Cultural Values, Diversity and Economic Growth in South Asian Region

Dr. Muhammad Mahroof Khan1  Dr. Saim Hashmi2  Dr. Fahim Ghazanfar3  Dr. Iftikhar Ahmed4
1. Associate Professor, 3 and 4 Assistant Professor
University of Management Sciences & Information Technology, Kotli, (AJK) Pakistan
2. Assistant Professor Mirpura University of Science & Technology, AJK

Abstract
This study represents an attempt at measuring the impact of certain cultural factors on economic growth in South Asian region. Cultural factors are incorporated into baseline endogenous economic growth model applied by ordinary least squares method in a growth regression framework, we have determined the impact of cultural factors on economic growth by estimating certain equations. The results have shown that cultural attitudes towards trust have positive and significant impact on economic growth. The surprising results are evident that ethnic fractionalization and religious fraction both have significant positive relation with economic growth in this region.

Introduction
Since long, culture and economy have been treated as broadly independent areas of research. Furthering the understanding of the determinants of economic activity promised to be one of the major research areas in the postwar era, although past, especially quantitative analyses were mainly focused on economic variables. However, since the late twentieth century, there have been arguments respecting an increasingly close relationship between economy and culture. It is now gradually becoming more conventional to argue that one of the reasons underlying relative lack of achievement of past economic development efforts are the exclusion of culture from development thinking and practice. This belated resurgence of interest has raised culture to a position of honor in development debates. Now, financial planners and technical problem-solvers have recognized that culture should not be overlooked if strong and sustainable development is to take place. In fact, various social scientists, particularly sociologists, political scientists and human geographers; have been undergoing a ‘cultural conversion’ in recent decades, as is evident both in method and content of analysis. Consequently, it remained a long-overdue dialogue with literary studies, and an increased concern with cultural phenomena in research studies (see, Altman, A. 2012; Barro, R., Hwang.J., and R., McCleary, 2010; Gorodnichenko, Y. and G. Roland 2011).

Living in culturally different countries also allows observations about how culture interacts with economic behavior and outcomes at micro level. This has urged to look into the possibility that culture could affect economic outcomes at national levels.

Research Questions
1. Do certain cultural values have impact on economic development?
2. Do diverse cultures have the same economic implications for economic development?

To answer these questions, this study examines the influences of various cultural factors on economic behavior of individuals that could be misinterpreted by existing economic theories. Its most important task is to elucidate conditions under which culture may not be a cause of misunderstanding and conflict but a source of creativity and profitability in multicultural cooperation. It also identifies diverse cultural situation under which economic policies can (or cannot) be arranged optimally.

Model and Data Sources
In order to estimate the effect of culture on economic development, we estimate growth model combined with economic and cultural variables following Barro (1991), Levine and Renelt (1992), and Granato, Inglehart and Leblang (1996). The empirical growth model has the following general form:

\[ G_{it} = \alpha + \gamma_i (Cultural \ var)_{it} + \beta_i (Economic \ Var)_{it} + \mu_{it} \]

(b)

Where, \( G_{it} \) is output growth (per capita) for country \( i \), Cultural var is a set of cultural variables: Cultural Motivational Index, Trust, respect, self-determination and obedience, and four cultural diversity variables (ethnic fractionalization, ethnic polarization, religious fractionalization, religious polarization). Economic variables is a set of economic variables for country \( i \), which includes levels of wealth and investment in human capital, level of per capita income, level of human capital investment, primary and secondary enrollment, population growth,
initial level of GDP per capita growth and the investment to GDP ratio. Data for measurement of cultural variables is taken from the World Values Surveys (WVS) and from Montalvo and Querol, (2005). The data on economic variables are taken from Penn World Tables and World Development Indicators for period of 1980-2014.

Econometric Model

\[
G_{it}(da) = \alpha + \beta_1 (\log GDP_{it}(da)) + \beta_2 (Edu_{it}(da)) + \beta_3 (Invest_{it}(da)) + \beta_4 (Pop.growth_{it}(da)) \\
G_{it}(sa) = \alpha + \beta_1 (\log GDP_{it}(sa)) + \beta_2 (Edu_{it}(sa)) + \beta_3 (Invest_{it}(sa)) + \beta_4 (Pop.growth_{it}(sa)) \\
G_{it}(za) = \alpha + \beta_1 (\log GDP_{it}(za)) + \beta_2 (Edu_{it}(za)) + \beta_3 (Invest_{it}(za)) + \beta_4 (Pop.growth_{it}(za)) \\
G_{it}(na) = \alpha + \beta_1 (\log GDP_{it}(na)) + \beta_2 (Edu_{it}(na)) + \beta_3 (Invest_{it}(na)) + \beta_4 (Pop.growth_{it}(na)) \\
G_{it}(oa) = \alpha + \beta_1 (\log GDP_{it}(oa)) + \beta_2 (Edu_{it}(oa)) + \beta_3 (Invest_{it}(oa)) + \beta_4 (Pop.growth_{it}(oa)) \\
G_{it}(pa) = \alpha + \beta_1 (\log GDP_{it}(pa)) + \beta_2 (Edu_{it}(pa)) + \beta_3 (Invest_{it}(pa)) + \beta_4 (Pop.growth_{it}(pa)) \\
G_{it}(ca) = \alpha + \beta_1 (\log GDP_{it}(ca)) + \beta_2 (Edu_{it}(ca)) + \beta_3 (Invest_{it}(ca)) + \beta_4 (Pop.growth_{it}(ca)) \\
G_{it}(wa) = \alpha + \beta_1 (\log GDP_{it}(wa)) + \beta_2 (Edu_{it}(wa)) + \beta_3 (Invest_{it}(wa)) + \beta_4 (Pop.growth_{it}(wa)) \\
G_{it}(ta) = \alpha + \beta_1 (\log GDP_{it}(ta)) + \beta_2 (Edu_{it}(ta)) + \beta_3 (Invest_{it}(ta)) + \beta_4 (Pop.growth_{it}(ta)) \\
G_{it}(sa) = \alpha + \beta_1 (\log GDP_{it}(sa)) + \beta_2 (Edu_{it}(sa)) + \beta_3 (Invest_{it}(sa)) + \beta_4 (Pop.growth_{it}(sa)) \\
G_{it}(za) = \alpha + \beta_1 (\log GDP_{it}(za)) + \beta_2 (Edu_{it}(za)) + \beta_3 (Invest_{it}(za)) + \beta_4 (Pop.growth_{it}(za)) \\
G_{it}(na) = \alpha + \beta_1 (\log GDP_{it}(na)) + \beta_2 (Edu_{it}(na)) + \beta_3 (Invest_{it}(na)) + \beta_4 (Pop.growth_{it}(na)) \\
G_{it}(oa) = \alpha + \beta_1 (\log GDP_{it}(oa)) + \beta_2 (Edu_{it}(oa)) + \beta_3 (Invest_{it}(oa)) + \beta_4 (Pop.growth_{it}(oa)) \\
G_{it}(pa) = \alpha + \beta_1 (\log GDP_{it}(pa)) + \beta_2 (Edu_{it}(pa)) + \beta_3 (Invest_{it}(pa)) + \beta_4 (Pop.growth_{it}(pa)) \\
G_{it}(ca) = \alpha + \beta_1 (\log GDP_{it}(ca)) + \beta_2 (Edu_{it}(ca)) + \beta_3 (Invest_{it}(ca)) + \beta_4 (Pop.growth_{it}(ca)) \\
G_{it}(wa) = \alpha + \beta_1 (\log GDP_{it}(wa)) + \beta_2 (Edu_{it}(wa)) + \beta_3 (Invest_{it}(wa)) + \beta_4 (Pop.growth_{it}(wa)) \\
G_{it}(ta) = \alpha + \beta_1 (\log GDP_{it}(ta)) + \beta_2 (Edu_{it}(ta)) + \beta_3 (Invest_{it}(ta)) + \beta_4 (Pop.growth_{it}(ta))
\] (1) 

Results and Discussion

The correlation coefficients between the cultural and economic variables are presented in Table 1. The results are contentious and do not support the previous studies. As it is surprising that Cultural Motivational index and trust is not significantly correlated with any other variables in the model which indicates that cultural values do not have any significant link with economic affairs in this region and these findings also support the views of cultural neutrality which recently has valuable discussion in economic literature.

The cultural diversity variables (ethnic fractionalization, ethnic polarization, religious fractionalization, and religious polarization) are significantly correlated economic variables. Ethnic diversity is positively correlated with economic growth which contrasts with previous studies. Similarly, religious fractionalization is also significantly and positively correlated with growth and education. These results also do not confirm the literature on diversity and economic affairs. The religious polarization and ethnic polarization both have insignificant correlation with all economic variables. All other economic variables are significantly correlated with each other with expected coefficients instead of population growth which has insignificant correlation with most of the variables.
### Table 1: Correlation between Cultural and Economic Variables

<table>
<thead>
<tr>
<th></th>
<th>CI</th>
<th>TRST</th>
<th>EF</th>
<th>EP</th>
<th>RF</th>
<th>RP</th>
<th>Sec.Edu</th>
<th>INV</th>
<th>Growth</th>
<th>Pop. grth</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRST</td>
<td>.243</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EF</td>
<td>-.252</td>
<td>.035</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EP</td>
<td>.015</td>
<td>-.578</td>
<td>.274</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RF</td>
<td>.333</td>
<td>-.273</td>
<td>-.311</td>
<td>.537</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RP</td>
<td>.269</td>
<td>-.212</td>
<td>-.346</td>
<td>.525</td>
<td>.984*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edu.</td>
<td>.535</td>
<td>-.133</td>
<td>-.049</td>
<td>.516</td>
<td>.807*</td>
<td>.732*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inv</td>
<td>-.380</td>
<td>.385</td>
<td>-.189</td>
<td>-.66</td>
<td>-.094</td>
<td>-.11</td>
<td>.266*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td>.292</td>
<td>-.505</td>
<td>.028**</td>
<td>.574</td>
<td>.751*</td>
<td>.683</td>
<td>.618*</td>
<td>.268*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Pop. grth</td>
<td>-.640</td>
<td>-.174</td>
<td>.736*</td>
<td>.310</td>
<td>-.452</td>
<td>-.42</td>
<td>-.357</td>
<td>-.193</td>
<td>-.354*</td>
<td>1</td>
</tr>
</tbody>
</table>

Significance level: * at 1%, ** at 5%.

Although the correlation results presented in previous table shows insignificant correlation with economic variables but other culture diversity variables have significant correlation, so we add these variables in our basic model to test the further validities of these variables. For this purpose, we applied multiple regression specifications and recognize the possible impact of our independent variables on dependent variables, ‘growth’ which is indicator of economic development and also applied variety of combinations of variables in our growth model and results are presented in Table 2.

The results presented in Model-1 below table 2 shows significant impact of economic variables to dependent variable economic growth with theoretically expected sign. Model-2 represents the insignificant impact of trust on growth where CMI now has robust significant negative impact on this region. These findings support the argument that cultural values hindering to economic performance in the region where traditional cultural values exit Inglehart (2000). In Model 4 we add both trust and CMI together and again trust is insignificant where CMI has the same results as in Model 3.

### Table 2: Trust, Cultural Motivational Index and Growth

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable: Growth Rate of Per-capita GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model-1</td>
</tr>
<tr>
<td>Initial level of GDP per capita growth (log)</td>
<td>-.304**</td>
</tr>
<tr>
<td>Education</td>
<td>.748*</td>
</tr>
<tr>
<td>Invest/GDP</td>
<td>.357**</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>-.001*</td>
</tr>
<tr>
<td>Trust</td>
<td>-.031</td>
</tr>
<tr>
<td>CMI</td>
<td>-.450**</td>
</tr>
<tr>
<td>constant</td>
<td>.944</td>
</tr>
<tr>
<td>(R^2)</td>
<td>.810</td>
</tr>
</tbody>
</table>

Significance level: * at 1%, ** at 5%, *** at 10%.

For comprehensive analysis, we include diversity variables in our basic model and results are reported in Table 3. The literature on diversity and economic growth has opposite views. It is also argued that the probable disagreement represented by a diverse society can impact negatively on investment rate and encourage rent-seeking activities that may lead to boost public consumption (Barro, 1991). Literature reveals that a high level of ethnic diversity causes decrease in the level of investment. It is further argued that diversity may have direct and significant negative impact on economic growth (Easterly and Levine 1997).

Including diversity variables in our model in order to test the validity of these variables in this region, we used economic variable which already estimated in previous model and cultural diversity variable includes ethnic fractionalization, ethnic polarization, religious fractionalization and religious polarization. The estimated results of ethnic fractionalization with economic variables are reported in Model 2 Table 4. The positive and statistically significant coefficients of ethnic fractionalization coefficient indicate that the ethnic groups which create competition among the groups are more likely to innovation and leads to positive impact on growth. These finding do not confirm earlier literature but there are few argument exist in the literature for favor of these findings.

Model 3 represents the estimated results for religious fractionalization showing significant positive effect on growth. These results are also surprising because literature shows that religious fractionalization hindering the growth through conflicts among different groups and government expenditure (McCleary, R. 2008). In model 4, the results of religious polarization also have positive and significant effect on growth. These results are more surprising as enormous studies are available in the literature which shows inverse effect of religious diversity of economic performance Levine (1992); Barro and Sala-i-Martin (2004) showed that the...
negative impact of diversity on growth is particularly strong in less democratic countries.

### Table 4: Cultural Diversity and Economic Growth

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model-1</th>
<th>Model-2</th>
<th>Model-3</th>
<th>Model-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial level of GDP per capita growth (log)</td>
<td>-.304**</td>
<td>-.389**</td>
<td>-.303</td>
<td>-.095**</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>.748*</td>
<td>.565***</td>
<td>.439***</td>
<td>.322**</td>
</tr>
<tr>
<td>Invest/GDP</td>
<td>.357**</td>
<td>.440**</td>
<td>.175***</td>
<td>.154**</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>-.001*</td>
<td>.091**</td>
<td>-.182**</td>
<td>.093**</td>
</tr>
<tr>
<td>Ethnic Fractionalization (EF)</td>
<td>.656**</td>
<td></td>
<td>.505*</td>
<td></td>
</tr>
<tr>
<td>Ethnic Polarization (EP)</td>
<td></td>
<td>.032*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious Fractionalization (RF)</td>
<td></td>
<td></td>
<td>.352**</td>
<td></td>
</tr>
<tr>
<td>Religious Polarization (RP)</td>
<td></td>
<td></td>
<td></td>
<td>.352**</td>
</tr>
<tr>
<td>constant</td>
<td>.944</td>
<td>-.2.934</td>
<td>-.743***</td>
<td>-.802</td>
</tr>
</tbody>
</table>

$R^2$  

810  

737  

832  

781  

Significance level: * at 1%, ** at 5%, *** at 10%.

### Conclusion

It has been argued that cultural values of this region are not conducive to economic performance and basic constrains to capital accumulation. The traditional hierarchical way of life, segregates the population into heterogeneous groups that also restricts inhabitants from escalating economic output by changing their economic activities. It may be true to some extent but our estimated results do not favor these arguments. The estimated results are evident that ethnic fractionalization and religious fraction both have significant positive relation with economic growth. These results would be amazing for researcher because scholars agree that cultural diversity is harmful to economic growth especially in those countries where the level of diversity is high. Apparently, this region conveys the message that incidence of social conflict and terrorist activities are because of the existence of ethnic and religious diversity. So the conventional argument is in favor of diversity and the literature has failed to prove the authenticity for this most diverse region.

### References


The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage: http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar