

NEXUS BETWEEN SOCIO-ECONOMIC IMPACT OF CPEC AND TOLERANCE: A CASE STUDY OF DISTRICT PESHAWAR

(M. Adil Saleem¹, Dr. Wasim Shahid Malik² and Asma Saeed³)

Abstract

Tolerance have important economic consequences. As more tolerant a place, the more it attracts talented people which in turn attract high-tech industries and this lead to a virtuous circle of economic growth. This study will investigate the nexus between the socioeconomic impact of China Pakistan Economic Corridor (CPEC) and tolerance that how can tolerance maximize the benefits of CPEC through attracting more and more investment, creating employment opportunities and hence improving the economic status (i.e. income) of the households in district Peshawar. Other factors affecting the economic status of the households such as household size, level of education, gender, age, native/immigrant and place of residence of the household were also estimated. The study used primary data collected through a well-structured questionnaire from 384 households in the selected district. Tolerance is measured as a composite index named as Household Tolerance Index (HTI) consisting of 20 items constructed through Principal Component Analysis (PCA). Ordinary Least Squares Method is applied for the estimation of results. The conclusion of the study show that HTI significantly and positively affect Household Income in district Peshawar. Findings also reveal a positive association between household size, level of education, gender and Household Income. While a negative association is found between the dependency ratio and Household Income. Thus the positive consequences of tolerance can be achieved through inculcating tolerant behaviors in the society. In this regard media, Religious and Educational institutions and parents while raising their off springs can engineer the tolerance in the society which will lead to higher living standards.

Keywords: China Pakistan Economic Corridor (CPEC), Tolerance, Household Tolerance Index (HTI), Principal Component Analysis (PCA), OLS.

¹ Lecturer, Department of Economics, Abdul Wali Khan University, Mardan. Email: adilsaleem@awkum.edu.pk

² Assistant Professor, School of Economics, Quaid I Azam University, Islamabad.

³ PhD Scholar, Department of Economics, Abdul Wali Khan UniversityS, Mardan.

Introduction

China-Pakistan Economic Corridor (CPEC) is a multibillion dollar project comprising of the construction of roads, railways and industrial zones. The developmental nodes of CPEC includes Kashi, Taxorgan, Khunjerab Islamabad, Lahore, Multan, Sukkur, Karachi, Peshawar, Quetta, Gilgit and Gwadar.

CPEC is of great importance to Pakistan and considered as a sign of peace and economic growth. This project will enhance greater regional connectivity, ensure economic development, which means that more and more people will come together for business and tourism purposes. The project will also provide employment opportunities to over a million of people and hence will uplift the socio-economic status of a common person. Though the project is of great importance to the country, however, its smooth implementation is a challenging one. In the past Pakistan is adversely affected by terrorism. And many developmental projects were failed to achieve its expected outcomes just because of the intolerant situations in the country which were created by the intolerant and violent elements of the society. Particularly, district Peshawar remained on the terrorist's hit lists after global war against terror which causes a lot of damages to the country. This situation of intolerance results in the lower rates of investment which in turn results in poor employment opportunities and poor socio-economic status of the people. In these situations the benefits of CPEC can become questionable and uncertain. So now it's time to change ourselves and put our nation on the path of economic growth and prosperity through welcoming and making CPEC and the like other developmental projects successful. This can be made possible if people become tolerant. Because if people of the society are intolerant toward the people of other religion, sect, race and languages, then the essence of economic prosperity through this multi-billion project will be shadowed. Hence tolerance can play a vital role in maximizing the benefits of CPEC through attracting more and more investment, creating employment opportunities and hence improving the economic status of the households. The purpose of present study is to discuss the question that how can tolerance maximize the economic consequences of CPEC at household level in district Peshawar.

Theoretical Background

Tolerance plays an important role in economic growth and wellbeing of a society. However before explaining how tolerance can maximize the benefits of CPEC and hence uplifting the

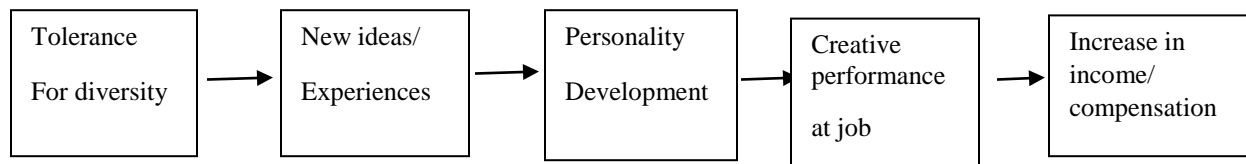
economic wellbeing of a society, it seems important to have a clear idea about tolerance. Tolerance can be defined as “openness, inclusiveness, and diversity to all ethnicities, races, and walks of life”,(R. Florida, 2003). This definition means that a tolerant person accepts the presence and participation of all kinds of people in society (Berggren & Elinder, 2012). It can also be defined as the acceptance of differences and opinions that may be different to yours own opinions (Kaukab & Saeed, 2014). It is “respect and appreciation of the rich diversity of our world’s cultures, our form of expression and ways of being human” (UNESCO, 1995). There are various determinants of tolerance in the literature such as household’s income level, age, education, occupational status, urban location, religiosity, democratic norms, threat perception, interpersonal trust and reading newspaper (Becchetti, Castriota, & Rossetti, 2007; Doorn, 2014; Hodson, Sekulic, & Massey, 1994; Kalin & Siddiqui, 2014; Kirchner, Freitag, & Rapp, 2011; Postic, 2011).

According to neoclassical growth theories technology and human capital or what is called talent, was considered the key drivers for economic growth and development. As Solow (1956) pointed out that technology played a significant role in economic development. He emphasized on the role of technology in the form of an exogenous factor. Similarly Ullman (1958) recognized the role of human capital in regional development. Later on Romer (1986) formulized endogenous growth model in which he treated technology as an endogenous factor and connect technology to human capital, knowledge and economic growth. Thus it can be concluded that the neoclassical growth models have focused on the role of technology and human capital in economic growth.

However, there are some other factors that can influence economic growth. Tolerance is one of those variables, which can be regarded as an important factor to boost economic growth. Therefore in addition to neoclassical growth theories, recent research has focused on 3Ts (namely Tolerance, talent and technology) theory of economic growth. The idea of 3Ts model was first presented by (Richard Florida, 2002). The 3Ts model identified the significant role of the interaction and integrity of tolerance, talent and technology in attracting innovative and diverse people and thus leading to an increase in economic growth (Paas & Halapuu, 2012). The more tolerant a place, the more it attracts talented people which in turn attract high-tech industries and this lead to a virtuous circle of economic growth(Richard Florida & Gates, 2003). Other studies have also emphasized the important role of tolerance in economic growth. For example, results of studies by (Boschma & Fritsch, 2007; Ottaviano & Peri, 2006)support a

correlation between income, growth and tolerance. Noland (2005) also find that there is a positive link between tolerant attitude and international economic activity outcomes. Alongside its positive economic consequences, it is concluded by (Inglehart, Foa, Peterson, & Welzel, 2008) that people living in tolerant societies are more happy. It is also pointed out by (Corneo & Jeanne, 2009) that minorities can enjoy protection and political rights only in such type of societies where there is the prevalence of tolerance. As it is cleared from the previous studies that tolerance have important economic consequences, so one can include it in the neoclassical growth model whose empirical estimation can show its impacts on economic growth. All of this existing literature has largely presented the economic consequences of tolerance at macro level. But now the question is this that how can tolerance increase the economic wellbeing of an individual at micro level which will result in maximizing the benefits of CPEC. And this is the main research question of the present study. To answer this question the present study takes help from psychology literature. In the psychology literature personality is mostly represented by using the five factor model of personality (Costa & McCrae, 1992; Deck, Lee, & Reyes, 2008). Openness to experience is one of the factors in the five factor model of personality (Buccioli, Cavasso, & Zarri, 2014) that describe an individual personality. Openness to experience indicates the degree to which persons are creative, imaginative, broadminded, curious and nontraditional (Buccioli et al., 2014; Sung & Choi, 2009). This also shows that persons who are highly open to experience tend to be more tolerant (McCrae, 1996). Thus persons with high openness to experience tend to be flexible and willing to accept different perspectives, even though they may be unfamiliar which allow greater access to new experiences and perspectives, and this in turn results in increasing creative performance (Sung & Choi, 2009), personality development and income. As shown by the study of Proto and Rustichini (2012) that openness to experience have positive impact on income. The same result is also confirmed by Boers (2015) that openness to experience have a positive impact on the income of a person. Personality development affects the individual performance on the work in such a way that will lead to higher compensation (Judge & Kammeyer-Mueller, 2007). All this discussion shows that tolerance have the potential of increasing the economic wellbeing of an individual through personality development on the work. A schematic picture of the theoretical framework of the study is given in the following figure;

Figure: Path Model of the Impact of Tolerance on Household Income



The above model assists in understanding the impact of tolerance on household income. The arrows indicate the hypothesized structure of the link among the key variables.

Materials and Methods

Sampling Design and Data Collection

To investigate the nexus between the socio-economic impact of CPEC and tolerance the present study is based on primary data and collected through questionnaire. The questionnaire consists of the information relevant to tolerance, household income, age, education, employment status and location of residence (urban area or rural area). The respondent of the present study is the main bread earner of the household. There are 430534 households in Peshawar. By using Survey Sample calculator by “The Survey System” and by setting confidence level to 95% and confidence interval to 5 a sample size of 384 was obtained out of which 100 sample points were assigned to Town 1 with a proportion of 26% to total population, 108 to Town 2 with proportion of 28% to total population, 92 to Town 3 with proportion of 24% to total population and 84 sample points were assigned to Town 4 with proportion of 22% to total population. One representative Union council was selected from each town and data was collected conveniently from the selected union councils on household level.

The dependent variable of the study include household income used as an indicator of the household economic status which is considered to be uplifted by CPEC (Richard Florida, 2007; Richard Florida, Mellander, & Qian, 2008; Government of New Zealand, 2007; Perry, 2013). While the independent variables of the study includes level of education of the main income provider of the household, household size, age and gender of the main income provider of the household, location of the residence of a family (i.e. urban area or rural area) and residential

status of the household whether the household is native or immigrant and the household tolerance index (HTI) (Berggren & Elinder, 2012; Richard Florida, 2007; Richard Florida et al., 2008; Shcherbak, 2012; Tuyen, 2015). The household's tolerance level was measured by attitude towards different kinds of neighbors including people of a different race, people having infectious diseases (AIDS, Hepatitis, TB etc.), immigrants/ foreigners, people of a different religion, people who speak a different language, teaching kid's tolerance, willingness to purchase household items from people of a different race, religion and from people of a different sect, willingness to take people of a different race, different religion and different religious sect as business partners, willingness to work under employer of a different race, different religion and of a different religious sect, provision of religious freedom to workers of different religions, discrimination in work place for people of different race/religion/sect, exercise of religious/ethnic preference among subordinates by a boss and approval of religion free zone at work on a Likert-scale through questionnaire survey (Berggren & Elinder, 2012; Hodson et al., 1994; Kalin & Siddiqui, 2014). The likert-scale has a range of 1 to 5, with 1 indicating complete disagreement and 5 indicating complete agreement. Thus, higher numbers indicate greater tolerance. Respondents were asked their level of agreement with questions concerning tolerance of group other than the one they belong to.

Construction of Household Tolerance Index (HTI)

The household tolerance index (HTI) was created by using the principal component analysis (PCA). PCA is a multivariate statistical technique that can be used to reduce the number of variables in a dataset by converting them into a smaller number of components, each component being a linear weighted combination of the initial variables (Bishoi, Prakash, & Jain, 2009; Vyas & Kumaranayake, 2006). The results obtained by running the PCA are reported in table 3.1 as follows:

Table 3.1: Eigen Values and Eigen Vectors of Correlation Matrix

	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13	PC14	PC15	PC16	PC17	PC18	PC19	PC20	
Eigen Values	12.148	1.425	0.921	0.680	0.651	0.528	0.415	0.388	0.381	0.349	0.320	0.293	0.273	0.255	0.205	0.196	0.186	0.154	0.138	0.091	
Variance %	60.740	7.130	4.600	3.400	3.250	2.640	2.080	1.940	1.900	1.750	1.600	1.470	1.370	1.280	1.030	0.980	0.930	0.770	0.690	0.450	
Cumulative %	60.740	67.870	72.470	75.870	79.120	81.760	83.840	85.780	87.680	89.43	91.030	92.500	93.870	95.150	96.180	97.160	98.090	98.860	99.550	100	
Eigen Vectors																					
Variables	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13	PC14	PC15	PC16	PC17	PC18	PC19	PC20	
TL1	0.243	-0.171	0.025	0.171	-0.005	0.181	0.105	-0.072	-0.143	-	0.491	-0.245	-0.138	0.201	-0.140	-0.011	-0.160	-0.176	0.134	0.593	-0.069
TL2	0.234	-0.140	0.087	0.179	0.158	0.117	0.386	-0.026	-0.143	0.216	-0.099	-0.199	-0.692	0.185	0.219	0.104	-0.016	-0.008	0.074	0.059	
TL3	0.201	0.010	-0.159	-0.053	0.744	-0.096	0.072	-0.015	-0.255	0.305	0.184	0.072	0.267	-0.234	0.057	-0.062	-0.089	0.052	0.030	-0.142	
TL4	0.186	-0.415	-0.279	-0.262	0.074	0.307	-0.053	0.417	0.165	-	0.189	0.371	0.003	0.039	0.219	0.157	-0.072	0.056	-0.031	-0.026	0.291
TL5	0.171	0.267	0.549	0.329	0.175	0.376	-0.291	0.138	0.038	0.051	0.206	0.182	0.054	0.246	-0.175	0.078	-0.027	0.145	0.050	0.094	
TL6	0.218	-0.208	0.357	-0.170	-0.040	-0.267	-0.133	-0.182	0.399	0.009	0.325	-0.380	0.024	-0.032	0.194	0.133	-0.052	0.139	0.050	-0.371	
TL7	0.247	-0.127	0.226	0.036	0.088	0.100	0.227	-0.117	0.083	-	0.209	-0.004	0.138	-0.001	-0.170	-0.191	-0.252	0.574	-0.408	-0.237	-0.189
TL8	0.189	0.419	-0.004	0.006	0.148	-0.370	0.345	0.509	0.279	-	0.201	-0.201	-0.179	0.114	0.162	-0.061	0.062	0.056	0.078	-0.048	0.043
TL9	0.236	0.028	0.164	-0.217	-0.142	0.236	0.409	-0.233	0.181	0.103	-0.150	0.267	0.321	-0.041	0.199	0.259	-0.370	-0.134	-0.180	0.185	
TL10	0.227	-0.145	0.276	-0.102	-0.267	-0.380	-0.004	0.208	-0.129	0.236	-0.005	0.382	-0.053	-0.249	0.126	-0.239	0.163	0.265	0.195	0.300	
TL11	0.249	0.015	0.052	-0.176	-0.117	-0.049	-0.191	0.342	-0.283	-	0.199	-0.022	0.197	-0.273	-0.105	-0.097	0.009	-0.461	-0.214	-0.225	-0.414
TL12	0.203	0.322	-0.012	-0.464	-0.108	-0.036	0.085	-0.288	-0.468	-	0.210	0.279	-0.085	-0.025	0.229	-0.152	0.178	0.215	0.138	0.065	0.103
TL13	0.258	-0.067	-0.129	0.062	0.011	0.064	-0.068	-0.222	0.064	-	0.069	-0.164	-0.129	-0.058	-0.015	-0.189	-0.345	-0.124	0.562	-0.544	0.108
TL14	0.218	0.354	-0.149	-0.249	0.017	0.054	-0.186	-0.179	0.351	-	0.209	-0.023	-0.044	-0.212	0.017	-0.130	-0.458	-0.165	-0.303	0.309	0.127
TL15	0.248	-0.073	-0.141	-0.066	0.114	0.034	-0.317	0.003	0.159	-	0.009	-0.244	-0.039	-0.158	-0.416	-0.273	0.592	0.165	-0.001	0.056	0.232
TL16	0.240	0.193	-0.125	-0.022	-0.031	0.121	-0.370	-0.008	-0.082	-	0.029	-0.377	0.035	0.113	0.171	0.635	0.003	0.309	0.011	-0.065	-0.200
TL17	0.212	-0.020	-0.300	0.418	0.029	-0.392	-0.055	-0.307	0.145	-	0.264	0.228	0.440	-0.089	0.232	0.075	0.129	-0.082	-0.079	0.026	0.049
TL18	0.192	0.302	-0.313	0.310	-0.395	0.253	0.189	0.133	0.026	0.163	0.395	-0.093	0.018	-0.391	0.068	0.039	0.082	0.108	0.009	-0.183	
TL19	0.229	-0.273	-0.188	0.006	-0.206	-0.003	0.057	0.062	-0.003	0.431	-0.175	0.068	0.212	0.433	-0.431	0.088	0.088	0.046	0.153	-0.328	
TL20	0.242	-0.083	0.069	0.287	-0.152	-0.210	-0.167	0.010	-0.303	0.118	0.038	-0.463	0.267	0.035	-0.004	-0.044	-0.108	-0.430	-0.170	0.360	

Source: Author's own calculation

The table 3.1 shows Eigen values and Eigen vectors obtained from the PCA. Eigen values shows the variance of each principal component while the Eigen vectors are the weights assigned to the corresponding principal components by the principal component analysis (PCA). In the principal component analysis those components are extracted which have Eigen values greater than one. This method is considered a standard method for the extraction of the principal components. So the study also extract those components which have Eigen values greater than 1. The table 3.1 reports that the first two components have Eigen values greater than one so these two components are extracted for the purpose of the analysis explaining 68% of the variance cumulatively in the data. These two principal components are computed by using the following equation:

$$P_i = \sum_{j=1}^n w_{ji} TL_j \text{ ----- (3.1)}$$

Where w_{ji} are the weights assigned for the i th principal components and j th TL (i.e. Tolerance) variables. The details of the j th tolerance variables are given in table 3.2 as follows:

Table 3.2: Tolerance Variables Used In the Construction of Principal Components

Variables	Definition
TL1	We encourage kids to learn tolerance at home
TL2	I do not feel comfortable in living with people of a different race in my neighborhood
TL3	There is no problem in living with people who speak a different language in our neighborhood
TL4	I am relaxed in living with people having diseases that can be communicated easily to me.
TL5	There is no problem in living with people of a different religion in the neighborhood
TL6	It is uncomfortable in living with people of a different religious sects in the neighborhood
TL7	I am mostly willing to purchase household item from people of different race
TL8	I am willing to purchase household item from people of other religion
TL9	I am not willing to purchase household item from people of different sects (like Sunni, Shia, Bareli, Deobandi for Muslims), (Catholics Protestants for Christians),

	(Vaishnavism (Vishnu), Shaivism (Shiva), Shaktism (Devi) and Smartism for Hindus)
TL10	I am not much willing to take people of different race as my business partners?
TL11	I am willing to take people of different religion as my business partners?
TL12	I am willing to take people of different religious sects as my business partners.
TL13	I am willing to work under employer of different race.
TL14	It's difficult for me to work under employer of different religion.
TL15	I feel easy in working under employer of different sects/religious school of thoughts
TL16	Mutual coexistence is essential for the prosperity of the society.
TL17	Different religious workers must be given freedom at work to perform their religious duty.
TL18	There should not be any discrimination in work place for people of different race/religion/sect
TL19	A boss can exercise his religious/ethnic preference among subordinates.
TL20	I am in favor of religion free zone at work

When the principal components are obtained then household tolerance index (HTI) is constructed by using the following expression:

$$HTI = \frac{\sum_{i=1}^n P_i E_i}{\sum_{i=1}^n E_i} \text{ ----- (3.2)}$$

Where E_i 's (i.e. E_1 and E_2) are the Eigen values of the corresponding principal components P_i 's (i.e. P_1 and P_2).

Econometric Modelling

After the construction of household tolerance index (HTI) the ordinary least square method has also been used to test a base line endogenous growth model by incorporating the tolerance variables with economic variables. This methodology has also been employed by Khan, Zhang, Hashmi, and Bashir (2010) and Granato, Inglehart, and Leblang (1996). The selected economic variables are level of education of the main income provider of the household, household size,

age and gender of the main income provider of the household, location of residence of a family (i.e. urban area or rural area) and residential status of the household the household is native or immigrant. The model applied for the estimation of results is multiple regression analysis with robust standard errors, it is used because of the reason that there is problem of heteroscedasticity across the cross sections in the data. Thus the household income regression model used in this study takes the following form:

$$\log Y_i = b_0 + b_1 Ecov_i + b_2 HTI_i + \varepsilon_i \dots\dots\dots (3.3)$$

Where Y_i is the total household Income level measured in rupees per month.

$Ecov_i$ stands for economic variables and includes the following variables:

- (i) Household's size measured as number of persons in a household.
- (ii) Level of education of the main income provider measured as the number of years of education.
- (iii) Age of the main income provider in a household measured as the number of years.
- (iv) Gender of the main income provider of the household that whether or not the main income provider is male measured as dummy variable taking value 1 = Male and 0 = female.
- (v) Location (i.e. urban area or rural area) of residence of the household measured as dummy variable taking value 1 = Urban area and 0 = Rural area.
- (vi) Residential status of the household whether the household is native or immigrant measure as dummy variable taking vale 1 = Native and 0 = immigrant

HTI is a composite index of household tolerance level constructed from 20 components through PCA which was measured on a Likert-scale ranging from 1 to 5 and its expected sign is positive.

And ε_i is the error term.

As cross sectional data is used for the estimation of the model so it becomes crucial to carry out different diagnostic tests in order to address certain issues concerning the cross sectional data. These tests includes heteroscedasticity, multicollinearity, model specification test and normality

of the residual of the model. It is also suspected that the main model of the study suffers from the problem of endogeneity. So the test for the detection of endogeneity problem is also essential. The details of these tests are reported in the result and discussion section.

Results and Discussion

Test of Heteroscedasticity

To investigate the existence of heteroscedasticity problem in the data used in the study, Breusch-Pagan test and IM test were conducted. The results of these test are presented in table 4.1 as follows:

Table 4.1: Heteroscedasticity Test Results

Ho: Constant variance	
Test of Heteroscedasticity	Probability
Breusch-Pagan	0.0614
IM Test	0.0150

Source: Estimations

As it is indicated from the above table 4.1 that the probability values for both of the tests are significant at 10% and 5% level of significance. So the null hypothesis (i.e. Ho: Constant variance) is rejected and it is concluded that the problem of heteroscedasticity exists in the data. The problem of heteroscedasticity is addressed by incorporating the robust standard errors in the regression model.

4.3 Test of Multicollinearity

To check the presence of multicollinearity, correlation matrix analysis and the Variance Inflation Factor (VIF) analysis were conducted. The results for the correlation matrix analysis among the repressors are given in Table 4.2 as follow:

Table 4.2: The Correlation Matrix Analysis Results

	<i>U/R</i>	<i>HHS</i>	<i>N/M</i>	<i>Dratio</i>	<i>HHIncome</i>	<i>Education</i>	<i>Age</i>	<i>Gender</i>	<i>HTI</i>
Urban/Rur	1								
HHS	0.055446	1							
N/M	-0.06893	0.200069	1						
Dratio	0.051825	0.070064	0.025478	1					
HHIncome	0.033844	0.25329	0.012532	-0.02487	1				
Education	0.027618	-0.10425	-0.05617	-0.0212	0.168455	1			
Age	0.057581	0.054227	-0.03861	0.027316	0.063674	-0.0451	1		
Gender	0.014214	-0.02239	-0.02304	0.002316	0.077558	0.032926	-0.01808	1	
HTI	0.140198	0.019358	-0.0721	0.076989	0.241594	0.096479	0.063507	-0.01289	1

Source: Survey Data

The correlation matrix analysis results shows that the repressors are not strongly correlated. Similarly the results of the Variance Inflation Factor (VIF) analysis are reported in Table 4.3 as follows:

Table 4.3: The Variance Inflation Factor (VIF) Analysis Results

Variables	VIF	1/VIF
HHS	1.06	0.939818
Native/ Immigrant	1.06	0.944632
HTI	1.04	0.958420
Urban/ Rural	1.03	0.966399
Education	1.03	0.971297
Age	1.02	0.982192
Dratio	1.01	0.986186
Gender	1.00	0.997306

Source: Estimations

The results of Variance Inflation Factor (VIF) analysis also shows that there is no problem of Multicollinearity among repressors.

4.4 Test of Endogeneity

As it is doubted that household tolerance index (HTI) and education will cause reverse causality i.e. it will also in turn effect household income in the reverse direction. So it is also essential to test the existence of endogeneity problem in the data. Different determinants of tolerance level

such as reading newspaper, television watching, trust, threat perception, feelings of superiority and inferiority and level of religiosity are used as instrumental variables for HTI and reading newspaper is used as an instrumental variable for education in the two stage least square (2SLS) method. The test used for the detection of the problem is reported in Table 4.4 as follows:

Table 4.4: Endogeneity Test Result

Ho: Variables are exogenous		
Tests of Endogeneity	HTI	Education
Durbin–Wu–Hausman test	P=0.8699	P=0.2805

Source: Estimations

The above table 4.4 shows that the probability values of Durbin–Wu–Hausman test is insignificant at 5% level of significance. So it is concluded that the null hypothesis (i.e. Ho: Variables are exogenous) cannot be rejected. This means that both of the variables are exogenous and the data does not suffer from the problem of endogeneity.

4.5 Model Specification Test

The model specification test was conducted through Ramsey Reset Test. The results of the test is reported in Table 4.5 as follows:

Table 4.5: Ramsey Reset Test

Test	Probability > F
Ramsey Reset Test	0.1908

Source: Estimations

The results of Ramsey reset test shows that model is correctly specified and there are no omitted variables. Table 4.5 shows the probability of the test with null hypothesis that “Model has no omitted variables”.

4.6 Normality Test of Residuals

To check the normality of the residual of the model Shapiro-Wilk W test was conducted. The results for Shapiro-Wilk W test are presented in Table 4.6 as follows:

Table 4.6: Shapiro-Wilk W Test Results

Test	Probability > z
Shapiro-Wilk W test	0.69262

Source: Estimations

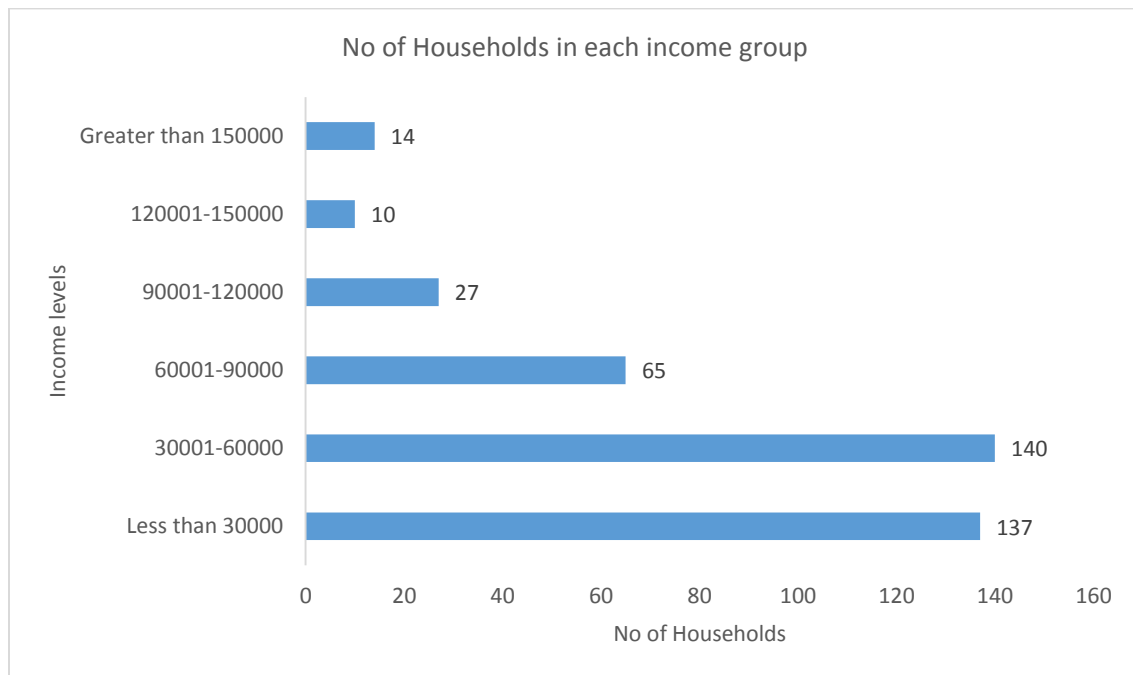
It can be inferred from the test that null hypothesis (i.e. H_0 : the residuals of the model are normally distributed) cannot be reject. This showing that the normality assumption of the residuals of the model is satisfied.

Most of the assumption regarding OLS Model is satisfied except the problem of heteroscedasticity. Therefore OLS model with corrected robust standard is used in the study.

4.7 Distribution of Households by Income Groups in District Peshawar

The distribution of households by different income groups is discussed in the following figure:

Figure 4.1: Distribution of Households by Different Income Groups in District Peshawar



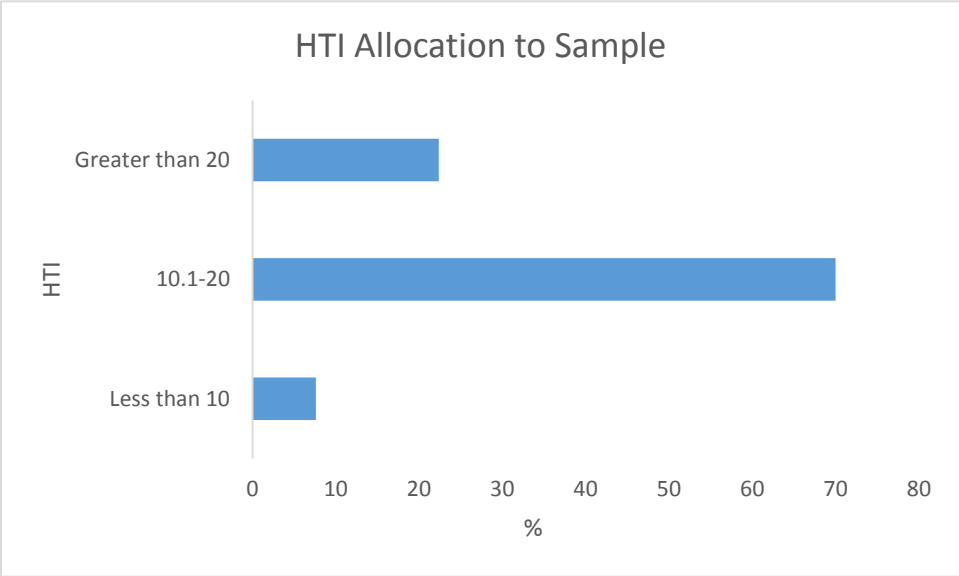
Source: Author's own calculation

The above figure 4.1 indicates number of households falling in different income groups ranging from less than 30000 to greater than 150000 in district Peshawar. It is revealed from the figure 4.1 that 137 households lying in less than 30000 income group. While 140 households falling in 30001 to 60000 category of the income. This shows that a large number of households earning an income level ranging from 30001 to 60000. The income groups that lies above this income group (i.e. 30001 to 60000) have a lower number of the households. As 65 number of households falling in an income groupe of 60001 to 90000. Similarly 27, 10 and 14 number of households falling in income groups ranging from 90001-120000, 120001-150000 and greater than 150000 respectively. So it is inferred from the above figure that majority of the households are eaning an income level of less than 30000 and an income level between 30001 to 60000. And only a small number of the households are earning an income level of 60000 and above.

4.8 Allocation of Household Tolerance Index (HTI) among Sample Size in District Peshawar

The figure 4.2 shows the allocation of household tolerance index (HTI) to sample size as follows:

Figure 4.2: Allocation of Household Tolerance Index (HTI) to Sample Size in District Peshawar



Source: Author’s own calculation

Household tolerance index (HTI) was constructed through using principal component anslysis (PCA). The higher value of HTI represents a higer level of tolerance. The figure indicates that 8% of the households have a HTI value of less than 10 showing that a only a small % of the households have lower

level of tolerance. While 70% of the households have the HTI value falling between 10.1 to 20. This showing that majority of the households in district Peshawar have a moderate level of tolerance. Only 20% of the household in district Peshawar have the HTI value more than 20 which are high tolerant households.

4.9 Multiple Regression Analysis of the Determinants of Household Income

A Log-lin regression analysis is done to gauge the determinants of household economic well-being. The estimated results for the households are given in table 4.7 as follows:

4.9.1 Impact of the Economic Variables and Household Tolerance Index on Households Income

The coefficient of household tolerance index (HTI) is positive and significant showing that with

Table 4.7 Regression Results of the Determinants of Household Income in District Peshawar

Dependent Variable Yi (Rs.)				
	Coef.	Std.Err	t-Statistics	P-values
HTI	0.0320442	0.0088934	3.60	0.000
Education	0.0288829	0.0079013	3.66	0.000
Household size	0.0695654	0.0134106	5.19	0.000
Dependency ratio	-0.0000175	2.11e-06		0.000
Gender	0.3375822	0.1596937	2.11	0.035
Age	0.0038649	0.0028312	1.37	0.173
Urban/rural	0.045249	0.0657783	0.69	0.492
Native/immigrant	-0.0291036	0.0781935	-0.37	0.710
Constant	8.832031	0.2869648	30.78	0.000
R ²	0.1573			
F-statistics	17.99			
Prob. F-statistics	0.0000			

the increase in household tolerance level, household income (Yi) increases. A one unit increase in HTI, increases household income by 3.204 percent. The possible reason for this positive and significant relationship is that as tolerance indicates openness (R. Florida, 2003). While openness

to experience is one of the factors in the five factor model of personality (Buccioli et al., 2014) that describe an individual's personality. Openness to experience indicates the degree to which persons are creative, imaginative, broadminded, curious and nontraditional (Buccioli et al., 2014; McCrae, 1996; Sung & Choi, 2009). This also shows that persons who are highly open to experience tend to be more tolerant (McCrae, 1996). Thus persons with high openness to experience tend to be flexible and willing to accept different perspectives, even though they may be unfamiliar which allow greater access to new experiences and perspectives, and this in turn results in increasing creative performance (Sung & Choi, 2009), personality development and income. The education coefficient is positive and significant. This depicts that if the main income provider of the household is educated then the household have a high level of income. A one unit increase in education of the main income provider of the household results a 2.888 percent increase in total household income. The reason for this is that the main income provider with higher level of education are more likely to have a good job and can earn a high level of income as compared to those who are less educated. Thus there is a positive association between education and household's total income. This finding is in accordance to (Aikaeli, 2010) and (Fadipe, Adenuga, & Lawal, 2014). The coefficient of household size is positive and significant. An increase of one person in the household size increase the household income by 6.957 percent. This is due to the reason that households with large household size are more likely to have more earning persons and more earning activities which results in a higher level of household income. This result is in line with the result of (Parvin & Akteruzzaman, 2013) and (Adunga, 2013) but in contrast to (Fadipe et al., 2014) and (Tuyen, 2015). The dependency ratio coefficient is negative and significant. This means that an increases of one percentage point in dependency ratio reduces household income by 0.00175 percent. This finding is in accordance to (Jansen, Pender, Damon, Wielemaker, & Schipper, 2006) and (Tuyen, 2015). So there is a negative link between dependency ratio and total household income. The coefficient of gender is positive and significant. This indicates a positive relationship between the male gender of the main income provider of the household and total household income. This shows that if the main income provider in a household is male then it results in an increase of total household income. A male gender of the main income provider of the household results in an increase of 33.758 percent in total household income. This result is in accordance to (Lhing, Nanseki, & Takeuchi, 2013) and (Aikaeli, 2010). The age coefficient is positive and insignificant as in contrast to the expectation.

A one year increase in the age of the main income provider of the household increase total household income by 0.386 percent. The coefficient of location of the household is positive and insignificant. The shows that urban area as the place of residence of the households results in an increase of total household income. Urban area increase the total household income by 4.525 percent. The coefficient of native/immigrant is negative and insignificant. This shows that natives are earning less than immigrants by -2.910 percent. The value of R^2 is low due to using cross section data and which is always low as compared to time series regression models. Though the value of R^2 is low but the probability value of F-statistics favors the overall significance of the model.

Conclusion

It is concluded from the findings of the study that tolerance plays a vital role in maximizing the benefits of CPEC through improving the economic status of the households. HTI is positively and significantly related to household income (HHI). Other variables such as gender, household size, and education shows a positive relationship while dependency ratio is negatively associated with HHI.

As the Tolerant Behaviors led to the development of society as a whole. So there is a need to inculcate tolerant behaviors in the society to reduce violence and terrorism which is already plaguing the country and specially the region where the study is conducted. Media, Religious and Educational institutions and parents while raising their off springs can engineer the tolerance in the society which will lead to higher living standards

References

- Adunga, E. (2013). Factors influencing income level of (agro-) pastoral communities. *International Journal of Social Economics*, 40(3), 207-219.
- Aikaeli, J. (2010). Determinants of rural income in Tanzania: An empirical approach.
- Becchetti, L., Castriota, S., & Rossetti, F. (2007). The positive relationship between real household income and self-declared tolerance.
- Berggren, N., & Elinder, M. (2012). Is tolerance good or bad for growth? *Public Choice*, 150(1-2), 283-308.
- Bishoi, B., Prakash, A., & Jain, V. (2009). A comparative study of air quality index based on factor analysis and US-EPA methods for an urban environment. *Aerosol and Air Quality Research*, 9(1), 1-17.
- Boers, J. J. (2015). *Personality and income – An empirical study*. Economics of Management and Organization Master Thesis, Erasmus University Rotterdam, Erasmus School of Economics.
- Boschma, R. A., & Fritsch, M. (2007). *Creative class and regional growth: empirical evidence from eight European countries*. Jena Economic Research Paper No. 66. Jena: Friedrich Schiller University and Max Planck Institute.
- Buccioli, A., Cavasso, B., & Zarri, L. (2014). *Social Status and Personality Work*.
- Corneo, G., & Jeanne, O. (2009). A theory of tolerance. *Journal of Public Economics*, 93(5-6), 691-702.
- Costa, P. T., & McCrae, R. R. (1992). Four ways five factors are basic. *Personality and individual differences*, 13(6), 653-665.
- Deck, C., Lee, J., & Reyes, J. (2008). Risk attitudes in large stake gambles: evidence from a game show. *Applied Economics*, 40(1), 41-52.
- Doorn, M. (2014). The nature of tolerance and the social circumstances in which it emerges. *Current Sociology*, 0011392114537281.
- Fadipe, A., Adenuga, A., & Lawal, A. (2014). ANALYSIS OF INCOME DETERMINANTS AMONG RURAL HOUSEHOLDS IN KWARA STATE, NIGERIA. *Trakia Journal of Sciences*, 12(4), 401.
- Florida, R. (2002). The Rise of the Creative Class—and how it's transforming work, leisure, community and every day life. *New York*.
- Florida, R. (2003). Cities and the creative class. *City & Community*, 2(1), 319.
- Florida, R. (2007). *Inside the Black Box of Regional Development*. Citeseer.
- Florida, R., & Gates, G. (2003). Technology and tolerance: the importance of diversity to high-technology growth. *Research in Urban Policy*, 9(1), 199-219.
- Florida, R., Mellander, C., & Qian, H. (2008). Creative China? The university, tolerance and talent in Chinese regional development: Royal Institute of Technology, CESIS-Centre of Excellence for Science and Innovation Studies.
- Government of New Zealand. (2007). *Quality of life in twelve of new zealand's cities*. New Zealand.
- Granato, J., Inglehart, R., & Leblang, D. (1996). The effect of cultural values on economic development: theory, hypotheses, and some empirical tests. *American journal of political science*, 607-631.
- Hodson, Sekulic, D., & Massey, G. (1994). National Tolerance in the Former Yugoslavia. *American Journal of Sociology*, Vol. 99,(No. 6), 1534-1558.
- Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom, and rising happiness: a global perspective (1981-2007). *Perspectives on Psychological Science*, 3(4), 264-285.
- Jansen, H. G., Pender, J., Damon, A., Wielemaker, W., & Schipper, R. (2006). Policies for sustainable development in the hillside areas of Honduras: A quantitative livelihoods approach. *Agricultural Economics*, 34(2), 141-153.

- Judge, T. A., & Kammeyer-Mueller, J. D. (2007). Personality and career success. *Handbook of career studies*, 59-78.
- Kalin, M., & Siddiqui, N. (2014). Religious Authority and the Promotion of Sectarian Tolerance in Pakistan. *Special Report, United States Institute of Peace*.
- Kaukab, S. R., & Saeed, A. (2014). To Analyse the Factors Enhancing Intolerance among University Students. *Journal of Research in Humanities and Social Science*, 2(10), 01-10.
- Khan, M. M., Zhang, J., Hashmi, M. S., & Bashir, M. (2010). Cultural values and economic growth in Asia: an empirical analysis. *International Journal of Business and Social Science*, 1(2), 15-27.
- Kirchner, A., Freitag, M., & Rapp, C. (2011). Crafting tolerance: the role of political institutions in a comparative perspective. *European Political Science Review*, 3(02), 201-227.
- Lhing, N. N., Nanseki, T., & Takeuchi, S. (2013). An Analysis of Factors Influencing Household Income: A Case Study of PACT Microfinance in Kyaukpadaung Township of Myanmar. *American Journal of Human Ecology*, 2(2), 94-102.
- McCrae, R. R. (1996). Social consequences of experiential openness. *Psychological bulletin*, 120(3), 323.
- Noland, M. (2005). Popular Attitudes, Globalization and Risk*. *International Finance*, 8(2), 199-229.
- Ottaviano, G. I. P., & Peri, G. (2006). The economic value of cultural diversity: evidence from U.S. cities. *Journal of Economic Geography*, 6, (1), 9-44.
- Paas, T., & Halapuu, V. (2012). Attitudes towards immigrants and the integration of ethnically diverse societies. *Eastern Journal of European Studies*, 3(2), 161-176.
- Parvin, M., & Akteruzzaman, M. (2013). Factors Affecting Farm and Non-Farm Income of Haor Inhabitants of Bangladesh. *Progressive Agriculture*, 23(1-2), 143-150.
- Perry, B. (2013). *Using Household Income to Measure Living Standards*.
- Postic, R. (2011). Trusting and Tolerating: Finding Ways to Tolerate Each Other. *International Journal of Humanities and Social Science*, Vol. 1(No. 19;), 79-93.
- Proto, E., & Rustichini, A. (2012). Life satisfaction, household income and personality traits.
- Romer, P. M. (1986). Increasing returns and long-run growth. *The journal of political economy*, 1002-1037.
- Shcherbak, A. (2012). Does Culture Matter? The Impact of Tolerance on Economic Modernization in a Comparative Perspective. *The Impact of Tolerance on Economic Modernization in a Comparative Perspective (February 22, 2012). Higher School of Economics Research Paper No. WP BRP, 5*.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *The quarterly journal of economics*, 65-94.
- Sung, S. Y., & Choi, J. N. (2009). Do Big Five personality factors affect individual creativity? The moderating role of extrinsic motivation. *SOCIAL BEHAVIOR AND PERSONALITY*, 37(7), 941-956.
- Tuyen, T. Q. (2015). Socio-Economic Determinants of Household Income among Ethnic Minorities in the North-West Mountains, Vietnam. *Croatian Economic Survey*, 17(1), 139-159.
- Ullman, E. L. (1958). Regional development and the geography of concentration. *Papers in Regional Science*, 4(1), 179-198.
- UNESCO. (1995, 25 October to 16 November). *Declaration of Principles on Tolerance*. Paper presented at the UNESCO General Conference,, Paris.
- Vyas, S., & Kumaranayake, L. (2006). Constructing socio-economic status indices: how to use principal components analysis. *Health policy and planning*, 21(6), 459-468.