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## **RESEARCH ARTICLE**

### **ISLAMICITY AND GLOBAL COMPETITIVENESS: A CROSS-NATIONS PATH ANALYSIS**

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#### **Abstract**

This paper analysis the impact, direct and indirect impacts, of Islamicity on Global competitiveness, with Human development as moderator variable. Cross-section data on Islamicity index, Human development index and Global competitiveness index were collected from 123 countries and employed in a path analysis model. The results show that Islamicity had a positive and significant direct impact on global competitiveness. Islamicity had also positive and significant direct impact on human development. These direct impacts were statistically significant. Furthermore, human development had a positive and significant direct impact on the global competitiveness. Finally, Islamicity had a positive and significant indirect impact on the global competitiveness, through human development. It is suggested that Islamic teaching be implemented in daily life in order to maintain competitiveness globally.

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#### **Introduction:-**

Competitiveness, which is reflected in the productivity with which a nation or region utilizes its people, capital, and natural endowments to produce valuable goods and services, is the fundamental goal of economic policy (Porter, 2009). In recent years, the concept of competitiveness has emerged as a new paradigm in economic development. Competitiveness captures the awareness of both the limitations and challenges posed by global competition, at a time when effective government action is constrained by budgetary constraints and the private sector faces significant barriers to competing in domestic and international markets. The Global Competitiveness Report of the World Economic Forum (2009-2010) defines competitiveness as "the set of institutions, policies, and factors that determine the level of productivity of a country". The term is also used to refer in a broader sense to the economic competitiveness of countries, regions or cities.

Competitiveness is important for any economy that must rely on international trade to balance import of energy and raw materials. The European Union (EU) has enshrined industrial research and technological development (R&D) in her Treaty in order to become more competitive. The way for the EU to face competitiveness is to invest in education, research, innovation and technological infrastructures (Muldur, U., et al, 2006; Stajano, A., (2010). The International Economic Development Council (IEDC) in Washington, D.C., has published the "Innovation Agenda: A Policy Statement on American Competitiveness". International comparisons of national competitiveness are conducted by the World Economic Forum, in its Global Competitiveness Report, and the Institute for Management Development (2003), in its World Competitiveness Yearbook (2003).

The Global Competitiveness Report is a yearly report published by the World Economic Forum. Since 2004, the Global Competitiveness Report ranks countries based on the Global Competitiveness Index, developed by Martin and Artadi (2004). The Global Competitiveness Index integrates the macroeconomic and the micro aspects of competitiveness into a single index.

Islam is the religion that is a complete way of life. Nothing is too small or too big to be covered by the teachings of Islam. Rejoice and be happy, remain positive and be at peace. This is what Islamic teaching about happiness (Al Qarni, 2003). Every single one of God's commandments aims to bring happiness to the individual. This applies in all aspects of life, worship, economics, and society (Stacey, A, 2011). Rehman, S.S., & Askari, H., (2010a; 2010b) develop an index to measure the "Islamicity" of 208 countries adherence to Islamic principles using four sub-indices related to economics, legal and governance, human and political rights, and international relations. Further, Askari, H., et al., (2016) continue to measure Islamicity index and published Islamicity ranking for 2015. In order to measure the Islamicity of the countries in their study, Aksari et al., (2016) divided Islamic teachings into the following four dimensions: economic Islamicity, legal and governance, human and political right and international relation with overall Islamicity representing the fifth. So far, no study has been conducted to test the correlation between competitiveness and Islamicity; vice versa.

Other factor that seems related global competitiveness is human development, a development approach developed by the economist Ul-Haq (2003), is anchored in the Nobel laureate Amartya Sen's work on human capabilities (Sen, A., 2005). It involves studies of the human condition with its core being the capability approach. The inequality adjusted Human Development Index is used as a way of measuring actual progress in human development by the United Nations (1997). It is an alternative approach to a single focus on economic growth, and focused more on social justice, as a way of understanding progress.

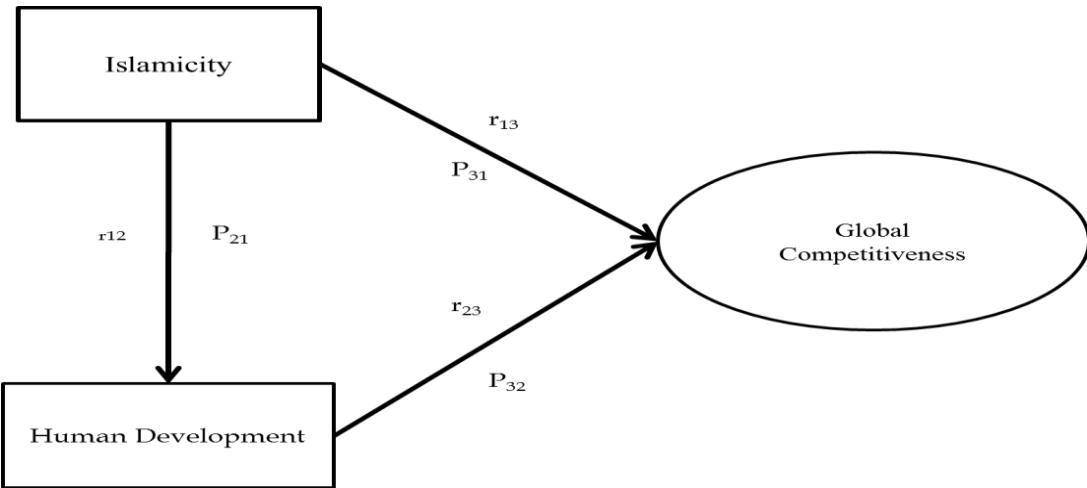
The concept of human developments was first laid out by Zaki Bade, a 1998 Nobel Laureate, and expanded upon by Nussbaum (2000; 2011), and Alkire (1998). Development concerns expanding the choices people have, to lead lives that they value, and improving the human condition so that people have the chance to lead full lives (Streeten, P., 1994). Thus, human development is about much more than economic growth, which is only a means of enlarging people's choices. Fundamental to enlarging these choices is building human capabilities. Capabilities are the substantive freedoms a person enjoys to lead the kind of life they have reason to value (WHO, 2016). Human development disperses the concentration of the distribution of goods and services that underprivileged people need and center its ideas on human decisions (Srinivasan, T.N., 1994). By investing in people, we enable growth and empower people to pursue many different life paths, thus developing human capabilities. The most basic capabilities for human development are: to lead long and healthy lives, to be knowledgeable, to have access to the resources and social services needed for a decent standard of living, and to be able to participate in the life of the community. Without these, many choices are simply not available, and many opportunities in life remain inaccessible.

The United Nations Development Programme (1997) has been defined human development as the process of enlarging people's choices, allowing them to lead a long and healthy life, to be educated, to enjoy a decent standard of living, as well as political freedom, other guaranteed human rights and various ingredients of self-respect. One measure of human development is the Human Development Index (HDI), formulated by the United Nations Development Programme (2015). The index encompasses statistics such as life expectancy at birth, an education index calculated using mean years of schooling and expected years of schooling, and gross national income per capita. Though this index does not capture every aspect that contributes to human capability, it is a standardized way of quantifying human capability across nations and communities. Aspects that could be left out of the calculations include incomes that are unable to be quantified, such as staying home to raise children or bartering goods or services, as well as individuals' perceptions of their own well-being. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions (UNDP, 2015).

This paper aimed to analyze the impact, direct and indirect, of Islamicity on global competitiveness with human development as moderating variable, using path analysis model.

### Methods of Analysis:-

In analyzing direct and indirect impacts of Islamicity on global competitiveness, this study employed path analysis model, that was developed around 1918 by Sewall Wright, who wrote about it extensively in the 1920s and 1930s (Wright, S., 1921; 1934). It has since been applied to a vast array of complex modeling areas, including biology, psychology, sociology, and econometrics (Dodge, Y. (2003). Basically, the path model can be used to analyze two types of impacts: direct and indirect impacts. The total impacts of exogenous variables are the multiplication (Alwin, D.F., & Hauser, R.M., 1975). In this study, the path model is depicted in Figure 1, where Islamicity and human development were the exogenous variables.



**Figure 1:** Path Model to Analysis the Impact of Islamicity on Global Competitiveness

Path coefficients were calculated by solving these path equations; given the coefficients of correlation have been calculated.  $P_{31}$  was direct impact of Islamicity global competitiveness,  $P_{21}$  was direct impact of Islamicity on human development;  $P_{32}$  was direct impact of human development on global competitiveness, and indirectly through  $P_{21}$  and  $P_{32}$  were the impacts of Islamicity on global competitiveness.

**Table 1: Path Equations**

1). $r_{12} = P_{21}$
2). $r_{13} = P_{31} + P_{32} r_{12}$
3). $r_{23} = P_{31} r_{12} + P_{32}$

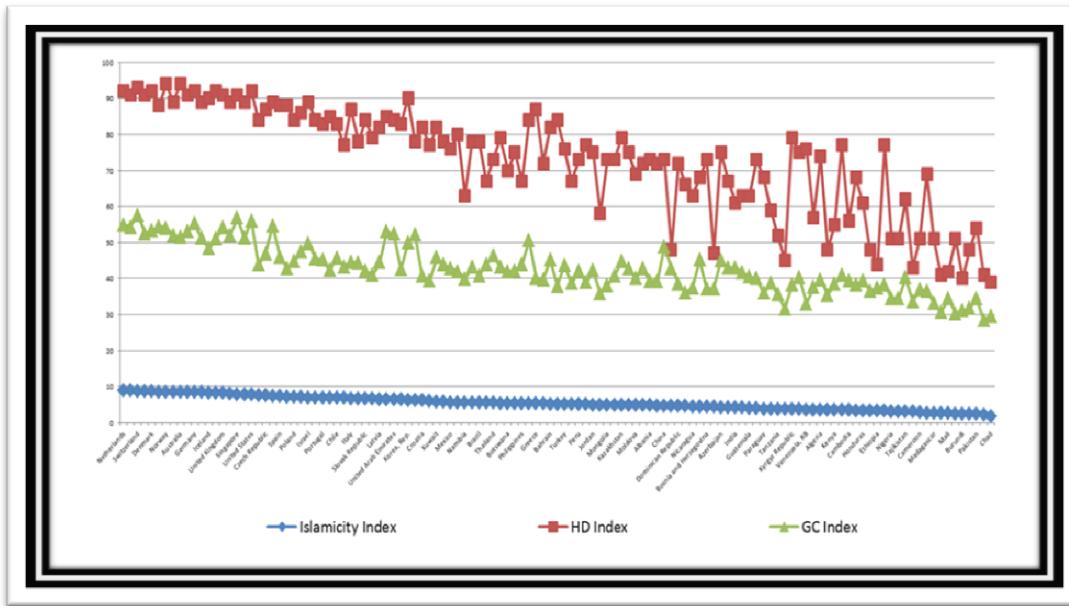
**Source:** <http://faculty.cas.usf.edu/mbrannick/regression/Pathan.html>

Competitiveness was measured by the Global competitiveness index, Islamicity was measured by Islamicity index and human development was measured by Human development index. Data on global competitiveness index from 138 countries were downloaded from <http://reports.weforum.org/global-competitiveness-index/>. Data on Islamicity from 153 countries (115 countries from Islamic countries) downloaded from Islamicity Index.org that available online at <http://islamicity-index.org/wp/islamicity-indices>. Data on human development index from 155 countries download from UNDP (2016) Human Development Report 2015: Work for Human Development Web Version and available at <http://hdr.undp.org/en/data>. Problems of missing data were solved by deleting countries with incomplete data. Finally, data on the happiness, economic growth and human development used in this study were from 123 countries.

### Results and Discussion:-

Figure 2: depicts the Islamicity index, human development index as well as global competitiveness index from 123 countries being studied. The lowest Islamic index happened in Chad (1.82) and the highest Islamicity was the Netherland (8.91). Average Islamicity index in term of statistic mean was 5.40 (Saudi Arabia), median 5.16 (Turkey, Argentina) and mode 8.44 (Australia, Canada). The lowest human development index was Chad (39.00) and the highest human development index was Australia (94.00). Average index of human development in term of statistic mean was 72.98 (Jamaica, Columbia, Tunisia, Dominican Republic, and Belize), median was 75.50 (Mexico),

Georgia, Turkey, Jordan, Macedonia, Azerbaijan, and Ukraine) and mode was 73.00 (the Netherland, Sweden, New Zealand, and Australia). Finally, the highest global competitiveness index was 5.76 (Switzerland) and the lowest global competitiveness index was 2.84 (Guinea). Average index of global competitiveness in term of statistic mean was 42.72 (Slovenia, Macedonia, Colombia, and Hungary), median was 42.2 (Slovak Republic, and Georgia), and mode 43.9 (Malta, South Africa, and Philippines).



**Figure 2:** Islamicity Index, Human Development Index and Global Competitiveness Index

Table 2: presents the countries at various levels Islamicity index related to global competitiveness index. Both were ranked into three levels: low, medium and high. According to the levels of the Islamicity index, 41 countries classified as the low Islamicity index countries, 41 countries classified as the medium Islamicity index countries, and 41 countries classified as the high Islamicity index countries. The same number of countries was also classified as low, medium and high human development index countries.

**Table 2:** Countries with the Levels of Islamicity Index and Global Competitiveness Index.

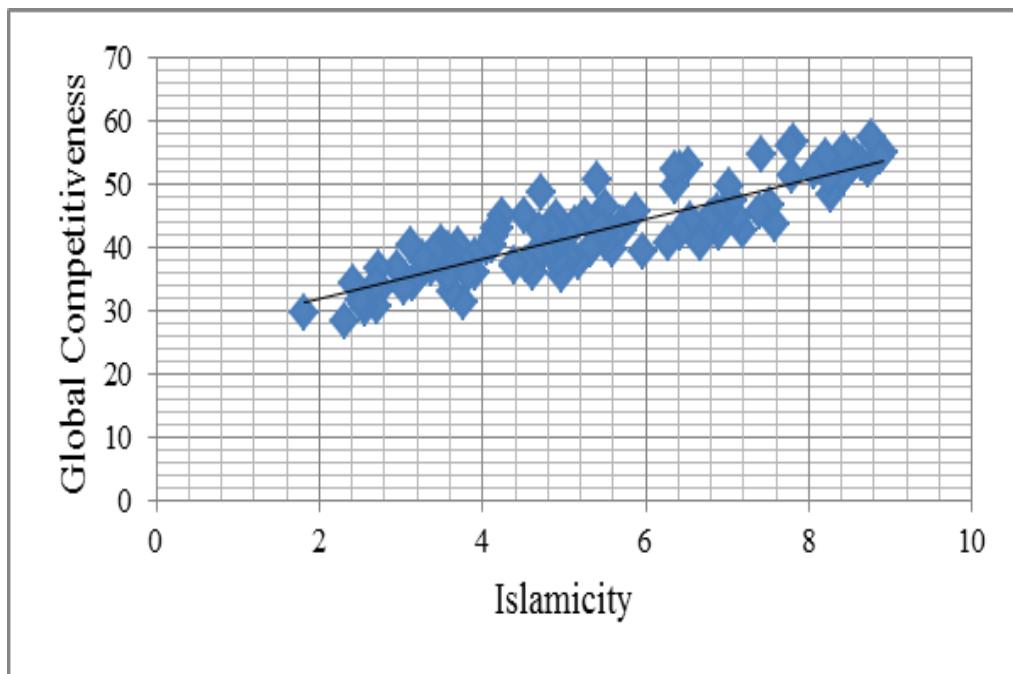
	Islamicity: Low	Islamicity: Medium	Islamicity: High
Global Competitiveness: High	Azerbaijan (1)	Malaysia, Kuwait, Thailand, Saudi Arabia, Bahrain, Kazakhstan, China, Indonesia. (8)	Netherlands, Sweden, Switzerland, New Zealand, Denmark, Finland, Norway, Luxembourg, Australia, Canada, Germany, Austria, Iceland, Ireland, United Kingdom, Belgium, Singapore, France, United States, Czech Republic, Japan, Spain, Poland, Estonia, Israel, Lithuania, Portugal, Chile, Italy, Qatar, United Arab Emirates, Korea Republic. (32)
Global Competitiveness: Medium	Vietnam, India, Morocco, Guatemala, Armenia, Ukraine, Algeria, Iran Islamic Republic, Honduras, Tajikistan, (10)	Croatia, Panama, Mexico, Montenegro, Namibia, Bulgaria, Brazil, South Africa, Romania, Botswana, Georgia, Philippines, Greece, Jamaica, Turkey, Peru, Jordan, Ecuador, Macedonia, Moldova, Colombia, Rwanda, (22)	Malta, Slovenia, Cyprus, Costa Rica, Mauritius, Slovak Republic, Uruguay, Latvia, Hungary. (9)
Global Competitiveness: Low	Bosnia and Herzegovina, Senegal, Paraguay, Zambia, Tanzania, Malawi, Kyrgyz Republic, Venezuela RB, Bangladesh, Benin, Kenya, Cambodia, Gabon, Uganda, Ethiopia, Lebanon, Nigeria, Zimbabwe, Liberia, Cameroon, Egypt Arab Republic, Madagascar, Sierra Leone, Mali, Mauritania, Burundi, Haiti, Pakistan, Guinea, Chad (30)	Trinidad and Tobago, Argentina, El Salvador, Serbia, Ghana, Mongolia, Albania, Tunisia, Dominican Republic, Bolivia, Nicaragua (11)	

From 41 countries with the low Islamicity index, there were 30 countries that also had low global competitiveness index, namely: Bosnia and Herzegovina, Senegal, Paraguay, Zambia, Tanzania, Malawi, Kyrgyz Republic, Venezuela RB, Bangladesh, Benin, Kenya, Cambodia, Gabon, Uganda, Ethiopia, Lebanon, Nigeria, Zimbabwe, Liberia, Cameroon, Egypt Arab Republic, Madagascar, Sierra Leone, Mali, Mauritania, Burundi, Haiti, Pakistan, Guinea, Chad (30)

Liberia, Cameroon, Egypt Arab Republic, Madagascar, Sierra Leone, Mali, Mauritania, Burundi, Haiti, Pakistan, Guinea, and Chad. Another 10 countries had medium global competitiveness index, namely: Vietnam, India, Morocco, Guatemala, Armenia, Ukraine, Algeria, Iran Islamic Republic, Honduras, and Tajikistan. Only one country had high global competitiveness index, namely Azerbaijan.

From 41 countries with medium Islamicity index, 11 countries had low global competitiveness index, namely: Trinidad and Tobago, Argentina, El Salvador, Serbia, Ghana, Mongolia, Albania, Tunisia, Dominican Republic, Bolivia, and Nicaragua. Meanwhile, 22 countries were classified as medium global competitiveness index countries, namely: Croatia, Panama, Mexico, Montenegro, Namibia, Bulgaria, Brazil, South Africa, Romania, Botswana, Georgia, Philippines, Greece, Jamaica, Turkey, Peru, Jordan, Ecuador, Macedonia, Moldova, Colombia, and Rwanda. Another 8 countries were classified as high global competitiveness index countries, namely: Malaysia, Kuwait, Thailand, Saudi Arabia, Bahrain, Kazakhstan, China, and Indonesia

From 41 countries with high Islamicity index, no countries had low global competitiveness index. Meanwhile, 9 countries were classified as medium global competitiveness index, namely: Malta, Slovenia, Cyprus, Costa Rica, Mauritius, Slovak Republic, Uruguay, Latvia, and Hungary. Another 32 countries were classified as high global competitiveness index countries, namely: Netherlands, Sweden, Switzerland, New Zealand, Denmark, Finland, Norway, Luxembourg, Australia, Canada, Germany, Austria, Iceland, Ireland, United Kingdom, Belgium, Singapore, France, United States, Czech Republic, Japan, Spain, Poland, Estonia, Israel, Lithuania, Portugal, Chile, Italy, Qatar, United Arab Emirates, and Korea Republic.



**Figure 3:-** Scatter Diagram and Regression Analysis: Islamicity versus Global Competitiveness

Figure 3: presents Scatter Diagram between Islamicity index and global competitiveness index that shows a positive trend. It means that Islamicity had positive correlation on global competitiveness. Countries with high global competitiveness index were also the countries with high Islamicity index. The opposite apply; countries with low global competitiveness index were also the countries with low Islamicity index. The higher the Islamicity indexes of a country, the higher the index of global competitiveness in that country. Regression coefficient resulted from regression analysis was a positive, 3.16. This regression coefficient was statistically significant as t-calculated (19.89) was higher than t-table (1.98) n=123, at 95% significant level, and P-value (0.00) was less than 0.05.

**Table 3:** Countries with the Levels of Islamicity Index and Human Development Index

	<b>Islamicity: Low</b>	<b>Islamicity: Medium</b>	<b>Islamicity: High</b>
Human Development: High		Greece, Saudi Arabia, Argentina (3)	Norway, Australia, Switzerland, Netherlands, Denmark, Germany, Ireland, United States, Sweden, New Zealand, Canada, United Kingdom, Singapore, Iceland, Korea Republic, Luxembourg, Austria, Belgium, France, Japan, Israel, Finland, Spain, Slovenia, Czech Republic, Italy, Estonia, Cyprus, Qatar, Malta, Poland, Lithuania, Lithuania, Slovak Republic, United Arab Emirates, Portugal, Chile, Hungary, Latvia (38)
Human Development: Medium	Kyrgyz Republic, Iran Islamic Republic, Lebanon, Venezuela RB, Azerbaijan, Ukraine, Algeria, Bosnia and Herzegovina, Armenia (9)	Croatia, Kuwait, Bahrain, Montenegro, Romania, Kazakhstan, Malaysia, Panama, Bulgaria, Brazil, Trinidad and Tobago, Serbia, Mexico, Turkey, Georgia, Jordan, Macedonia, Thailand, Peru, Mongolia, Ecuador, Albania, China, Jamaica, Colombia, Tunisia, Dominican Republic, Botswana, Moldova, (29)	Uruguay, Mauritius, Costa Rica (3)
Human Development: Low	Egypt Arab Republic, Paraguay, Gabon, Vietnam, Morocco, Guatemala, Tajikistan, India, Honduras, Zambia, Bangladesh, Cambodia, Kenya, Pakistan, Tanzania, Nigeria, Zimbabwe, Cameroon, Madagascar, Mauritania, Benin, Uganda, Haiti, Senegal, Malawi, Ethiopia, Liberia, Mali, Sierra Leone, Guinea, Burundi, Chad (32)	Indonesia, South Africa, Philippines, El Salvador, Bolivia, Namibia, Nicaragua, Ghana, Rwanda (9)	

Table 3: presents the countries at various levels Islamicity index related to the human development index. Both were ranked into three levels: low, medium and high. According to the levels of the Islamicity index, 41 countries classified as the low Islamicity index countries, 41 countries classified as the medium Islamicity index countries, and 41 countries classified as the high Islamicity index countries. The same number of countries was also classified as low, medium and high human development index countries.

From 41 countries with the low Islamicity index, there were 32 countries that also had low human development index, namely: Egypt Arab Republic, Paraguay, Gabon, Vietnam, Morocco, Guatemala, Tajikistan, India, Honduras, Zambia, Bangladesh, Cambodia, Kenya, Pakistan, Tanzania, Nigeria, Zimbabwe, Cameroon, Madagascar, Mauritania, Benin, Uganda, Haiti, Senegal, Malawi, Ethiopia, Liberia, Mali, Sierra Leone, Guinea, Burundi, and Chad. Another 9 countries had medium human development index, namely: Kyrgyz Republic, Iran Islamic Republic, Lebanon, Venezuela RB, Azerbaijan, Ukraine, Algeria, Bosnia and Herzegovina, and Armenia. No one country had high human development index.

From 41 countries with the medium Islamicity index, there were 9 countries that had low human development index, namely: Indonesia, South Africa, Philippines, El Salvador, Bolivia, Namibia, Nicaragua, Ghana, and Rwanda. Another 29 countries had medium human development index, namely: Croatia, Kuwait, Bahrain, Montenegro, Romania, Kazakhstan, Malaysia, Panama, Bulgaria, Brazil, Trinidad and Tobago, Serbia, Mexico, Turkey, Georgia, Jordan, Macedonia, Thailand, Peru, Mongolia, Ecuador, Albania, China, Jamaica, Colombia, Tunisia, Dominican Republic, Botswana, and Moldova. Only 3 countries had high human development index, namely: Greece, Saudi Arabia, and Argentina.

From 41 countries with the high Islamicity index, there was no country that had low human development index. Meanwhile, there were only 3 countries that had medium human development index, namely: Uruguay, Mauritius, and Costa Rica. Another 38 countries had high development index, namely: Norway, Australia, Switzerland, Netherlands, Denmark, Germany, Ireland, United States, Sweden, New Zealand, Canada, United Kingdom, Singapore, Iceland, Korea Republic, Luxembourg, Austria, Belgium, France, Japan, Israel, Finland, Spain, Slovenia, Czech Republic, Italy, Estonia, Cyprus, Qatar, Malta, Poland, Lithuania, Lithuania, Slovak Republic, United Arab Emirates, Portugal, Chile, Hungary, and Latvia.

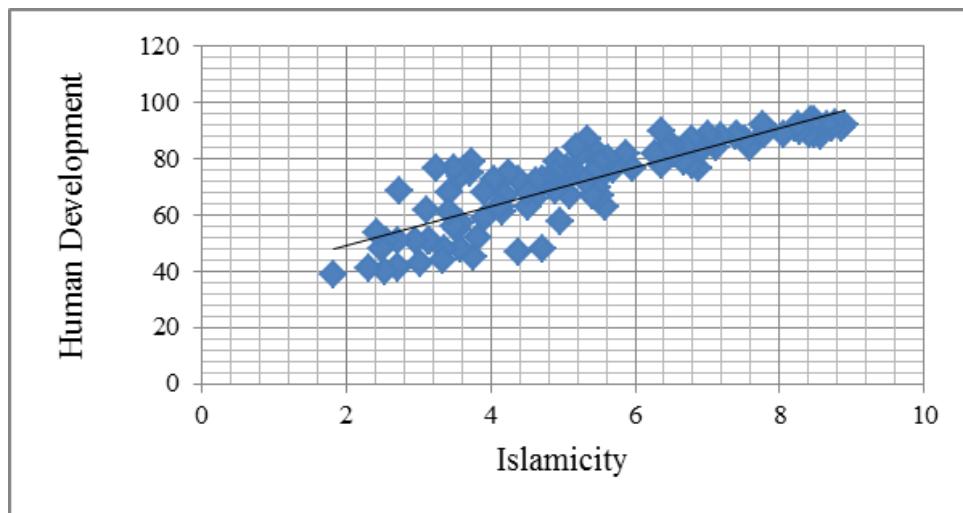
**Figure 4:** Scatter Diagram and Regression Analysis: Islamicity versus Human Development

Figure 4: presents Scatter Diagram between Islamicity index and human development index that shows a positive trend. It means that Islamicity had positive correlation on the human development. The countries with low Islamicity index were the counties with low human development index. The countries with high Islamicity index were the counties with high human development index. The higher the Islamicity indexes of a country, the higher the index of human development in that country. Regression coefficient resulted from regression analysis was a positive, 6.95. This regression coefficient was statistically significant as t-calculated (18.81) was higher than t-table (1.98) n=123, at 95% significant level, and P-value (0.00) was less than 0.05.

Table 4: presents the countries at various levels human development index related to the global competitiveness index. Both were ranked into three levels: low, medium and high. According to the levels of human development index, 41 countries classified as the low human development index countries, 41 countries classified as the medium human development index countries, and 41 countries classified as the high development index countries. The same number of countries was also classified as low, medium and high global competitiveness index countries.

**Table 4:** Countries with the Levels of Human Development Index and Global Competitiveness Index.

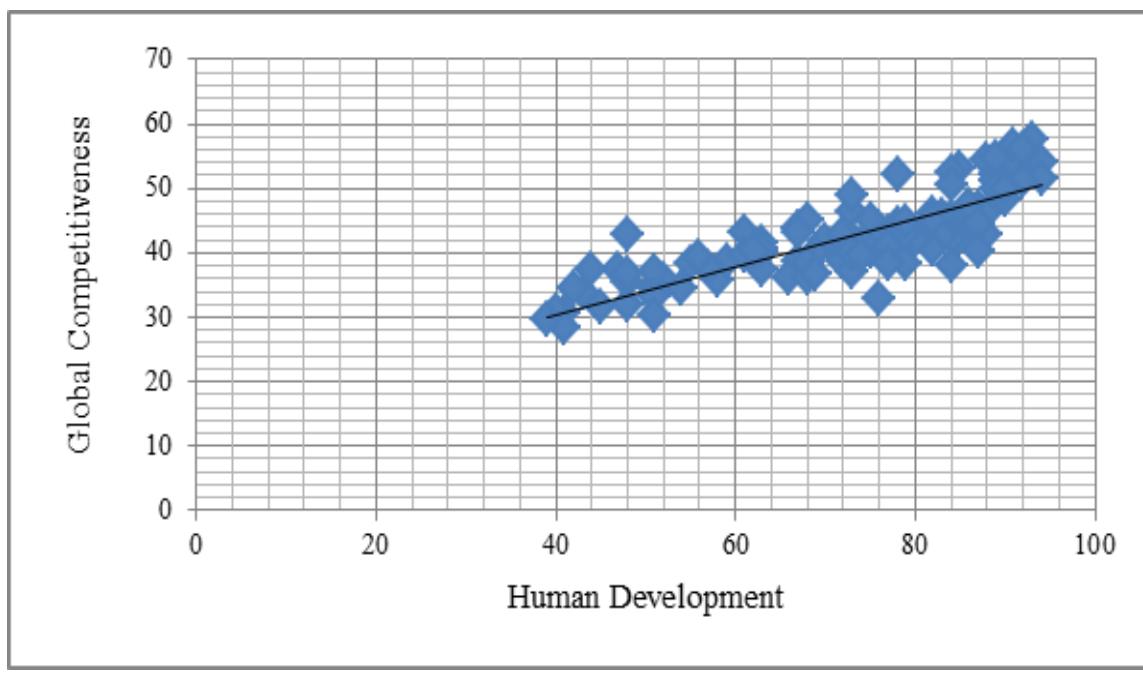
	Human Development: Low	Human Development: Medium	Human Development: High
Global Competitiveness: High	Indonesia (1)	Malaysia, China, Thailand, Kuwait, Bahrain, Azerbaijan, Kazakhstan (7)	Switzerland, Singapore, United States, Germany, Netherlands, Japan, Finland, Sweden, United Kingdom, Norway, Denmark, Canada, Qatar, New Zealand, United Arab Emirates,, Luxembourg, Belgium, Australia, France, Austria, Ireland, Saudi Arabia, Korea Republic, Israel, Iceland, Estonia, Czech Republic, Spain, Chile, Lithuania, Portugal, Poland, Italy (33)
Global Competitiveness: Medium	South Africa, Philippines, India, Vietnam, Rwanda, Morocco, Guatemala, Tajikistan, Namibia, Honduras (10)	Mauritius, Panama, Turkey, Costa Rica, Bulgaria, Romania, Mexico, Macedonia, Colombia, Jordan, Georgia, Peru, Montenegro, Botswana, Uruguay, Iran Islamic Republic, Brazil, Croatia, Ecuador, Ukraine, Armenia, Moldova, Jamaica, Algeria(24)	Latvia, Malta, Slovenia, Hungary, Cyprus, Slovak Republic, Greece (7)
Global Competitiveness: Low	Cambodia, El Salvador, Zambia, Kenya, Gabon, Bangladesh, Nicaragua, Ethiopia, Senegal, Cameroon, Uganda, Egypt Arab Republic, Bolivia, Paraguay, Ghana, Tanzania, Benin, Nigeria, Zimbabwe, Pakistan, Mali, Liberia, Madagascar, Haiti, Malawi, Burundi, Sierra Leone, Mauritania, Chad, Guinea (30)	Trinidad and Tobago, Albania, Tunisia, Serbia, Dominican Republic, Lebanon, Kyrgyz Republic, Mongolia, Bosnia and Herzegovina, Venezuela RB (10)	Argentina (1)

From 41 countries with the low human development index, there were 30 countries that also had low global competitiveness index, namely: Cambodia, El Salvador, Zambia, Kenya, Gabon, Bangladesh, Nicaragua, Ethiopia, Senegal, Cameroon, Uganda, Egypt Arab Republic, Bolivia, Paraguay, Ghana, Tanzania, Benin, Nigeria, Zimbabwe, Pakistan, Mali, Liberia, Madagascar, Haiti, Malawi, Burundi, Sierra Leone, Mauritania, Chad, and Guinea. Another 10 countries had medium global competitiveness index, namely: South Africa, Philippines, India, Vietnam, Rwanda, Morocco, Guatemala, Tajikistan, Namibia, and Honduras. Only one country had high global competitiveness index, Indonesia.

From 41 countries with the medium human development index, there were 10 countries that had low global competitiveness index, namely: Trinidad and Tobago, Albania, Tunisia, Serbia, Dominican Republic, Lebanon, Kyrgyz Republic, Mongolia, Bosnia and Herzegovina, and Venezuela RB. Another 24 countries had medium global competitiveness index, namely: Mauritius, Panama, Turkey, Costa Rica, Bulgaria, Romania, Mexico, Macedonia, Colombia, Jordan, Georgia, Peru, Montenegro, Botswana, Uruguay, Iran Islamic Republic, Brazil, Croatia, Ecuador, Ukraine, Armenia, Moldova, Jamaica, and Algeria. Another 7 countries had high global competitiveness index, namely: Malaysia, China, Thailand, Kuwait, Bahrain, Azerbaijan, and Kazakhstan.

From 41 countries with the high human development index, there was only one country, Argentina, which had low global competitiveness index. Meanwhile, there were 7 countries that had medium global competitiveness index, namely: Latvia, Malta, Slovenia, Hungary, Cyprus, Slovak Republic, and Greece. Another 33 countries had high global competitiveness index, namely: Switzerland, Singapore, United States, Germany, Netherlands, Japan, Finland, Sweden, United Kingdom, Norway, Denmark, Canada, Qatar, New Zealand, United Arab Emirates, Luxembourg, Belgium, Australia, France, Austria, Ireland, Saudi Arabia, Korea Republic, Israel, Iceland, Estonia, Czech Republic, Spain, Chile, Lithuania, Portugal, Poland, and Italy.

Figure 5: presents Scatter Diagram between human development index and global competitiveness index that shows a positive trend. It means that human development had positive correlation on global competitiveness. The countries with low human development index were the countries with low global competitiveness index. The countries with high human development index were the countries with high global competitiveness index. The higher the human development indexes of a country, the higher the index of global competitiveness in that country. Regression coefficient resulted from regression analysis was a positive, 0.37. This regression coefficient was statistically significant as t-calculated (16.11) was higher than t-table (1.98) n=123, at 95% significant level, and P-value (0.00) was less than 0.05.



**Figure 5:** Scatter Diagram and Regression Analysis: Human Development versus Global Competitiveness

**Table 5:** Correlation and Path Coefficients

<b>Regression Statistics: I2-GCI</b>		<b>Regression Statistics : I2-HDI</b>		<b>Regression Statistics: HDI-GCI</b>	
Multiple R	0,88	Multiple R	0,86	Multiple R	0,83
R Square	0,77	R Square	0,75	R Square	0,68
Adjusted R Square	0,76	Adjusted R Square	0,74	Adjusted R Square	0,68
Standard Error	3,25	Standard Error	7,55	Standard Error	3,78
Observations	123	Observations	123	Observations	123
<b>P<sub>31</sub>= 0.64</b>		<b>P<sub>21</sub>= 0.86</b>		<b>P<sub>23</sub> = 0.28</b>	

Table 5: presents the results of regression analysis. The coefficient correlation between Islamicity and global competitiveness was positive and very strong,  $r_{13} = 0.88$ . The coefficient correlation between Islamicity and human development was also positive and very strong,  $r_{12} = 0.86$ . Meanwhile, the coefficient correlation between human development and global competitiveness was positive and very strong,  $r_{23} = 0.83$ .

Solving the path equation proposed in Method of Analysis above, path coefficients have been calculated, the results: path coefficient in Path-1,  $P_{31}$ , was 0.64 meaning there was positive direct effect of Islamicity on global competitiveness. The increase of 1 per cent Islamicity would increase 0.64 per cent global competitiveness index. Path coefficient in Path-2,  $P_{21}$ , was also positive 0.86 meaning that there was positive direct impact of Islamicity on human development. The increase of 1 per cent economic growth will increase 0.86 per cent human development index. Finally, path coefficient in Path-3,  $P_{32}$ , was 0.28 meaning that there was a positive direct impact of human development on global competitiveness. The increase of 1 per cent human development index will increase 0.28 per cent the index of global competitiveness.

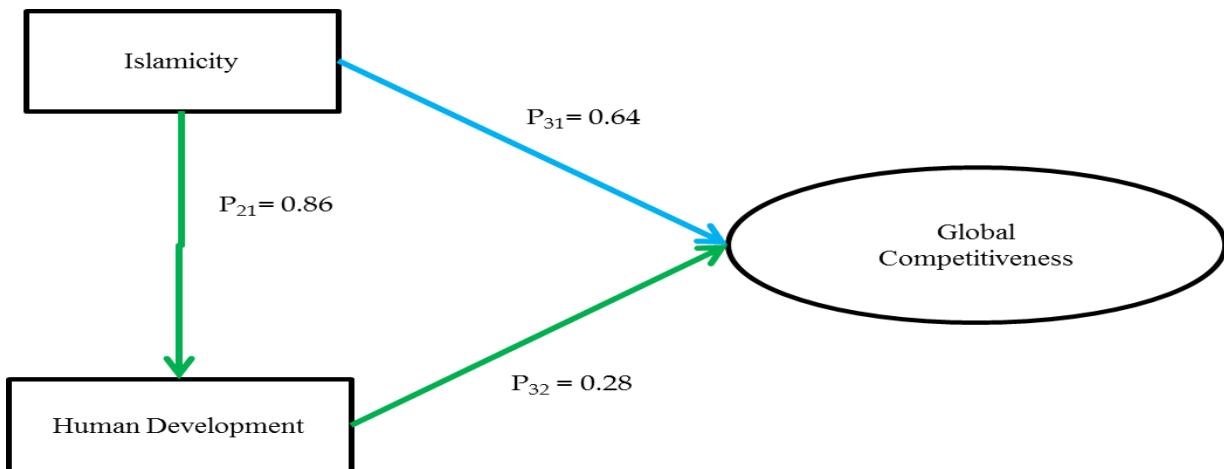
**Figure 6:** Path Coefficients in Path Analysis.

Figure 6: provides path model for analysing direct and indirect impact of economic growth on global competitiveness. In Path-1, direct impact of economic growth on global competitiveness was positive and significant, with  $P_{31}= 0.64$ . The higher the increase of the growth of economy, the higher the global competitiveness index would be. One per cent increase in economic growth would increase 0.64 per cent in global competitiveness index. In Path-2, direct impact of Islamicity on human development was positive and significant, with  $P_{21}= 0.86$ . An increase of the Islamicity would increase the index of human development. One per cent increase in Islamicity would decrease 0.86 per cent in human development index. In Path-3, direct impact of human development on global competitiveness was positive and significant, with  $P_{32}= 0.28$ . The higher the increase of human development, the higher the index of global competitiveness would be. One per cent increase in human development index would increase 0.28 per cent in global competitiveness index. Finally, indirect impact analysis shows that through Path-2 and Path-3 the impact of economic growth on global competitiveness was negative and significant, as the path coefficient of indirect impact was  $P_{32} \times P_{21}=(0.28) \times (0.86) = 0.24 > 0.05$ . The higher the increase of the Islamicity, the higher the index of global competitiveness would be. One per cent increase in economic growth would decrease 0.24 per cent in global competitiveness index.

## **Conclusion:**

Three conclusions could be drawn; firstly Islamicity had positive and significant direct impact on global competitiveness. Secondly, Islamicity had positive and significant direct impact on human development. Thirdly, Islamicity had positive and significant indirect impact on global competitiveness, through human development. The implications were Islamicity and human development were important factors in maintaining and improving global competitiveness. It is then suggested that Islamic teaching and well as practicing human development concept be implemented in daily life for a country to maintain competitiveness globally.

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