The Three-Way Linkages Of Government Effectiveness, FDI And Economic Growth: Adopting A New Model Specification For Tourism Sector

Intan Maizura Abd Rashid, Irza Hanie Abu Samah, Mohammad Harith Amlus

Abstract—Recently, growth and development studies have started to focus on the importance of improving institutions of governance through government effectiveness on economic growth. Foreign direct investment (FDI) inflows are used to address the economic problems, such as government effectiveness and tourism growth. This paper has identified, after visualizing theoretical standpoints and empirical researches, that there is the linkage between FDI inflows and government effectiveness-GDP nexus focusing on tourism sector. Contrasting with previous studies, this study not only observed the degree of the association between FDI in tourism sector (FDIT) and government effectiveness (GOV) but also investigated the relationship between FDIT and tourism growth (TG). While the amount of literature on FDIT, TG and GOV using panel data and for singular countries has increased in the last few years, no research has identified the relationships among FDIT, TG and GOV together using a growth framework and a simultaneous equation model. The end discussions show that FDIT has bidirectional causal relationships with TG and GOV. Therefore, reviewing this chapter it gets confirmed that the research gap prevails in this particular area, that is, neither do a research conducted for evaluation of FDI inflows in tourism impact on government effectiveness and GDP. Thus, in the light of suggestion of theories and empirical literature, this chapter paves the ground of building up a conceptual framework that is to describe the directions in recognizing how government effectiveness and FDI inflows in tourism can increase government effectiveness and stimulate the economic growth and tourism growth.

Index Terms—Tourism Growth, Government Effectiveness, FDI in Tourism Inflows, Dynamic Simultaneous Equation Model

I. INTRODUCTION

Government effectiveness mirrors perceptions of the quality of the civil service, quality of public services, and the degree of its independence from political pressures, the quality of policy formulation and implementation and credibility of the government's commitment to such policies. Many economists agree that government effectiveness is one of the main aspects enlightening the divergence in performance across developing countries the slow growth performances in many developing countries, especially African and middle east countries, have been disappointing over the last decade. Recently, growth and development studies have started to focus on the importance of improving institutions of governance through government effectiveness on economic growth. Similarly with Kurtz et al. (2007), this study used the government effectiveness indicator developed by Kaufmann et al. (2008) at the World Bank. Governments effectiveness among organizations are humanly-devised constraints that shape human relations and affect as the incentives of economic agents. Despite the plethora of studies on Government effectiveness (GOV), tourism growth (TG) and FDI, the empirical evidence is not clear about these factors in the tourism sectors. Following criticisms of the traditional assumption of a one-way causal link between FDI and growth, recent studies have considered the possibility of two-way (bidirectional) or non-existent causality among these variables [4]. In other words, these studies have proposed that: (1) not only can FDI inflows in Tourism (FDIT) influence government effectiveness (GOV) and tourism growth (TG) but government effectiveness and tourism growth can also cause FDI inflows in tourism; or (2) there are no causal links among the three variables. Although a number of economic theories point to a positive relationship between FDI and government effectiveness, the direction of causality between the variables has continued to generate controversy among economists, especially regarding determining whether government effectiveness can cause FDI inflows [10]. Additionally, few studies have tested all these constructs (FDI inflows in tourism, government effectiveness and tourism growth) in a single model.

Research Objectives

To develop simultaneous equation model and to observe the three-way linkage interrelationship between FDI in tourism, tourism growth and government effectiveness.

II. METHODOLOGY

The new framework was designed to find the three-ways linkages between FDIA, TG and GOV. Each panel contains three different models; FDIT model, TG model and GOV model. Government Effectiveness (GOV) - the quality of the...
civil service, quality of public services, and the degree of its independence from political pressures, the quality of policy formulation and implementation and credibility of the government’s commitment to such policies. The higher the GOV level, the less FDI inflows can be attracted. In other words, for this research there is a negative correlation between GOV and FDIT. Meanwhile, FDI inflows is often associated with increased international trade and therefore has an impact on the economics of the host economy. Liu et al (2002) tested the existence of long-term relationships among economic growth, FDI and trade in China. The research found the existence of bi-directional causal relationships of FDI with growth and exports. The results similar with research from Gerlach and Liu (2010). In addition, Borensztein, De Gregorio and Lee (1998), Balasubramaniamy (2001) and Xu (2000) found that FDI contributes more to government effectiveness than domestic investment does. Thus, this study proposed that TG and government effectiveness levels are significantly affected by FDIT. Many researchers have agreed that growth is the single most important factor in reducing government effectiveness on a national level. As growth increases, this leads to an increase in the number of jobs, which in turn leads to a government effectiveness (Lin, Thirtle & Wiggins, 2001; Soumaré & Gohou, 2009). Sectorial growth is a key factor in increasing FDI inflows and government effectiveness. Thus, as TG increases, FDIT increases and hence government effectiveness increased. Furthermore, trade openness is a key factor in government effectiveness. In this case, Trade openness of tourism sector (TOT) leads to better domestic technology, more-efficient production and improved TG, leading to FDIT increases and GOV effectiveness. Next control variables used in this study is Market size. Market size defined as the level of development of a market, usually measured by per capita GDP. Generally speaking, the larger the tourism market size (MST), the more FDI inflows it attracts. In this study, the tourism per capita share of GDP was used as a proxy for MST, which is an important determinant of FDI inflows. FDIT increases TG and can increase the government effectiveness levels. In endogenous growth theory, human capital has been recognized as an essential determinant of economic growth. Mankiw et al. (1992), Barro and Sala-i-Martin (2004) and Benhabib and Spiegel (1994) stressed the importance of human capital to growth in both developed and developing countries. Easterlin (1981) and Benhabib and Spiegel (1994) pointed out that human capital is a factor affecting productivity growth, as suggested by endogenous growth theory. The present study used school enrolment as a proxy for human capital. It has been commonly proven that highly educated and skilled workers enhance the absolute value of GDP. Furthermore, a higher level of education in a country attracts more investors; therefore, it indirectly contributes to economic growth. Thus, when the human capital of tourism sector (HCT) in a country increases, it leads to increased growth in tourism sectors which improves living standards, increases FDIT and increase government effectiveness. Lastly, Many researchers have agreed that unemployment rate (UR) is a key determinant of government effectiveness and economic growth. Minsky (1968) summarizes that the alleviation of poverty can be done through the accomplishment and sustaining of full employment. Indeed, a recent study on investment showed that FDI inflows might directly increase the employment rate and training of the labour force, resulting in poverty reduction in the host country (Nguyen, 2003). Thus, UR was used to understand the relationship between poverty and TG.

### Table 3.1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Unit of Measurement</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Effectiveness Index</td>
<td>GOV</td>
<td>Government effectiveness index</td>
<td>World Bank, UNCTAD, OIC annual reports, FAOSTAT and Thomson Reuters DataStream Professional</td>
</tr>
<tr>
<td>Tourism growth</td>
<td>TG</td>
<td>GDP tourism growth (annual %)</td>
<td></td>
</tr>
<tr>
<td>FDI inflows in tourism</td>
<td>FDIT</td>
<td>Total net inflows in USD</td>
<td></td>
</tr>
<tr>
<td>Tourism trade openness</td>
<td>TOT</td>
<td>Trade in tourism (% of GDP)</td>
<td></td>
</tr>
<tr>
<td>Tourism human capital</td>
<td>HCT</td>
<td>Enrolment at least in higher education of tourism sector (%)</td>
<td></td>
</tr>
<tr>
<td>Tourism market size</td>
<td>MST</td>
<td>Tourism value added (constant USD)</td>
<td></td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>UR</td>
<td>Unemployment rate</td>
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</tbody>
</table>

### Regression Model

This study basically used Cobb–Douglas production function and extended version from Kaufmann and Kraay (2002), this study regression model is presented below:

\[
Log GDP_{it} = \alpha_0 + Log GOV_{it} + \mu_{it} + \epsilon_{it}
\]

Where GDP is the log per capita income, GOV is the government effectiveness index, and the subscripts i represents the country. The estimate of the equation will provide information on the marginal contribution of improving governance to the per capita economic growth in the long run. The following regression model was adapted from the Keynesian framework, and Equation [3] was further adjusted according to Pervez and Rizvi’s (2014) conceptual framework, focusing on the tourism sector. This study basically used Cobb–Douglas production function and extended version from Kaufmann and Kraay (2002), this study regression model is presented below:

\[
Log GDP_{it} = \alpha_0 + Log GOV_{it} + \mu_{it} + \epsilon_{it}
\]
Government Effectiveness Model

\[
\text{LogGOV}_{it} = \alpha_0 + \alpha_1 \text{LogGOV}_{i,t-1} + \alpha_2 \text{LogTOT}_{it} + \alpha_3 \text{LogMST}_{it} + \beta_1 \text{LogUR}_{it} + \beta_2 \text{LogHCT}_{it} + \gamma \text{LogFDIT}_{it} + \mu_{it} + \epsilon_{it} \tag{1}
\]

where:
- \(FDIT\) = FDI inflows in tourism (USD)
- \(TOT\) = Tourism trade openness (% of GDP)
- \(MST\) = Tourism market size (constant USD)
- \(GOV\) = Government Effectiveness (government effectiveness index)
- \(UR\) = Unemployment rate (%)
- \(HCT\) = Tourism human capital (%)
- \(TG\) = Tourism growth (annual %)
- \(i\) = Country ;
- \(t\) = Time period
- \(\alpha_0, \alpha_1, \alpha_2, \beta_1, \beta_2, \beta_3, \gamma\) = coefficients of the independent variables
- \(\mu\) = is the error term

Tourism Growth Model

\[
\text{LogTG}_{it} = \alpha_0 + \alpha_1 \text{LogTG}_{i,t-1} + \alpha_2 \text{LogTOT}_{it} + \alpha_3 \text{LogMST}_{it} + \beta_1 \text{LogGOV}_{it} + \beta_2 \text{LogUR}_{it} + \beta_3 \text{LogHCT}_{it} + \gamma \text{LogFDIT}_{it} + \mu_{it} + \epsilon_{it} \tag{3}
\]

where:
- \(FDIT\) = FDI inflows in tourism (USD)
- \(TOT\) = Tourism trade openness (% of GDP)
- \(MST\) = Tourism market size (constant USD)
- \(GOV\) = Government Effectiveness (government effectiveness index)
- \(UR\) = Unemployment rate (%)
- \(HCT\) = Tourism human capital (%)
- \(TG\) = Tourism growth (annual %)
- \(i\) = Country ;
- \(t\) = Time period
- \(\alpha_0, \alpha_1, \alpha_2, \beta_1, \beta_2, \beta_3, \gamma\) = coefficients of the independent variables
- \(\mu\) = is the error term

Dynamic Simultaneous-Equation Model

Arellano and Bond (1995) the GMM estimator provides a convenient framework for obtaining asymptotically efficient estimators in this context. The GMM estimator is designed for datasets that have many panels and few periods and gives consistent estimates under the assumption that there is no autocorrelation in the idiosyncratic errors and that the explanatory variables are weakly exogenous. The identifying assumption that there is no serial correlation in the idiosyncratic errors can also be validated by testing for no second-order serial correlation in the first-differenced residuals. Negative first-order serial correlation is expected in the first-differenced residuals if the idiosyncratic errors are serially uncorrelated, while positive serial correlation is expected at the residual level (Bond & Windmeijer, 2002). The extended Cobb–Douglas production framework has helped to explore the links among the three variables: FDIT, GOV and TG. They were considered simultaneously in a modelling framework. The links among these variables were empirically examined by using Equation [4], Equation [5] and Equation [6].

The third model in this study was to determine the impact of FDIT on TG, as referenced by Solow (1957), using the Cobb–Douglas tourism production function. This model is based on the assumptions of growth theory as specified by Solow (1957), Romer (1990) and Mankiw, et al. (1992) and as employed by Borensztein et al. (1998), Ayanwale (2007) and Goss et al. (2007). For the purpose of empirical analyses, Equation [2] was further adjusted by proxying all functions into the equations. Hence, further developing the concept of the impact of FDIT on TG, Equation [2] is similar to the equations modified by Lin, Thirlle and Wiggins (2001), Li and Liu (2005) and Licai et al. (2010).

CONCLUSION

The system GMM estimator was used to find the three-ways linkages between FDIT, TG and GOV. Each panel contains three different models: FDIT model, TG model and GOV model. The model specification show that FDIT has bi-directional causal relationships with TG and GOV. This suggests that higher TG does send positive signals to prospective FDIT sector. Secondly, TG is found to have a statistically significant effect on FDIT and on GOV. This implies that the FDIT and GOV demand are more closely related to the TG. Consistent with this view that TG leads to greater FDIT is the likelihood that GOV effectiveness.
should be positively affected by increases in TG. Similarly, GOV effectiveness has a statistically significant effect on FDIT; this concludes that FDIT is a determinant of GOV; therefore, a high level of FDIT will decrease GOV. Moreover, the results show that TG and GOV have a significant bi-directional causal relationship. Since GOV effectiveness is an important ingredient for TG, strong FDIT policies are required to attain sustained economic growth. This implies that a greater of GOV effectiveness increases the demand of tourism sector accompanied by the FDIT which lead to a rapid improvement in the efficient use of tourism resources and thus resulted in a reduction of TG issues. This confirms that, in overall terms, an increase in the inflows of FDIT increases TG which attracts further FDIT into these countries. In overall, the results reveal that there is the bi-directional causal relationship between FDIT and GOV. Lastly, the design models also found that bi-directional causal relationship from GOV to TG.

REFERENCES


