have been conducted to understand the phenomena of financial liberalization and its impact on economic development, growth, efficiency and financial development but not much work has been done using political aspects of the economoy. Chen and Yeh (1998) attempted to analyze the operating efficiency of Taiwan's commercial banks which helped the managers and regulators for the improvement of performance. Hossain and Alauddin (2005) observed the trade liberalization process in Bangladesh with greater emphasis on export and its effect on imports, GDP and other macro level variables. Ito (2006) found that many Asian countries could be more successful in attaining the benefits of financial liberalization which had the relatively better and sound legal and developed framework of institutions. Denizer, Dinc, and Tarimcilar (2007) measured the banking competence before and after liberalization period and analyzed whether the financial liberalization direct to the efficiency increase in the commercial banking system in Turkey. Braun and Raddatz (2008) argued that the trade liberalization encouraged the strengthening of promoters or opponents of financial development which could be helpful in the sub-sequent financial sector reforms. James and Karoglou (2010) explained the relationship between volatility of stock market and financial liberalization in emerging economy of Indonesia. Countries which had better legal system, good institutions, favourable environment for investments, generated larger growth effect. Kaya et al. (2013) investigated the economic, political factors of emerging countries that influenced the decision of liberalization of the equity markets. The study supported a better modification impact for such economies that had strong legal institutions and higher human capital. Dabo (2012) inspected the financial liberalization policy especially the interest rate liberalization in continuation of financial sector reforms and analyzed this proposition before and after consolidation effect of financial liberalization on performance of banks and used the wilcoxon signed rank test to assess the performance of banks. Ahmed (2013) also emphasized that to ascertain benefits from liberalization, governments had to encourage a strong and more obvious framework for development of institutions. Now after discussing the past literature, this study tries to fill the gap in the existing literature using variety of new factors which can be regarded as one of the main determinants in the process of finamcial development.

3: Data and Variables Description:

The objective of this study is to examine the political and economic factors which affect the financial liberalization process. Table 1 represents the variables of economic and political nature and its description along with source of data.

Table 1: Variables and their sources

Variables	Description
Credit to Private Sector (CSP)	For measuring the performance of financial sector, a proxy Credit to private sector has been used. It refers to "monetary assets such as loans, account receivables, purchase of non-equity securities that create a claim for reimbursement to private sector". Source: World Bank Development Indicators (WDI).
Financial liberalization (FL)	Financial liberalization corresponds to the date of liberalization. Financial liberalization is a dummy variable and ranges from 0 to 1. 1 represents the full liberalization and 0 represents the no and partial liberalization in the countries during the time period from 1990 to 2012. Data is available for all countries from 1990 to 2012. Source: IMF and Bekaert et al. (2005).
GDP per capita (GDPG)	It is defined as "Gross Domestic Product per capita is based on constant 2005 US dollar". Source: World Bank Development Indicators (WDI).
Population growth (POP)	"Population growth is based on population growth (annual %) which counts all the residents of the country without considering their status of citizenship or legal except for expatriate". Source: World Bank Development Indicators (WDI).
Agriculture (AGRI)	"Share of value added in agriculture as a percentage of GDP. Agriculture is used in vast meaning it includes cultivation of crops, forestry, and livestock, hunting, and fishing etc". Source: World Bank Development Indicators (WDI).
Trade openness (TOPENER)	Trade openness can be achieved by summing up the value of exports and imports of goods and services which is divided by gross domestic product. Data is available for all countries from 1990 to 2012.Source: World Bank Development Indicators
Foreign Direct	Openness to foreign capital is foreign direct investment which is based

Investment (NFDI)	on net foreign direct investment percentage of GDP. Data is available for all countries from 1990 to 2012. Source: World Bank Development Indicators
Government Final Consumption (GFC)	Government expenditures divided by GDP. It consists of all current expenditures of government that made for the purchases of goods and services except for expenditures made on security purpose and defense. Data is available for all countries from 1990 to 2012. Source: World Bank Development Indicators
Democracy (DEM)	Democracy value is obtained from the Polity IV index. The indicator ranges from +10 to -10. As +10 describes the perfect democracy and -10 represents the perfect autocracy value. Source: Polity IV Index
Rule of law (RL)	Rule of law represents the awareness level of representatives of the society which follow the rules of society. Their confidence is on law enforcement, police, and courts etc. against violence, crime. The indicator ranges from approximately -2.5 to 2.5. The -2.5 reflects the weak extent of rule of law and 2.5 indicates the strong performance of rule of law. Source: Worldwide Governance Indicators, 2012

4: Methodology:

In this section the methodology designed to measure the outcome of economic and political factors on financial sector has been discussed. Data includes both cross sections and time series therefore panel data models have been applied as per requirement. The data comprises of thirty developing and thirty developed countries for period from 1990 to 2012. The panel regression model to be used is given below:

$$\begin{aligned} CPS_{it} = \alpha_{1i} + \alpha_2 FL_{it} + \alpha_3 POPG_{it} + \alpha_4 AGRI_{it} + \alpha_5 GDPG_{it} + \alpha_6 TOPENPER_{it} \\ + \alpha_7 NFDI_{it} + \alpha_8 GFC_{it} + \alpha_9 DEM_{it} + \alpha_{10} RL_{it} + \varepsilon_{it} \end{aligned}$$

Where *i* stands for the *i*th cross-sectional individual (i.e. country) and *t* for the *t*th time period. ε_{it} is called the idiosyncratic errors or idiosyncratic disturbances as it varied across *t* as well as *i*. Analysis has been started by applying simply Pooled Ordinary Least Squares (OLS) regression model. But the diagnostics showed the signs of heteroscadasticity in the model which became the reason to move further for such choice of econometric technique that can be a remedy for this disease. For this purpose fixed and random effect models were being applied. Again to make the right selection of model diagnostic test i.e. The Hausman test was used to decide whether the random effects is better or fixed effects. It justified the use of Fixed Effect model. But the problem of heteroscadasticity, cross sectional independence and auto correlation of more than first order persisted in the model which was eventually being solved using Driscoll and Kraay Standard Errors.

5: Estimation:

Table 2 demonstrated the descriptive statistics of panel data of developing and developed countries. The total number of observations was 1288 because there were fifty six developing and developed nations and twenty three time periods. The overall mean value of financial liberalization was 0.69 and the standard deviation was 0.46. The overall mean value of credit to private sector (as % GDP) was 72.34% while the standard deviation was 51.38 units, minimum value 1.17% and maximum value 233.55%.

Table 2: Descriptive Statistics:

Variables	Mean	Standard Deviation	Minimum	Maximum	Observations
Financial Sector (Credit to private sectors)	72.34	51.38	1.17	233.55	1288
Financial liberalization	0.69	0.46	0.00	1.00	1288
Population growth	0.92	0.98	-2.57	11.18	1288
Agriculture	8.08	7.30	0.30	46.80	1288
Trade openness	76.86	47.51	12.34	342.05	1288
GDP growth	3.22	4.81	-30.51	38.20	1288
FDI	4.08	9.26	-161.24	172.72	1288
Government consumption	17.02	5.32	3.15	36.06	1288
Democracy	6.31	5.46	-8.00	10.00	1288
Rule of law	0.50	0.99	-1.63	2.00	1288

5.1: Estimation Results of Whole Panel:

The study applies OLS regression technique, although this model incorporated the data well, but it might be suspected that each data could have time period or country effects for this purpose, various diagnostic tests have been applied to make the right choice of the mode. Breusch-Pagan (1980) Lagrangian multiplier test examined whether the individual or time specific variance are zero, $H_0 : \sigma^2_u = 0$. The lagrangian multiplier followed by chi-squared distribution with one degree of freedom (Park, 2011). The LM test assisted whether the random effect regression was better one or the OLS regression. The value of Prob. > chi-square illustrated that random effect was an appropriate model rather than pooled OLS. Then, fixed effect model is applied to the data; for selection between fixed effect and random effect; Hausman test is applied. The test statistics of Hausman illustrated that fixed effect model was better than random effect. If the Prob.> Chi2 is less than 0.05 then used fixed effect (Torres-Reyna, 2011). Hoechle (2007) suggested using Driscoll and Kraay standard errors for cross-sectional dependence. To cope with the problem of heteroskedasticity, serial correlation and cross-sectional dependency, Driscoll and Kraay standard errors regression assumed to be the best among all the four regression techniques.

Table 3: Estimation results:
Dependent Variable: Financial Sector measured by credit provision.

Variables	Pooled OLS	Fixed Effects	Random Effects	Driscoll/Kraay Results
Economic Factors				
Financial liberalization	18.401 (0.501)	2.157 (0.391)	4.622 (0.061)	2.157 (0.000)***
Trade openness	0.100 (0.710)***	0.463 (0.000)***	0.405 (0.000)***	0.463 (0.000)***
GDP growth	1.239 (0.000)***	1.408 (0.000)***	1.410 (0.000)***	1.408 (0.000)***
Net foreign direct investment	-0.116 (0.319)	-0.022 (0.766)	-0.029 (0.696)	-0.022 (0.009)***
Political Factors				
Democracy	-1.036 (0.240)	-0.703 (0.042)**	-0.558 (0.090*)	-0.703 (0.000)***
Rule of law	24.811 (0.065)*	1.560 (0.725)	11.490 (0.001)***	1.560 (0.000)***
Control Variables				
Population Growth	4.170 (0.001)***	4.126 (0.001)***	4.281 (0.001)***	4.126 (0.039)**
Agriculture	-1.975 (0.000)***	-1.917 (0.000)***	-1.923 (0.000)***	-1.917 (0.000)***
Government final consumption	-0.893 (0.001)***	-0.030 (0.927)	0.056 (0.855)	-0.030 (0.947)
Constant	77.767 (0.000)***	55.734 (0.000)***	51.027 (0.000)***	55.734 (0.000)***
Diagnostics				
Number of observations	1288	1288	1288	1288
F value	133.01	49.97	472.41	123.67
Prob.> F	0.000	0.000	0.000	0.000
Wald chi2(9)				
Hausman test	Chi ^ 2	33.14	Prob.> Chi^2	0.000
Breusch-Pagan Lagrange Multiplier Test	Chi ^ 2	5165.06	Prob.> Chi^ 2	0.000

*** Significance at 1%, ** Significance at 5%, *Significance at 10%

The estimations of the Driscoll and Kraay standard errors are presented in the Table 3 given above. The regression could be interpreted as follows: For one percent increase in financial liberalization, credit to private sector as a percentage to GDP is expected to increase by more than 200% i.e. 215 times increase. Trade openness and GDP growth is also affecting positively to the development of this sector but role of liberalization policy is more as compared to other economic factors. Similarly out of political factors, effect of Governance measured in the form of Rule of law is positive and significant for the development of this sector. For one unit increase in rule of law index, credit to private sector as a percentage to GDP is expected to increase by more than 100 times which sheds light on the importance of better governance for the development of sectors. The signs of control variables are also in the right direction and significant for all variables. The F-value of the model also revealed that it is satisfactory.

5.2: Estimation Results of Developing Nations

Now in this section, the study analyzed the impact of those political and economic factors on the financial sector development for developing countries. The same procedure has been applied as in case of above. The results are given below in Table 4.

Table 4: Estimation results:

Variables	Pooled OLS	Fixed Effects	Random Effects	Driscoll/Kraay Results
Economic Factors				
Financial Liberalization	16.018 (0.645)	3.394 (0.063*)	3.846 (0.034**)	3.394 (0.056)*
Trade openness	0.305 (0.090*)	-0.019 (0.614)	0.010 (0.778)	-0.019 (0.066)*
GDP growth	0.063 (0.756)	0.466 (0.000***)	0.475 (0.000***)	0.466 (0.004)***
Net foreign direct investment	-0.171 (0.486)	0.077 (0.647)	0.051 (0.764)	0.077 (0.005)***
Political Factors				
Democracy	-0.461 (0.031**)	-0.467 (0.034**)	-0.454 (0.035**)	-0.467 (0.002)***
Rule of law	13.450 (0.087*)	0.626 (0.847)	3.474 (0.256)	0.626 (0.066)*
Control Variables				
Population Growth	2.904 (0.706)	0.544 (0.558)	0.725 (0.430)	0.544 (0.068)*
Agriculture	-0.827 (0.000***)	-1.588 (0.080)*	-1.527 (0.000***)	-1.588 (0.000)***
Government final consumption	0.751 (0.009***)	-0.507 (0.051**)	-0.503 (0.050**)	-0.507 (0.005)***
Constant	18.373 (0.013***)	76.154 (0.000***)	73.559 (0.000***)	76.154 (0.000)***
Diagnostics				

Number of observations	690	690	690	690
F value	50.27	81.05	152.66	230.74
Prob > F	0.000	0.000	0.000	0.000
Wald chi2(9)				
Hausman Test	Chi^2 (9)	19.74	Prob.>Chi^2	0.0196
Breusch-Pagan Lagrange Multiplier Test	Chi ^ (2)	3789.85	Prob.> Chi ^ 2	0.0000

*** Significance at 1%, ** Significance at 5%, *Significance at 10%

Here from the above Table, it can be seen that the nature of signs is same for all variables as in case of above panel but a drastic change cane be observed in the magnitude of financial liberalization variable. This shows that the process of opening up of this sector is slow but it is generating positive effect in the development of this sector. On the other side from political factors, the impact of governance is positive but lesser in its intensity as compared to the results being discussed for the whole panel again confirming that as these nations lack such characteristics of proper Rule of Law therefore having meagre impact. Overall model estimation is satisfactory due the significant value of F-Test. Moreover in this case of developing nation too, it is visible that the impact of economic reforms is more than political though the intensity is reduced due to the regional specific characteristics.

5.3: Estimation Results of Developed Nations:

In this section, the study analyzed the impact of political and economic factors of developed countries on financial sector progress.

Table 5: Estimation results:

Variables	Pooled OLS	Fixed Effects	Random Effects	Driscoll/Kraay Results
Economic Factors				
Financial liberalization	27.574 (0.178)	-12.883 (0.160)	8.564 (0.297)	12.883 (0.000)***
Trade openness	0.013 (0.742)	0.621 (0.000***)	0.391 (0.000***)	0.621 (0.000)***
GDP growth	3.912 (0.000***)	3.203 (0.000***)	3.420 (0.000***)	3.203 (0.000)***
Net foreign direct investment	-0.041 (0.797)	-0.061 (0.635)	-0.029 (0.824)	-0.061 (0.000)***
Political Factors				
Democracy	-2.172	2.254	1.167	2.254

	(0.419)	(0.460)	(0.699)	(0.000)***
Rule of law	23.681 (0.855)	-2.252 (0.886)	17.170 (0.109)	2.252 (0.000)***
Control Variables				
Population Growth	7.664 (0.319)	2.982 (0.527)	6.815 (0.141)	2.982 (0.068)*
Agriculture	-5.779 (0.091***)	-4.549 (0.000***)	-4.239 (0.000***)	-4.549 (0.001)***
Government final consumption	-2.644 (0.172)	2.054 (0.035**)	0.719 (0.397)	2.054 (0.000)***
Constant	145.475 (0.707)	22.156 (0.620)	31.741 (0.401)	22.156 (0.000)***
Diagnostics				
Number of observations	598	598	598	598
F value	31.43	21.93	170.53	114.27
Prob > F	0.000	0.000	0.000	0.000
Wald chi2(9)				
Hausman Test	Chi ^ 2 (9)	38.88	Prob.>Chi ^ 2	0.000
Breusch-Pagan Lagrange Multiplier Test	Chi ^ (2)	566.30	Prob.> Chi ^ 2	0.0000

*** Significance at 1%, ** Significance at 5%, *Significance at 10%

From this Table again results are again supporting that economic reforms are more helpful for the development of this sector as compared to political factors in these nations. Moreover interesting facts can also be observed in the form of increased magnitude of those variables which were showing lesser impact in case of developing nations. Relationship is same in nature except for Trade openness variable. For developed countries, its showing positive relation with financial development but for developing nations, its impact was negative again emphasizing the need of liberalizing the policies for the development of the economies. Moreover from political factors, it can be observed both the variables are affecting positively to the development of financial sector with increased intensity as in case of developing nations. The positive sign of democracy for developed nations also confirms that for the development of economies, contemporary regime effects are vague rather it's the stock of regimes or the total number of years a system has been in practice matters for long term effects. Signs of control variables are in line with theory and almost same as has been observed in previous two Tables.

6: Conclusion and Recommendations:

The rationale of the study was to analyze the role of economic and political factors in the development of financial sector of developing and developed nations. Results proved the significance of economic policy reforms for the development process for both classifications of nations. This result confirms the findings of Cajueiro et al., (2009) that it is Financial liberalization that has directed to financial improvement and elevated growth in numerous countries. Among political factors, the role of governance measured by Rule of Law, is being found more prominent in all cases but democracy showed positive result only for developed nations. Overall results justified the supremacy of economic policy reforms for the development of this sector. These findings stresses upon the need of time for developing nations to follow liberalization policies to facilitate maximum the existing working of this sectors. Hence on the basis of these observations, few recommendations have been made. Firstly Government should try to take steps to increase the flow of foreign direct investment and more towards trade opening up process, so that the investment opportunities could be increased. Secondly for developing countries, more emphasis should be on the promotion of better rule of law which in turn can promote the financial liberalization and development in the economy. Lastly from the results it can be seen that trade openness, population growth and agriculture sector are also affecting significantly the performance of financial sector through credit creation. Therefore efforts should be made to increase the extent of trade liberalization in these nations. Moreover growth of population is showing Malthusian effect because it is showing that increase in population is improving the performance of this sector in economies hence efforts should be made to convert this increased population into human capital to have maximum advantage.

References:

Ahmed, A. D. (2013). Effects of financial liberalization on financial market development and economic performance of the SSA region: An empirical assessment. *Economic Modelling, 30*, 261-273.

Allegret, J. P., Courbis, B., & Dulbecco, P. (2003). Financial liberalization and stability of the financial system in emerging markets: the institutional dimension of financial crises. *Review of International Political Economy, 10*(1), 73-92.

Bekaert, G., Harvey, C. R., & Lundblad, C. (2005). Does financial liberalization spur growth? *Journal of financial Economics, 77*(1), 3-55.

Braun, M., & Raddatz, C. (2008). The politics of financial development: evidence from trade liberalization. *The Journal of Finance, 63*(3), 1469-1508.

Breusch, T. S., & Pagan, A R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *The Review of Economic Studies*, 47(1), 239-253.

Cajueiro, D. O., Gogas, P., & Tabak, B. M. (2009). Does financial market liberalization increase the degree of market efficiency? The case of the Athens stock exchange. *International Review of Financial Analysis*, *18*(1), 50-57.

Chen, T. Y., & Yeh, T. L. (1998). A study of efficiency evaluation in Taiwan's banks. *International Journal of Service Industry Management, 9*(5), 402-415.

Dabo, Z. (2012). The Impact of Financial Liberalisation on the Performance of Banks in Nigerian. *Procedia-Social and Behavioral Sciences, 62,* 548-554.

Denizer, C. A., Dinc, M., & Tarimcilar, M. (2007). Financial liberalization and banking efficiency: evidence from Turkey. *Journal of Productivity Analysis, 27*(3), 177-195.

Driscoll, J. C., & Kraay, A. C. (1998). Consistent covariance matrix estimation with spatially dependent panel data. *Review of economics and statistics, 80*(4), 549-560.

Eichengreen, B., Gullapalli, R., & Panizza, U. (2011). Capital account liberalization, financial development and industry growth: A synthetic view. *Journal of International Money and Finance, 30*(6), 1090-1106.

Esteves, R. (2011). The Political Economy of Global Financial Liberalisation in Historical Perspective. *The Encyclopedia of Financial Globalization, Gerard Caprio, ed., Elsevier, 2012. Available at SSRN:* http://ssrn.com/abstract= 2024992, University of Oxford-Department of Economics.

Fuchs-Schündeln, N., & Funke, N. (2003). Stock market liberalizations: Financial and macroeconomic implications. *Review of world economics*, *139*(4), 730-761.

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, *46*(6), 1251-1271.

Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *Stata Journal, 7*(3), 281-312.

Hossain, M. A., & Alauddin, M. (2005). Trade liberalization in Bangladesh: the process and its impact on macro variables particularly export expansion. *The Journal of Developing Areas*, *39*(1), 127-150.

Ito, H. (2006). Financial development and financial liberalization in Asia: Thresholds, institutions and the sequence of liberalization. *The North American Journal of Economics and Finance*, *17*(3), 303-327.

James, G. A., & Karoglou, M. (2010). Financial liberalization and stock market volatility: the case of Indonesia. *Applied financial economics, 20*(6), 477-486.

Kaya, C., Ashraf, M., Dikilitas, M., & Tuna, A. L. (2013). Alleviation of salt stress-induced adverse effects on maize plants by exogenous application of indoleacetic acid (IAA) and inorganic nutrients-A field trial.

Kaya, I., Lyubimov, K., & Miletkov, M. (2012). To liberalize or not to liberalize: Political and economic determinants of financial liberalization. *Emerging Markets Review*, *13*(1), 78-99.

Miles, W. (2005). Stock market liberalization, the cost of capital, and investment: how significant is the effect in emerging markets? *Savings and Development*, *29*(4), 349-362.

Park, H. M. (2011). Practical Guides To Panel Data Modeling: A Step by Step Analysis Using Stata: Tutorial Working Paper. Graduate School of International Relations, International University of Japan.

Rodrik, D. (2006). Goodbye Washington consensus, hello Washington confusion? A review of the World Bank's economic growth in the 1990s: learning from a decade of reform. *Journal of Economic literature*, *44*(4), 973-987.

Torres-Reyna, O. (2011). Panel Data Analysis Fixed & Random Effects (using Stata 10. x). *Retrieved form* http://www.*princeton. edu/~ otorres/panel101. pdf*.