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The Impact of Political Institutions on General Insurance/ Takaful Consumption: A Comparative Study between OIC Countries and Non-OIC Developing Countries

Mohamad Ghaith Mahaini<sup>a</sup> & Kamaruzaman Noordin<sup>b</sup> & Mohammad Taqiuddin Mohamad<sup>c\*</sup>

<sup>a,b</sup> Department of Shariah and Management, Academy of Islamic Studies, University of Malaya, Malaysia

<sup>c</sup> Department of Shariah and Economy, Academy of Islamic Studies, University of Malaya, Malaysia

\* Corresponding author, email; m.taqiuddin@um.edu.my

# ABSTRACT

Political institutions are part of the overall institutional matrix of a country and cover institutions that are responsible for establishing and maintaining a robust and reliable political system. The impact of an instable political system on general insurance/ Takaful services demand in OIC countries is an area that has not been sufficiently explored in the literature. This study is set to empirically test the impact of political institutions on general insurance/ Takaful consumption in OIC countries versus non-OIC developing countries. To address the research question, fixed effects and random effects models are applied on a strongly balanced dataset covering 36 OIC countries and 67 non-OIC developing countries for the years from 1994 till 2015. The study used two different indicators of political institutions. Namely, the control of corruption index and the government effectiveness index which are retrieved from the World Governance Indicators (WGI). The study utilises insurance density rate as a dependent variable. Further, for more robust findings, the researchers utilise general insurance penetration rate as well. The results suggest that better political institutional environment would play a role in promoting general insurance/ takaful consumption only in OIC countries but not necessarily in non-OIC developing countries. This finding further illustrates the unique institutional environment in OIC countries. This paper recommends that policy makers look into the potential of integrating takaful services in the insurance industry especially in OIC countries that still do not offer Islamic financial services.

**Keywords:** Political Institution; General Insurance; Takaful; OIC & Shariah Management.

# Introduction

The role of institutions has been under spotlight since the development of the New Institutional Economics (NIE). North (1990) defines institutions as the constrains that people create for the purpose of structuring the political, economic and social interaction among them. Institutions can take different forms and can be formal or informal. According to North (1990), the constrains of institutions are there to reduce uncertainty and therefore reduce transaction cost. On the other hand, Kunčič (2014) argues that institutions can be grouped into three main categories: Political, legal and economic. Kunčič (2014) defines the comprehensive meaning of

politics as follows: "The voters, electoral rules, political parties and rules of and limits of a government or state". This definition indicates that political institutions are concerned with establishing and maintaining a robust and reliable political system. Inferred from the definitions of North (1990) and Kunčič (2014), political institutions can take formal or informal shape. The scope of such institution covers not only the bureaucracy quality of the state's formal institutions, but also covers the degree of political freedom and stability as well as its level of corruption. further, political institutions can also cover the government effectiveness in its ability to carry out its declared programmes without being influenced by different political adversaries.

Studies have tested the impact of institutions on economic growth e.g. (Butkiewicz & Yanikkaya, 2006; Chong & Calderón, 2000; Dollar & Kraay, 2003; Klein et al., 2005; Knack & Keefer, 1995; Redek & Sušjan, 2005; Siddiqui & Ahmed, 2013) and financial development e.g. (Andrianova, Demetriades, & Shortland, 2006; Baltagi, Demetriades, Law, Perspectives, & Fund, 2007; Law & Azman-Saini, 2008; Outreville, 1999; Roe & Siegel, 2011).

When it comes to insurance development studies, the majority of empirical papers do not solely focus on the impact of political institutions. Rather, the focus is often on the overall impact of institutions. Most of the relevant literature focuses on creating an institutional index that is comprised of a number of other institutional indices. As an example, Beck and Webb (2003) constructed an institutions index drawn from the average of six different political and legal indices. Another example is Biekpe (2016) who created an institutional variable from the average of five different institutional variables. That said, empirical studies argued that insurance determinants can be grouped within three main categories: economic, demographic and institutional determinants (Alhassan & Biekpe, 2016; Beck & Webb, 2003; Elango & Jones, 2011; Kjosevski, 2012; Park & Lemaire, 2012; Sen & Madheswaran, 2013; Ward & Zurbruegg, 2002).

However, attention to Muslim majority countries has been limited to adding a dummy variable to represent Muslim majority countries which is usually associated with a negative impact on insurance demand (Beck & Webb, 2003; Park & Lemaire, 2012; Trinh, Nguyen, & Sgro, 2016; Ward & Zurbruegg, 2002). Although OIC countries share many economic and demographic similarities with other countries, the institutional matrix might be quite different than the rest of the world. This is due the impact of Shariah (Islamic law) on the formal and informal social, legal, political and economic interaction among the individuals in the society.

As such, there is a need to test the impact of the different aspects of the institutional environment on insurance consumption in OIC countries. This paper aims to focus on testing the impact of political institutions on general insurance/ takaful consumption in OIC countries in an attempt to cover this gap. For a better grasp of the expected difference in the impact of political institutions on general insurance/ takaful in OIC countries, this study also applies the same analysis on non-OIC countries in order to compare and contrast the findings.

For the purpose of this paper, the term general insurance would refer to both conventional and Takaful services. This is because many OIC countries still do not have Takaful services and also due to the lack of data on the macroeconomic levels for those that do. It is also because the focus of this paper is on the decision of seeking protection against covered perils rather than on the technical differences. The protection impact, wording and pricing are effectively the same in both alternatives. Furthermore, whenever used in this paper, the term "institutions" is referred to within the context of the New Institutional Economics. (NIE) and do not mean organisations. The study is organised as follows: next chapter briefly explores the existing theoretical and

empirical literature regarding the determinants of general insurance. The third section includes the methodology and data while the fourth section handles the empirical findings. The fifth section concludes the study.

## **Literature Review**

Individuals and corporates seek general insurance coverage as an attempt of mitigating the risk of potential future losses that would entail potentially paying large sums by paying a relatively smaller and periodic amounts called premiums in conventional insurance or contributions in takaful. The theoretical underpinnings for the demand of general insurance can be traced back to the works of Mossin (1968) and Szpiro (1985) who argued that individuals develop a demand for insurance products to maximise their utility function. Such function consists of income level, price, risk profile and loss probability. In turn, Szpiro (1985) and Lewis (1989) suggested that the level of risk aversion is better to be assumed constant overtime. That said Arrow (1972) along with Pratt (1964) and Mossin (1968) opined that the more risk averse the individual is, the higher is the demand for insurance services. Nonetheless, due to the inability of empirical studies to observe price and quantities of general insurance, researchers tend to select other theoretically-backed variables that are more observable (Millo & Carmeci, 2011). As a result, Beenstock, Dickinson, & Khajuria (1988) suggest a solution to this issue through solving for the equation of equilibrium between supply and demand of insurance.

On the other hand, it seems that the focus of empirical studies tends to be directed more towards life insurance than on general insurance. Nevertheless, there is a number of studies that handled the determinants of general insurance consumption. Beenstock et al. (1988) looked into the relationship between property liability insurance and income in 45 countries and argued that lower interest rate environment would play a role in reducing insurance production. Beenstock et al. (1988) also referred to the role of economic development in promoting property liability insurance. likewise, Weiss (1991) compared the input, output and productivity of property liability insurance between five countries and highlighted the role of regulations.

After the emergence of the New Institutional Economics (NIE), research efforts started to look into the potential impact of institutions on insurance demand. For example, Browne, Chung, & Frees (2000) tested consumption of property liability insurance and auto insurance products across OECD countries. The authors argued that income, competition from foreign companies operating in the local markets along with the level of wealth as well as legal institutions determine insurance demand in said countries. Similarly, Esho, Kirievsky, Ward, & Zurbruegg (2004) looked into the determinants of property casualty insurance and the impact of the legal system. Applying various panel data techniques on a dataset of 44 countries, the authors resulted that a good legal institutional environment is important to derive insurance demand. The study suggested that there a positive relationship between demand of property casualty insurance and the probability of loss as well as income level. One of the drawbacks of said study is that it only focuses on the legal environment without paying much attention on the potential impact of the political institutional environment as well.

In turn, Elango & Jones (2011) looked into the drivers of property-casualty insurance demand in emerging markets. The authors looked into the impact of multiple institutional variables including property rights, business freedom, fiscal and financial freedom as well as the degree of openness of the economy. Among others, the researchers found evidence that freedom of corruption is negatively associated with non-life insurance demand when measured

by insurance density. Furthermore, S. C. Park & Lemaire (2012) used a panel data of 68 countries to test the impact of culture on demand of general insurance. The results highlighted that the impact is different between developed and developing countries whereby all proxies used were significant in developed countries, only one cultural proxy was found to be so in developing countries. Among the institutional variables, political risk is found to positively impact general insurance demand in developing countries. Additionally, S. C. Park & Lemaire (2012) argued that being a Muslim majority country is negatively associated with general insurance demand. On the other hand, some control variables used for the study has the opposite impact depending on the level of development of the countries. It can be argued that culture reflects the informal aspect of institutions. As such, based on the findings of S. C. Park & Lemaire (2012), one might expect that there are some differences in the impact of institutions on insurance consumption between developing and developed countries.

Finally, the study put forward by Trinh et al. (2016) looked into the determinants of general insurance consumption using a panel of 36 developed economies and 31 developing economies. The study indicated that the determinants of general insurance are economic freedom, income, banking sector development, the level of urbanisation, cultural values as well as the legal framework. Similar to other studies, Trinh et al. (2016) indicated that the different groups of countries responds differently to the different variables implemented in the study. Supporting the findings of S. C. Park & Lemaire (2012), Trinh et al. (2016) also argued that insurance demand is less in Muslim majority countries.

The above brief literature review illustrates few important points with regards to the role of institutions in deriving general insurance consumption. First, the focus on identifying insurance determinants in Muslim majority countries is limited to adding a dummy variable and not studied in particular. That said, Muslim majority countries are associated with lower insurance demand. It can be argued that improving the overall institutional quality might help in reducing resentment fuelled by religious sentiment against life insurance services and toward better protection for the society (Mahaini, Noordin, & Mohamad, 2019). Second, the literature supports the suggested role of institutions in deriving general insurance demand. Nonetheless, the focus tends to be either on the overall role of institutions or on legal institutions in particular. Very few papers looked into the role of political institutions and it is usually done through either adding one political institutions variable only (Elango & Jones, 2011) or as an overall index representing the average of group of political indexes (Park & Lemaire, 2012). Third, different studies pointed out that the determinants of general insurance consumption vary based on the level of development of the country (Park & Lemaire, 2012; Trinh et al., 2016). This suggests that it might not be accurate to compare OIC countries with the rest of the world. This is why this paper compares the results with non-OIC developing countries only.

As a result, this paper is an attempt to fill the gap in the literature by assessing the potential impact of political institutions on general insurance demand in OIC countries and compare the result with that of non-OIC developing countries. Next section handles the methodology and data.

### **Methodology and Data**

This study follows the approach of the majority of related literature in applying fixed effects and random effects models (Browne et al., 2000; Elango & Jones, 2011; Park & Lemaire, 2012;

Trinh et al., 2016). Hausman test is applied to determine which model is a more suitable estimator. Said panel data techniques are set to test the following regression equation:

$$Y_{i,t} = \alpha_i + \beta_t + K_t C_{it} + K_t D_{it} + K_t P_{it} + \epsilon_{it}$$

Where:  $\alpha_i$  is a dummy variable to control for time-invariant country-specific variables;  $\beta_t$  is a dummy variable to time varying factors;  $Y_{it}$  refers to the insurance variable for country *i* in year *t*.  $C_{it}$  stands for the economic determinants;  $D_{it}$  represents the demographic determinants;  $P_{it}$  indicates the political institutional variables used  $\epsilon_{it}$  is the normally distributed error term; *i* and *t* are indices for cross-section and time-series, respectively, with *i*= 1,...,*N* and *t* = 1,...,*T*.

In order to mitigate heteroscedasticity issues in error terms as well as autocorrelation problems, robust standard errors are estimated. This is done through STATA software through vce (robust) option.

Following the approach of the literature, the economic determinants that will be used in this paper as control variables are gross domestic product (GDP) per capita to proxy for income level following the mainstream of the literature (Elango & Jones, 2011; Esho et al., 2004; Trinh et al., 2016), consumer price index to represent the effect of inflation following Elango & Jones (2011), real interest rate following Beenstock et al. (1988) and Elango & Jones (2011) in addition to private credit following Trinh et al. (2016) to proxy for banking sector development. Similarly, this study employs two different variables to control for social-demographic variables. The first is urban population rate which is widely used proxy for the probability of loss (Browne et al., 2000; Esho et al., 2004; Park & Lemaire, 2012; Trinh et al., 2016) as well as age dependency ratio which is often used to proxy for risk aversion (Elango & Jones, 2011; Esho et al., 2004; Park & Lemaire, 2012; Trinh et al., 2016).

Lastly, to cater for political institutions which are the focus variable of this study, this study employs control of corruption index as well as the government effectiveness index. Both indexes are issued by the World Governance Indicators (WGI) (Kaufmann & Kraay, 2016). Based on the provided definitions, the first index reflects the perception of how public power is exercised for private gain while the second captures the perceptions of the level of public services quality. This includes the extent of independent from political pressure, the quality of policy formulation and implementation as well as the authority's commitment to said policies. It is hypothesised that better political institutions would have a direct positive impact on consumption of general insurance products. When there is more certainty about the stability of the country and less risk of the involvement of different political influence over the government's activities, individuals might have better motive to get insurance coverages knowing that they will get reimbursed upon the occurrence of a covered calamity. Additionally, lower levels of corruption would reduce the number of faulty claims and therefore lower insurance costs. This, in turn, makes insurance services more affordable bearing in mind the low per capita income level of most developing countries, OIC or otherwise.

Similarly, insurance density rate is used to proxy for general insurance consumption. Insurance density is calculated by dividing general insurance premiums by the country's population. Using said variable to represent general insurance is quite common in the literature (Browne et al., 2000; Elango & Jones, 2011; Esho et al., 2004; Park & Lemaire, 2012; Trinh et al., 2016). To ensure robustness of the findings of this paper, the same test will be run using general

insurance penetration rate. Insurance penetration rate is calculated by dividing general insurance premiums by the country's GDP.

The dataset consists of a panel of 36 OIC countries for the years between 1995 and 2015. Selection of the countries and years is solely based on data availability. Following the approach of Beck & Webb (2003), three year average of the variables has been taken because institutional quality scores tend to change slowly over time. Further, the dependent and independent variables of this study are taken in logs which would facilitate estimating the coefficients as elasticities (Beck & Webb, 2003) and would also deal with potential linearity issues.

## **Empirical Findings**

## 1. Descriptive Statistics and Correlations

Tables 4.1 and 4.2 includes the descriptive statistics of the variables employed in this study for OIC countries and non-OIC countries, respectively. Viewing the mean, minimum and maximum values in both tables shows that there are differences across OIC countries suggesting that applying pooled OLS estimation is not appropriate.

| Variable:                     | С   | Min    | Max   | М     | SD   |
|-------------------------------|-----|--------|-------|-------|------|
| General Insurance Density     | 349 | -3.18  | 7     | 2.68  | 1.91 |
| General Insurance Penetration | 375 | -4.23  | 0.82  | -0.63 | 0.75 |
| GDP per capita                | 417 | 5.14   | 11.17 | 7.77  | 1.44 |
| Consumer Price Index          | 383 | -3.2   | 5.78  | 4.15  | 0.95 |
| Real interest rate            | 253 | -65.52 | 34.08 | 5.59  | 9.97 |
| Private Credit                | 408 | 0.33   | 4.86  | 2.84  | 0.93 |
| Urban Population              | 441 | 2.44   | 4.61  | 3.84  | 0.47 |
| Age Dependency                | 441 | 2.82   | 4.78  | 4.21  | 0.35 |
| WGI-Control of Corruption     | 350 | 0.16   | 4.49  | 3.25  | 0.81 |
| WGI-Government Effectiveness  | 350 | 0.65   | 4.51  | 3.33  | 0.77 |

**Table 4.1:** Descriptive Statistics for all used variables for the whole sample- OIC countries:

Note: C: count || Min: Minimum || M: Mean || Max: Maximum || SD: Standard Deviation.

| Table 4.2: Descriptive Statistics for all used variables for the whole sample-non-OIC count | tries: |
|---|--------|
|---|--------|

| Variable:                     | с   | Min    | Max   | М     | SD    |
|-------------------------------|-----|--------|-------|-------|-------|
| General Insurance Density     | 591 | -1.49  | 7.14  | 3.39  | 1.81  |
| General Insurance Penetration | 606 | -3.36  | 2.56  | -0.06 | 0.84  |
| GDP per capita                | 669 | 5.19   | 11.11 | 8     | 1.23  |
| Consumer Price Index          | 631 | -16.76 | 6.81  | 3.97  | 1.48  |
| Real interest rate            | 548 | -84.1  | 71.51 | 7.5   | 11.87 |
| Private Credit                | 676 | -0.36  | 5.35  | 3.15  | 0.94  |
| Urban Population              | 683 | 1.74   | 4.61  | 3.79  | 0.56  |
| Age Dependency                | 674 | 3.2    | 4.71  | 4.12  | 0.29  |
| WGI-Control of Corruption     | 536 | -0.37  | 4.59  | 3.54  | 0.87  |
| WGI-Government Effectiveness  | 537 | -0.04  | 4.61  | 3.58  | 0.81  |

Note: C: count || Min: Minimum || M: Mean || Max: Maximum || SD: Standard Deviation.

Similarly, tables 4.3 and 4.4 which include the correlation matrix for both country groups show that there exists a high correlation between GDP per capita and urban population and age dependency ratio which highlights that it is important to use fixed effects model to control for country specific variables (effects) that might be affecting some or all the independent variables Beck & Webb (2003). As a result, the descriptive statistics included above generally support using fixed and random effects models and provide evidence that pooled OLS is not robust.

|                                    | GDP P.C  | СРІ      | Interest<br>Rate | Private<br>Credit | Urban<br>Population | Age<br>Dependency | Control of<br>Corruption | Government<br>Effec |
|------------------------------------|----------|----------|------------------|-------------------|---------------------|-------------------|--------------------------|---------------------|
| GDP P.C                            | 1        |          |                  |                   |                     |                   |                          |                     |
| CPI                                | 0.0644   | 1        |                  |                   |                     |                   |                          |                     |
| Interest Rate                      | -0.1106* | 0.2394*  | 1                |                   |                     |                   |                          |                     |
| Private Credit                     | 0.5744*  | 0.2643*  | -0.0718          | 1                 |                     |                   |                          |                     |
| Urban Population                   | 0.8417*  | 0.0816   | -0.0481          | 0.5757*           | 1                   |                   |                          |                     |
| Age Dependency                     | -0.7980* | -0.1564* | 0.0846           | -0.5801*          | -0.6812*            | 1                 |                          |                     |
| Control of Corruption              | 0.4501*  | -0.0147  | -0.0783          | 0.5467*           | 0.4186*             | -0.3542*          | 1                        |                     |
| Government Effectiveness           | 0.5421*  | -0.0177  | 0.0566           | 0.6431*           | 0.4240*             | -0.4760*          | 0.8017*                  | 1                   |
| * significant at 10 percent level. |          |          |                  |                   |                     |                   |                          |                     |

**Table 4.3:** Correlations matrix for the variables of the study- OIC countries:

Table 4.4: Correlations matrix for the variables of the study- non-OIC countries:

|                                    | GDP P.C  | CPI      | Interest<br>Rate | Private<br>Credit | Urban<br>Population | Age<br>Dependency | Control of<br>Corruption | Government<br>Effec |
|------------------------------------|----------|----------|------------------|-------------------|---------------------|-------------------|--------------------------|---------------------|
| GDP P.C                            | 1        |          |                  |                   |                     |                   |                          |                     |
| CPI                                | 0.1713*  | 1        |                  |                   |                     |                   |                          |                     |
| Interest Rate                      | -0.0162  | 0.3485*  | 1                |                   |                     |                   |                          |                     |
| Private Credit                     | 0.5658*  | 0.4660*  | 0.1081           | * 1.0000          |                     |                   |                          |                     |
| Urban Population                   | 0.7340*  | 0.0787*  | 0.0512           | 0.3024*           | 1                   |                   |                          |                     |
| Age Dependency                     | -0.6865* | -0.2615* | 0.0661           | -0.6012*          | -0.5344*            | 1                 |                          |                     |
| Control of Corruption              | 0.4396*  | 0.2013*  | 0.0702           | 0.5921*           | 0.2047*             | -0.3899*          | 1                        |                     |
| Government Effectiveness           | 0.5506*  | 0.1732*  | 0.0304           | 0.6107*           | 0.2646*             | -0.4864*          | 0.8357*                  | 1                   |
| * significant at 10 percent level. |          |          |                  |                   |                     |                   |                          |                     |

# 2. Empirical Results

Table 4.5 illustrates the estimation results of the fixed effects or random effects whichever is more suitable to test for the impact of political institutions on general insurance consumption in OIC countries as well as non-OIC countries using general insurance density as a dependent variable.

| Table 4.5: Estimates of the fixed effects / random effects model for the impact of political |
|--|
| institutions on general insurance consumption:   |

|                              | General Insurance Density |                    |                     |                     |  |
|------------------------------|---------------------------|--------------------|---------------------|---------------------|--|
|                              | <u>OIC</u>                |                    | Non                 | OIC                 |  |
|                              | (1)                       | (2)                | (1)                 | (2)                 |  |
| GDP per capita               | 0.877 <sup>a</sup>        | 0.851ª             | 1.178ª              | 1.189ª              |  |
|                              | [0.113]                   | [0.111]            | [0.150]             | [0.149]             |  |
| Consumer Price Index         | 0.006                     | 0.016              | -0.352ª             | -0.352ª             |  |
|                              | [0.198]                   | [0.191]            | [0.095]             | [0.099]             |  |
| Real interest rate           | 0.004                     | 0.002              | -0.006 <sup>c</sup> | -0.005 <sup>c</sup> |  |
|                              | [0.008]                   | [0.007]            | [0.003]             | [0.003]             |  |
| Private Credit               | 0.295ª                    | 0.254ª             | 0.334ª              | 0.334ª              |  |
|                              | [0.067]                   | [0.075]            | [0.080]             | [0.083]             |  |
| Urban Population             | 0.625ª                    | 0.706 <sup>a</sup> | 0.207               | 0.193               |  |
|                              | [0.228]                   | [0.243]            | [0.249]             | [0.252]             |  |
| Age Dependency               | 0.068                     | 0.128              | 0.208               | 0.222               |  |
|                              | [0.290]                   | [0.283]            | [0.416]             | [0.410]             |  |
| WGI-Control of Corruption    | 0.128 <sup>b</sup>        |                    | -0.045              |                     |  |
|                              | [0.055]                   |                    | [0.083]             |                     |  |
| WGI-Government Effectiveness |                           | 0.234 <sup>a</sup> |                     | -0.077              |  |
|                              |                           | [0.086]            |                     | [0.100]             |  |
| Constant                     | -8.032ª                   | -8.680ª            | -7.173ª             | -7.144ª             |  |
|                              | [2.119]                   | [2.180]            | [1.769]             | [1.786]             |  |
| Obs                          | 192                       | 192                | 397                 | 397                 |  |
| Countries                    | 36                        | 36                 | 67                  | 67                  |  |
| R2within                     | 0.414                     | 0.426              | 0.598               | 0.598               |  |
| R2between                    | 0.938                     | 0.937              | 0.827               | 0.827               |  |
| R2overall                    | 0.917                     | 0.917              | 0.827               | 0.828               |  |
| Hausman                      | 0.671                     | 0.828              | 0.000               | 0.001               |  |
| Model used                   | RE                        | RE                 | FE                  | FE                  |  |

|| F E: Fixed Effects Model || RE: Random Effects Model || Year effect is taken yet not reported.

<sup>c</sup> p < 0.1, <sup>b</sup> p < 0.05, <sup>a</sup> p < 0.01

The findings suggest that for the economic determinants that are used as control variables, GDP per capita is consistently statistically significant at one percent significance level for both OIC and non-OIC countries. This suggests a positive impact on general insurance demand. Such finding is consistent with the findings of the majority of relevant literature (Beenstock et al., 1988; Browne et al., 2000; Elango & Jones, 2011; Park & Lemaire, 2012; Trinh et al., 2016). Similarly, banking sector development which is represented by private credit is also a significant predictor of consumption of general insurance services in both country groups. This supports the findings of Trinh et al. (2016) who suggested that there is a positive impact of financial sector development on general insurance demand in developing countries.

That said, the remaining economic determinants do not have a statistically significant impact in any of the two regressions for OIC countries but show a negative impact in non-OIC countries. Consumer price index being insignificant is against the findings of Elango & Jones (2011) who suggested a negative impact. In other words, only non-OIC countries come to support the findings of Elango & Jones (2011). On the other hand, the latter could not draw a conclusive evidence of the impact of real interest rate. However, the negative impact found in non-OIC countries goes in line with the suggestions of Beenstock et al. (1988).

As per the social-demographic determinants, only urbanisation is found to have a significant impact on general insurance consumption and that is in OIC countries only. As a proxy for loss probability, urbanization is also suggested to have a positive impact by other empirical studies (Esho et al., 2004; Trinh et al., 2016).

As for the focus variable of this paper, the main analysis shown in table 4.5 above clearly indicates that political institutions have a positive impact on general insurance consumption in OIC countries but not in non-OIC countries. As per the table, ten percent improvement in the political institutional environment in OIC countries would correspond to an improvement in general insurance density by 1.28 percent and 2.34 percent when measured by control of corruption index and government effectiveness index, respectively.

As mentioned earlier, to test the robustness of the results, this paper runs the same model but using general insurance penetration rate as a dependent variable instead of density rate. The results shown in table 4.6 clearly support the previous finding that the lower political institutional quality can impede general insurance consumption.

|                              | General Insurance Penetration (Robustness) |                     |                     |                     |  |
|------------------------------|--|---------------------|---------------------|---------------------|--|
|                              | <u> 01</u>                                 | <u>ic</u>           | Non-OIC             |                     |  |
|                              | (1)  | (2)                 | (1)                 | (2)                 |  |
| GDP per capita               | -0.121                                     | -0.147              | 0.182               | 0.193               |  |
|                              | [0.114]                                    | [0.112]             | [0.152]             | [0.151]             |  |
| Consumer Price Index         | 0.011                                      | 0.02                | -0.348ª             | -0.348 <sup>a</sup> |  |
|                              | [0.203]                                    | [0.196]             | [0.098]             | [0.102]             |  |
| Real interest rate           | 0.004                                      | 0.002               | -0.006 <sup>c</sup> | -0.006 <sup>c</sup> |  |
|                              | [0.008]                                    | [0.008]             | [0.003]             | [0.003]             |  |
| Private Credit               | 0.296 <sup>a</sup>                         | 0.256 <sup>a</sup>  | 0.334ª              | 0.334 <sup>a</sup>  |  |
|                              | [0.068]                                    | [0.077]             | [0.080]             | [0.083]             |  |
| Urban Population             | 0.623 <sup>a</sup>                         | 0.700 <sup>a</sup>  | 0.196               | 0.182               |  |
|                              | [0.232]                                    | [0.246]             | [0.248]             | [0.250]             |  |
| Age Dependency               | 0.072                                      | 0.129               | 0.204               | 0.218               |  |
|                              | [0.290]                                    | [0.284]             | [0.420]             | [0.414]             |  |
| WGI-Control of Corruption    | 0.122 <sup>b</sup>                         |                     | -0.043              |                     |  |
|                              | [0.054]                                    |                     | [0.083]             |                     |  |
| WGI-Government Effectiveness |  | 0.225 <sup>a</sup>  |                     | -0.076              |  |
|                              |  | [0.087]             |                     | [0.100]             |  |
| Constant                     | -3.457                                     | -4.076 <sup>c</sup> | -2.568              | -2.54               |  |
|                              | [2.132]                                    | [2.196]             | [1.784]             | [1.799]             |  |
| Obs                          | 192  | 192                 | 397                 | 397                 |  |
| Countries                    | 36   | 36                  | 67                  | 67                  |  |
| R2within                     | 0.228                                      | 0.243               | 0.289               | 0.290               |  |
| R2between                    | 0.464                                      | 0.448               | 0.275               | 0.273               |  |
| R2overall                    | 0.400                                      | 0.398               | 0.265               | 0.267               |  |
| Hausman                      | 0.671                                      | 0.827               | 0.000               | 0.001               |  |
| Model used                   | RE   | RE                  | FE                  | FE                  |  |

**Table 4.6:** Robustness tests for the impact of political institutions using general insurancedensity as a dependent variable:

|| F E: Fixed Effects Model || RE: Random Effects Model || Year effect is taken yet not reported.

<sup>c</sup> p < 0.1, <sup>b</sup> p < 0.05, <sup>a</sup> p < 0.01

Based on the findings of this paper, corruption can hinder the growth of general insurance. Perhaps the reason is because in highly corrupted countries, insurance companies might face higher levels of false claims that are backed by inaccurate police reports. This in turn would lead to an increase in the price of insurance making it less affordable to the public. This would also lead to an increased moral hazard since it could be easier to forge an inaccurate claim reports than taking the due diligence required by the insurance contract. Government effectiveness which is used as another indicator of political institutions also supports the discussed positive impact. This indicates that the better the perception of the general public

about the quality and independence of public services, the better the demand for general insurance would be. This might be because when political institutions are good, insurance companies cannot easily reject payments of valid claims since the government is perceived to act as an enforcer of the contract.

This impact of political institution is probably due to the delay mechanism mentioned by Falcigia (1980) which exists in insurance contract. The customer has to pay the premium/ contribution first and then the insurance company might honour its obligation in case of a covered peril or not. This is more omnipresent in cases of multi-year policies whereby the individuals or corporates may pay insurance premiums/ contributions for years before possibly receiving insurance compensation. Without proper political and legal institutions, the enforceability of the contract might be questioned by customers which would, in turn, lower demand for insurance coverages.

### **Conclusion and Policy Implications**

This paper serves as an attempt to better understand the importance of the political aspect of the institutional matrix in OIC countries in facilitating better general insurance demand. Applying fixed effects and random effects models on a strongly balanced panel data consisting of 36 OIC countries and 67 non-OIC countries covering the years between 1996 and 2015, this study presents evidences that better political institutions can grow insurance consumption in OIC countries but not necessarily in non-OIC countries. Improving the political spectrum in OIC countries is of great significance to encourage individuals and corporates to benefit from the protection offered by insurance and takaful operators against adverse events. Policy makers are recommended to enact policies that are directed towards lowering corruption levels as well as the level of involvement of politics in government bodies.

Finally, it is recommended that OIC countries that are yet to have regulations that facilitate takaful services to consider looking into such opportunity. This is because having an option for a shariah compliant solution for financial services would take advantage of the impact of Shariah over the overall institutional matrix in the society. This would in turn make Shariah values instilled with the hearts and minds of the majority of Muslims become a supportive factor in the quest to achieving highly insured economies and thus, safer, more independent and stronger countries overall.

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