

Cultural Diversity, Economic Growth and Poverty Relationship: Does Poverty Level Matters for the Explanation?

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Abstract: The paper is focused on the relationship of culture diversity, economic growth and poverty in a sample of developed and least developed countries. Applying OLS estimation technique we found that there is a significant difference in the relationship among culture diversity, economic growth and poverty in the sample of developed and least developed countries. The relationship of religious diversity and language diversity has become insignificant in case of least developed countries while it has significant impact on poverty in case of developed countries. We also conclude that the level of poverty does matters in the explanation of the relationship of cultural diversity, economic growth and poverty.

Key words: Cultural diversity • Economic growth • Poverty • Religious diversity • Language diversity

INTRODUCTION

The role of culture in studying the economic development was emphasized by [1]. Author argued that religious beliefs and practices affect economic growth. Until the cold war era this point of view could not achieve its due importance. But later there has been growing tendency for researchers to explain countries growth phenomenon from culture point of view [2-6].

The effect of cultural diversity on economic growth has a substantial literature of economics and political economics. The diversity in economic literature first introduced by [7] and also examined its effects on economic growth. There are many studies focus growth from cultural diversity perspective. Studies by [7-10], empirically emphasized that culture has influence on economic growth. [11, 6] conclude that more diverse states are more vulnerable to development inhibiting internal strife as compared to less diversified states. Further [12, 13, 2] empirically found that less diversified countries experience higher growth rates. [14, 15] found negative correlation between growth and cultural diversity. They argued that this negative relationship might be because of the sense of disaffection among

people. [16] explained country's economic growth from religion and beliefs link. They conclude that growth depends on the extent of believing relative to belonging as they found negative relationship between church attendance and economic growth and positive relationship between economic growth and religious belief.

The growth-poverty nexus is widely discussed by the development economists in the literature. In this era of globalization there is a colossal shift of global wealth towards the developing emerging economies. There are new economic giants and emerging economies in new globalized world. In the last three decades many developing countries experienced the high growth rate. This accelerated growth is suppose to result in the increase in human development such as increase in education and health facilities, poverty reduction, etc [17]. The recent development in the literature on growth and poverty focus on how many poor has been benefitted from the recent growth upsurge and what are the driving variables in coping with poverty [18].

In literature there is a common belief about the relationship between culture and poverty, conceives that the former causes the latter. In particular because of their

cultural beliefs and attitudes, individuals either are or remain poor. Further, because of their national or collective cultures, societies fail to overcome underdevelopment [19, 20]. Over the last several decades researchers have examined the relationship between culture and poverty, producing a very diverse and urbane literature [21, 22, 23] stats that while studying the wellbeing of the people we should also focus on the capabilities of the people to have acquired certain goods along with the material poverty. [24] Focused on the effects of globalization on human development index. By using individual indicators of globalization and Human Development index author found strong correlation among these variables. [25], focused on the role of development policies in the selection of efficient selection of non-oil exports, which is an important area in the oil exporting developing countries. the author argue that in the economic development process, the role of technical and engineering services in the oil exporting countries, in the recent years received little attention, it could be more than predicted developing programs.

[26], focused on the relationship of foreign direct investment and domestic private investment and economic growth. The study found that DPI is more significant than FDI for economic growth. So there should be more focus on the development of internal infrastructure. [27], also found similar findings for Pakistan when economy was under financial crises.

The role of development is vital for poverty reduction in developing countries. Some researchers believe that the country's ability to cope up with the issue of poverty heavily depends on the national mindset. [28] figured out twenty factors related to culture according to the respective environment and estimated the role of culture for development. Further [29] identifies ten cultural values that can be used as analytical tools for the better understanding of developmental environment of the nation. These two authors argue that the issue of poverty mainly is due to cultural characteristics among underdeveloped countries, to control this phenomenon development is the key. [30] describe that Cultural processes are certainly part of the lives of poor people. Author argues that equally problematic is the view that differences in national cultures explains differences in growth rates across countries.

The role of culture in the current debate on poverty reduction strategies came out as an important variable. There is less literature available on the relationship from empirical perspective. There is need to explore this facet

to have quantitative impending of the relationship. In this paper we attempt to explore the above mentioned relationship by focusing the following issues:

- The primary focus is to empirically examine the relationship among culture, economic growth and poverty variables in the developing countries.
- Does poverty level matters for the explanation of the relationship among culture, economic growth and poverty in developing and least developed countries of the world.

Model and Data Description: In this paper we attempt to gauge the possible relationship in the purview of developing countries. We follow two step analyses to answer our study questions. In the first step we will apply regress model on the overall sample of 144 developing countries. In the second step, to address second study question, we split sample into two groups; 93 developing countries and 51 least developed countries to see any change in the relationship of variables.

Following the World Bank definition of poverty we use poverty head count ratio at \$1.25 and \$2.00 per day. We use these two levels of poverty in the analysis to explore the relationship among culture diversity, economic growth and poverty. To analyze this relationship Poverty is taken as dependent variable. Following [31] that demographic variables play an important role in the poverty, we include set of demographic variables Land Locked (LANDLK), Land area (LLA) and Population growth (POPGR) in the model. Following [20, 32, 21], we used set of independent economic variables, trade openness (open), gross domestic product (GDP), human development index (HDI) and GDP per capita growth (GDPPCG). We used religious diversity and language diversity [33, 11, 6, 34] to analyze the possible relationship.

The main relationship to be estimated is as follows:

$$poverty1 = \alpha1 + \alpha2DV + \alpha3EV + \alpha4Cul \quad (1)$$

$$poverty2 = \beta1 + \beta2DV + \beta3EV + \beta4Cul \quad (2)$$

where the poverty 1 and poverty 2 are poverty head count ratio at \$1.25 and \$2.00 per day respectively, DV represents the set of demographic variables, EV is a set of economic variables and cul is a set of cultural variables. $\alpha1, \alpha2, \alpha3, \alpha4, \beta1, \beta2, \beta3$ and $\beta4$ are coefficient of the

model 1 and model 2 variables respectively. The data are collected from different sources. Language diversity and religious diversity variable are taken from [28]. The data for economic and demographic variables are mostly been taken from World Development Indicator [1] and International Financial Statistics [35] a publication of World Bank and International Monetary Fund respectively. The data for land area, land lock and GDP are taken in log form. All the data are based on annual averages assorted from 1980 to 2010. For the analysis of developing and least developed countries the sample was adjusted for missing values. We use Pearson's product moment correlation coefficient and Ordinary Least Square (OLS) methods for the analysis.

RESULTS AND DISCUSSION

Correlation Analysis: To estimate the relationship of variables we estimate correlation coefficient for the set of variables, presented in Table 1.

Results indicate that language diversity is positively and significantly associated with pov1 ($r=.265, p=0.00$) and Pov2($r=.321, p=0.00$). The correlation coefficient for religious diversity is also positive but insignificant for both measures of poverty ($r=.131, p=.176$ for Pov1 and $r=.121, p=.212$ for Pov2). Pov1 and Pov2 are negatively correlated with all other variables except land lock ($r=.296, p=.002$) and ($r=.276, p=.004$). The correlation coefficient for land area ($r=.050, p=.668$, and $r=-.011, p=.925$) and Human development index ($r=-.081, p=.486$, and $r=-.059, p=.613$) show insignificant correlation with Poverty. GDP per capita growth has shown significant and negative correlation ($r=-.261, p=.006$, and $r=-.230, p=.015$) to poverty reveal that an increase in GDP per capita growth leads to reduction in poverty.

Regression Analysis

Overall Sample: To test first study question we run two models on the overall sample. The results are reported in Table 2 below indicate that the demographic and economic variables also show expected signs with dependent variables. As described by [31] that in land locked countries, due to increased transportation cost, they cannot compete in the world so this is contributing factor in poverty through low level of GDP growth. GDP per capita and HDI have negative but insignificant behavior in case of Pov1. The relationship of Pov1 with religious diversity is positive and significant (column 1). Language diversity variable shows positive but

insignificant relationship with Pov1. In model 2, Pov2 have positive and significant relationship with religious and language diversity. From these results we can construct that religious diversity has a significant role in the explanation of poverty phenomenon regardless the level of poverty (Pov1 or Pov2) in developing countries. It has positive impact on the poverty variable in overall sample. It means that religious diversity contribute positively to poverty. In more religiously diverse country there would be more poverty. Reason could be that the religious groups might be taking each other as rivals. This rivalness might result in conflicts and result in poverty [28]. While in case of Language diversity it appears to be less illuminating in case of Pov1 variable. Hence in response to question 1 it has been found empirically that culture diversity has positive relationship with poverty.

In case of GDP per capita, it shows the negative sign indicating that it contribute to poverty negatively. But it is insignificant in case of Poverty 1, while in case of Poverty 2 variable, it display significant relationship which is in line with the theory. But overall results show that its effect on poverty is very trifling in case of developing countries. On the contrary the other economic variable, openness, has significant relationship with both indicators of poverty showing that openness plays an important role in poverty reduction. Results show that GDP per capita growth and openness has negative relationship with poverty.

Case of Developing Countries: Table 3 presents the regression results for the sample of 93 developing countries. The effect of demographic variables shows that they contribute to poverty in positive manner. Results also show that GDP growth has become insignificant while openness and HDI has negative and significant relationship with Pov1. HDI, as compared to our main sample, behave differently where it was negative and insignificant. While it shows almost similar behavior with Pov2 variable. Religious diversity has proved to be significantly affecting at Pov2 level of poverty but is insignificant in case of Pov1 standards. Similarly language diversity has shown similar behavior in case of Pov1 and Pov2 variables.

In case of developing countries it is evident that the relationship varies with cultural variables when poverty level changes. But overall results for this subsample show that though there is no change in the direction of behavior but significance changes with respect to the poverty level.

Table 1: Pearson's Product moment correlation coefficients for overall sample

	1	2	3	4	5	6	7	8	9	10	11
1. Pov1	1										
2. Pov2	.961**	1									
3. Language diversity	.265**	.321**	1								
4. Religious diversity	.131	.121	.204*	1							
5. Openness	-.346**	-.400**	-.239*	.009	1						
6. Land lock	.296*	.276*	.026	.010	-.009	1					
7. log GDP	-.584**	-.612**	-.151	-.103	.437**	-.179	1				
8. Population growth	.406**	.420**	.049	-.055	-.066	.059	-.353**	1			
9. log Land Area	-.050	-.011	.207*	.009	-.229*	-.053	-.147	.236*	1		
10. Human Development Index	-.081	-.059	-.035	-.147	-.276*	-.063	-.020	.050	.103	1	
11. GDP per capita growth	-.261**	-.230*	-.025	-.096	.057	-.026	.113	-.236*	.010	-.117	1

*, ** indicates significance at 1% and 5% respectively.

Table 2: Regression results for overall sample

Dependent Variable:	Pov1		Pov2	
Variable	1	2	3	4
C	15.764	24.117	36.403***	49.285*
LANDLK	15.294*	15.615*	15.028*	15.437*
LLA	-6.061**	-6.963**	-5.277	-6.766***
POPGR	11.315*	11.239*	9.781*	9.614*
GDPPC	-0.002	-0.002	-0.004***	-0.005***
HDI	-3.679	-3.714	-5.479***	-5.331***
OPPN	-12.846*	-11.210*	-16.201*	-13.457*
RD	2.500***		3.059***	
LD		0.533		0.868***
R-squared	0.54	0.53	0.58	0.58
F-statistic	9.93	9.66	10.61	10.79
Prob (F-statistic)	0.00	0.00	0.00	0.00

*, **, *** indicates significance at 1%, 5% and 10%, respectively.

Table 3: Regression results for developing countries

Dependent Variable:	Pov1		Pov2	
Variable	1	2	3	4
C	28.703	43.532	9.463	17.139
LANDLK	12.311***	11.586***	11.417**	10.909***
POPGR	7.652**	7.483**	6.799*	6.753*
LGDP	-11.156	-12.863	-6.028	-6.903
HDI	-5.946**	-5.198***	-5.256**	-4.928**
OPPN	-14.660*	-10.084**	-10.394*	-8.181**
RD	3.547***		2.014	
LD		1.0306**		0.503
R-squared	0.47	0.49	0.41	0.42
F-statistic	5.45	5.91	4.23	4.27
Prob	0.00	0.00	0.00	0.00

*, **, *** indicates significance at 1%, 5% and 10%, respectively

Case of Least Developing Countries: The results of regression for least developing countries are presented in Table 4. It depicts relatively different picture of behavior of variables than the results of sub sample of developing countries case. The demographic variable Land lock has proved to be significant when it is combined with language diversity while it becomes insignificant when it is combined with religious diversity.

Table 4: Regression results for least developed countries.

Dependent Variable:	Pov1		Pov2	
Variable	1	2	3	4
C	114.267*	145.309*	93.325*	20.858
LANDLK	9.340	15.449**	15.816***	15.420*
LLA	-6.358***	-10.011**	-12.006**	-6.152**
POPGR			7.790	11.077*
LGDP	-0.006*		-0.005**	
HDI	-0.361	-2.065	0.519	-2.614
OPPN	2.244	7.652	1.946	-13.447*
RD	2.795		5.787	
LD		-0.448		0.435
R-squared	0.67	0.62	0.65	0.55
F-statistic	4.09	3.31	2.98	9.08
Prob	0.01	0.03	0.05	0.00

*, **, *** indicates significance at 1%, 5% and 10%, respectively

The behavior of economic variables also changes with respect to poverty level. LGDP has become significant in case of least developing countries contrary to the findings for the sub sample of developing countries. The coefficient of HDI and OPPN has become insignificant in case of least developing countries. These variables (HDI and OPPN) have shown the inverse behavior as compare to the results of overall sample and sub sample of developing countries. The core variable of study, religious diversity and language diversity both were insignificant in case of least developing countries at both levels of poverty, contrary to the developing countries.

In the light of above results we can conclude our second question that “does poverty level matters for the relationship among culture, economic growth and poverty in developing and least developed countries of the world, we can infer from these findings that poverty level matters in the explanation of relationship of poverty, culture and growth as it is different in least developed and developing countries.

CONCLUSION

Study is mainly focused on the relationship of culture diversity, economic growth and poverty, in the sample of developing and least developing countries. Applying OLS estimation technique on set of demographic, economic and cultural variables, we found that there is a significant difference in the relationship among culture, growth and poverty, in the sample of developing and least developed countries. As it is evident from the findings of the study that the role of cultural variables is important but it is different in least developed and developed economies. We also conclude that the level of poverty does matters in the explanation of relationship.

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