



## THE ROLE OF GEOGRAPHICAL CHARACTERISTICS, ECONOMIC AND TRANSPORTATION POLICIES ON THE GEOGRAPHICAL DEVELOPMENT: MODERATING ROLE OF DEVELOPMENT POLICIES

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### ABSTRACT

The goal of the existing study is to analyze the impact of geographical characteristics, economic policies, and transportation policies on Malaysia's geographical development. The aim also shows the investigation of the moderating impact of development policies among the nexus of geographical characteristics, economic policies, transportation policies and geographical development in Malaysia. The study has adopted the primary and quantitative data collection method, and survey questionnaires were used to gather the data. The smart-PLS has been employed to check the validity, reliability and hypotheses testing. The results revealed that geographical characteristics, economic policies and transportation policies have a positive association with geographical development in Malaysia. The results also exposed that development policies are moderating among the nexus of geographical characteristics, economic policies and geographical development in Malaysia. These findings are guided to the regulation-making and implementation authorities that they should focus on the geographical characteristics, economic policies, and transportation policies that could improve Malaysia's geographical development.

### INTRODUCTION

Geographical development has been becoming interesting to be researched and discussed among renowned researchers, scholars and academics for several

decades because of the increasing importance of geographical development. In any economy, geographical development is of great importance, as it brings more or less improvement in its almost all sectors and departments which are the major sources of public and government revenues and provide ample employment opportunities (Hadjimichalis, 2011). Moreover, the economic departments improved by geographical development may be engaged in the production activities or rendering of different services. The geographical development in making plain routes makes it easy for the people and their luggage to move from one place to another. In this way, it brings improvement in both the country's economy and the social life of its public. From an economic perspective it would prove to be of immense importance as it gives the professionals chances to travel from one place to another in search of livelihood, it promotes the transport industries, it makes it easier for the business organizations to acquire needed goods from far off territories and deliver finished products to the desired destination. It also makes tourism possible by clearing the routers (Das, 2017). Let's talk about social importance of making direct routes. We reach the point that the patients may go far off cities searching for a cure and may find better treatment to their diseases, they consumers may acquire goods of need from remote areas with quite ease. Most commonly the people may travel from one place to another easily to meet the dear ones; thus, social relations become stronger. This paper supports its objectives with the empirical evidence from Malaysia's geographical conditions and its development with the time, which proves to be beneficial for the Malaysian economy and society. Moreover, the development in geography is made and accelerated by several factors, addressed by this study (Sultana, 2018). The current study throws light on geographical characteristics, economic policies, and transportation policies to geographical development. When the geographical characteristics are favorable it becomes easier for the authorities to bring positive changes in the geography which is the sign of geographical development. Similarly, the easier, flexible, and favorable economic policies help accelerate geographical development rate. In addition, if any country's transportation policies are polite, easily modifiable, and effective, there are more chances of increase in geographical development, which further opens ways for economic and social progress (Ma & Lew, 2012).

This paper analyses the geographical development in Malaysia which is very important to the Malaysian economy, cultural and social life of Malay people (Singh, Kleeman, & Van Bergen, 2013). A large portion of the Malaysian economy depends on the country's geographical conditions, as the agriculture, mining, tourism, gas and petroleum industries are considered the major sources of revenue for Malaysian government and are based geographical conditions.

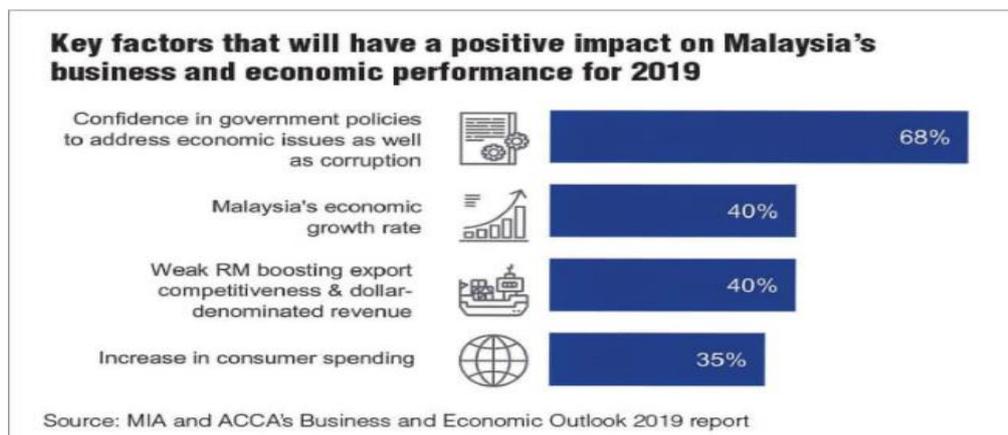
The farming is the very important sector of the Malaysian economy as it earns foreign exchange by exporting crops. The three main crops – rubber, palm oil, and cocoa – have dominated agricultural exports. But unfortunately, a large portion of soil is weathered, acidic, and not very fertile for crop production; thus, the government is trying its best to improve soil quality (Buang, 2011). Moreover, mining is one of Malaysia's major industries whose contribution to the economy is 10 %. Many destinations used for mining serve as tourism spots like Chimney Museum, Geological Museum, Palong Tin Museum, Petroleum

Museum, Tanjung Tualang Tin Dredge No. 5. And the mining is also concerned with geographical conditions. Besides this tourism industry is growing in the Malaysian economy, and its growth is based on geographical development. That is why the government of Malaysia is making a struggle to accelerate the rate of geographical development. In this regard, the Malaysian government takes different steps which include the understanding of geographical characteristics (both human and physical), the issuance and implementation of favorable economic policies, the execution of favorable transportation policies, and making policies for the development of different economic, social, and cultural sectors which are analyzed to rapidly accelerate the rate of geographical development (Saadatian, Haw, Mat, & Sopian, 2012).

The paper examines the influences of geographical characteristics, economic policies, and transportation policies on geographical development. Geographical characteristics of any country are divided into physical geographical characteristics such as landforms, water, climate, etc. and human geographical characteristics such as economic, social, and cultural characteristics. The change in the geographical characteristics in different territories affects geographical development (Elwood, Goodchild, & Sui, 2012).

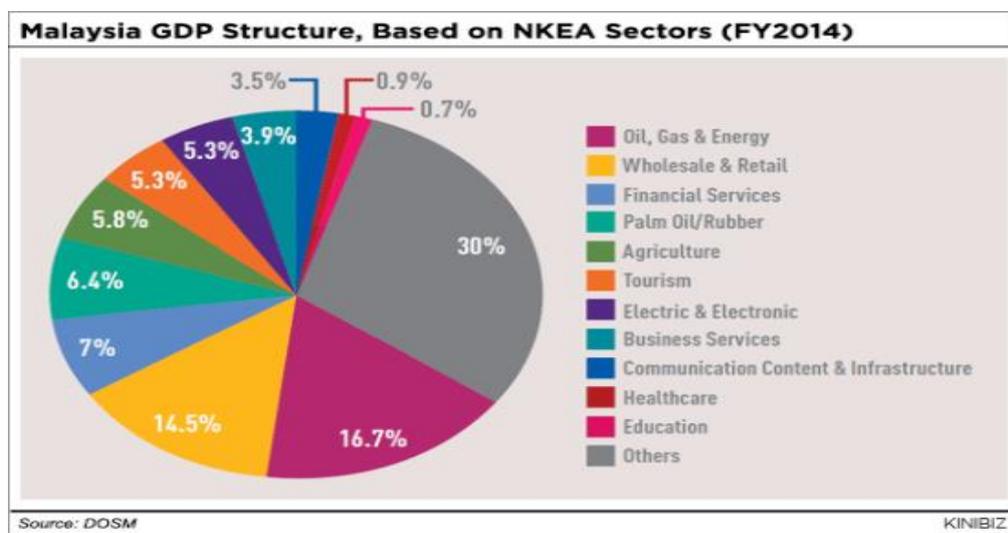
Similarly, economic policies also put positive influences on the rate of geographical development. Economic policies are issued and administered by the government of a country to control the economy's conduct. These are the decisions about government taxation and spending, circulation of money, and distribution of income. Moreover, the rate of geographical development is increased by transportation policies that are effective decisions regarding allocating transport resources, regulation, and transportation activities.

Furthermore, the development policies which are issued and implemented by the government to promote different economic, social, and cultural sectors, influence the factors such as geographical characteristics, economic policies, and transportation policies and the geographical development and strengthens their mutual association between geographical characteristics, economic policies, and transportation policies and geographical development. In addition, government economic and development policies could enhance the economic performance of the country. As mentioned in Figure 1 of the study that shows the factors influencing Malaysia's economic performance and business, the biggest factor is confident government economic, development, and geographical policies representing 68 per cent improvement in Malaysia's economic performance. In addition, other factors also influenced the performance, such as growth rate effects being 40 per cent, export competitiveness also has 40 per cent impact, and consumer spending has a 35 per cent impact on the country's economic performance. These statistics are shown in Figure 1.



**Figure 1:** Factors Influence Malaysia's Economic Performance

In addition, due to Malaysia's geographical characteristics related to natural resources, it is evident that Malaysia's economy depends on the country's oil and gas resources. As mentioned in Figure 2, the oil, gas and energy are the most significant GDP source for Malaysia, which is 16.7 per cent of total GDP. While other geographical factors also influence the country's GDP like palm oil and rubber resources that contribute 6.4 per cent, agriculture contributes 5.8 per cent, and tourism contributes 5.3 per cent. These values are mentioned in Figure 2.



Thus, the present study throws light on the contribution of geographical characteristics, economic policies, and transport policies to the geographical development in a country and a considerable moderator of development policies with the help of suitable theoretical framework and proper methodology. The paper takes the empirical support of Malaysian geography to find out its results regarding its objectives. At last, the paper proves its findings with proper discussion, implication and conclusion.

### LITERATURE REVIEW

Any country has specific geographical features which are different from territory to territory. Some of these geographical features may be favorable for

the economy or society, while others may not be favorable. Geography of any country is very significant as it affects the country's culture, people, and economy (Vágner, Müller, & Fialová, 2011). Though a country has specific geography, the country's government and private authorities may have an intention and sufficient power to bring some positive changes in the country's geography according to the changing economic and social needs known as geographical development. In this line, the scholar Sheppard (2012) believes that every state has a specific geography. As per emerging needs, the artificial change in physical and human geography is known as geographical development. While in other words, geographical development in the improvement or positive changes in a state's geography. This geographical development is of great importance to people's social lives and economic growth. If natural resources like land, climate, water, and sanitation are not good, it affects people's health. It affects their professional services; in such a situation, the management makes positive changes in the country's natural resources and improves the health and services of the general public. Similarly, if the land is weathered, acidic, barren or less fertile, it is unlikely for the plants and crops to grow, in result the food and medication are difficult to acquire as per requirements. In such a situation, the government tries its best to remove the faults found inland to make the land fertile and cultivated to meet the food, cloth and medication requirements (Hendrikx, Dormans, Lagendijk, & Thelwall, 2017). In Malaysia, as the geography of different areas is different and most of the economy depends on geographical conditions, it is required to make necessary changes in the geography. Thus, geography development is proving to be considerable importance for tourism, mining, farming, travelling, chemical, food, cloth industries and accommodation, etc. The geographical development in any country is accelerated by many factors such as geographical characteristics, economic policies, and transportation policies. The geographical characteristics (both physical geographical characteristics and human geographical characteristics) help the authorities improve geographical development. Likewise, the nature of government policies to control its revenue and spending assists in increasing the rate of geographical development (Newman, 2019). Furthermore, the nature of policies made by transportation authorities in the country also affects geographical development. Besides, in the presence of sound and effective development policies, geographical characteristics, economic policies, and transportation policies are in better a position to accelerate economic development.

The geographical characteristics of any country (both the physical geographical characteristics and the human geographical characteristics) are of great importance to geographical development, contributing to the country's economy. As the scholar, Mitchell, Frank, Harris, Dodds, and Danforth (2013) are of the view that geographical characteristics are divided into two categories, physical geographical characteristics and human characteristics while physical characteristics consist of landforms, soil, climate, atmosphere, water, and natural vegetation, and human geographical characteristics include social, political, economic, and cultural characteristics. Physical geographical characteristics prove to be beneficial in accelerating the rate of geographical development. For instance, if there are hills and the water is easily available in some territory, the government may allow to clear the patches of that hills and

let the plants, vegetation, and crops grow there, which give rise to economic growth (Kwan, 2012). Similarly, the territories where the climate is suitable for a normal life, but there are not equal patches of land, and some rocks are found there, the government, as well as private authorities, initiate to remove the rocks from there and try to convert the land into equal plans to let the territory serve as accommodation. Likewise, the country where there are several islands with suitable climate and fertile soil the land can be prepared to cultivate foods (both vegetables and fruits) and tourism hotels can be established with parks and other recreational places. The human geographical characteristics are equally beneficial for the acceleration of geographical development in the country. For instance, if the inhabitants of a territory are hardworking, active, and healthy due to the suitable climate effects, they take active part in promoting the rate of geographical development as they can bring changes in the country's geographical conditions. Similarly, the territories where the social bondage among the people is strong they may work in groups and teams, and the investigation proves that groups best handle a task than individuals thus the strong social bondage among people let them accelerate the geographical development according to their need (Seto, Sánchez-Rodríguez, & Fragkias, 2010). In Malaysia, as analyzed by Kitchin (2013), the geographical characteristics of different territories add to geographical development rate by facilitating the government in this regard.

**H1:** Geographical characteristics are a positive relation with geographical development.

The nature of economic policies and their implementation and execution affects the rate of geographical development of any country and thereby affects the country's economic and social growth. Economic policies are the course of actions on the part of the government, affecting the economy's behavior or conduct (Dziauddin, Powe, & Alvanides, 2015). Economic policies include the decisions made about the revenues (the major source of revenue is taxation) and government spending, income distribution, and the supply of money. In his article on geography Long, Liu, Li, and Chen (2010) suggest that both the taxation and spending of government bring positive changes in the country's geography and thereby facilitate its public. When fewer taxes are imposed on mining, tourism, agriculture, transport, and other industries and these policies are flexible and convenient, the industries will be better positioned to bring positive changes in the geography of specific territory according to the needs. Similarly, government decision-making about spending its revenues is a source of great contribution to geographical development (Martin, 2010). Suppose the government decides to start transportation between two specific territories. It may initiate to clear paths, build roads and bridges that is in itself a geographical development, and this development further promotes positive changes in the geography as it lets the people and equipment move far off territories (Elhadary & Samat, 2012). In the same way, the government policy to spend its revenue on the building of dams, different tunnels, artificial waterfalls and rivers help accelerate geographical development as it is a positive artificial change in the geographical conditions of the country (Rodríguez-Pose, 2013). The government's economic policies about the supply and the circulation of money within the country also cause the occurrence of positive changes in the country.

For example, suppose the government has made a policy to reduce the discount rate on advances or purchase securities in the open markets to increase the amount of money in circulation. It allows local industries to invest in bringing positive changes in the geography as per their needs, which is a sign of increasing geographical development rate. Thus, the rate of geographical development is accelerated with the convenient, flexible and favorable economic policies on the government (Boschma & Frenken, 2011).

**H2:** The economic policies have a positive association with geographical development.

As per a long investigation by Barca, McCann, and Rodríguez-Pose (2012) the transport has become a backbone in the economic, social, cultural, and religious life that all take an active part the acceleration of geographical development of the country, transport policies deal with the development of a set of propositions and constructs which are made to meet specific objectives regarding economic, social, and environmental circumstances, and the performance and the functioning of the overall transport system (Jeevan, Ghaderi, Bandara, Saharuddin, & Othman, 2015). The effective decisions regarding the allocation of transport resources and the management and regulation of current transportation functions help bring positive changes in the country's geographical conditions, which determine the rate of geographical development. According to the views of Liu, Derudder, and Wu (2016) the decision of building different transport ways like air transport ways, road transport ways, and waterways of transport along with the sanction and jurisdiction at the different level of transport building and functions affect both physical and human geographical conditions. To meet the emerging economic needs, the government pay attention to make a transportation policy to build a direct, safe, and comfortable roadways to establish a connection between two territories which are divided by rocks. This policy brings improvement in geographical development as it results in the removal of rocks from there, cleanliness of path, and the growing of granary, plants, and trees alongside the road. The building of road and plantation of trees alongside the road contribute to geographical development in two ways. First, they further clarify the country's atmosphere, and secondly, they result in the construction of artificial waterways and artificial rivers (McEntee & Agyeman, 2010). When the government gives sanction to travel to particular hills, mountains, and islands, it provides them with the way to bring geographical development. Similarly, allowing road or water transport from one place to another helps the general public develop their geographical culture and social attitudes as it lets them meet people having different or quite opposite geographical culture and social conduct. In Malaysia, a developing Southeast Asian country, where there is still some need of developing the quality of land, atmosphere, and the cultural and social interaction, and the changes in physical geographical conditions transport policies of the government play a significant role in geographical development (Glass, 2014).

**H3:** Transport policies are in a positive association with geographical development.

Development policies help the government and private sectors directly or indirectly bring positive changes in the country's geography. Development policies are the decisions made by the government to launch activities which help remove poverty and economic problems, raising the level of well-being of the people, enhancing the rate of employment opportunities, the achievement of equality, provision of equal basic rights, and development in all the social and economic sectors (Laursen, Reichstein, & Salter, 2011). The development policy made for the reduction of poverty and the provision of employment opportunities leads to a high rate of geographical development as it raises the people's income level. With more financial resources, people can invest in different geographical projects like spending money on land to prepare for farming or other profitable activity. Similarly, the government may compose a policy to develop tourism or mining industries. The activities undertaken for the development of tourism or mining industries result in improved geographical conditions like landforms, water, atmosphere, sanitation, and cultural and social conducts (Huang, Wu, & Barry, 2010). In Malaysia, the government is making development policies to promote different economic sectors which is making a considerable improvement in both the physical and human geographical conditions. Moreover, development policies also affect geographical characteristics, economic policies, and transportation policies. Thus, they lead to strength of the association between geographical characteristics, economic policies, and transportation policies and geographical development. The government's geographic policies accelerate the country's economic and social activities, which directly or indirectly affect human and geographical characteristics and thereby improve the rate of geographical development (Yeo, Yoon, & Yee, 2013). Likewise, the policies made for developing different economic sectors substantially impact the number of economic policies and their nature, contributing to geographical development (Blaschke et al., 2014). Moreover, the issuance of different development policies for the promotion of transport tends the government to make better transport policies that promote the transport related industries which also accelerate geographical development. Thus, the issuance of development policies makes geographical characteristics, economic policies, and transportation policies more effective on geographical development.

**H4:** Development policies are a considerable moderator between geographical characteristics and geographical development.

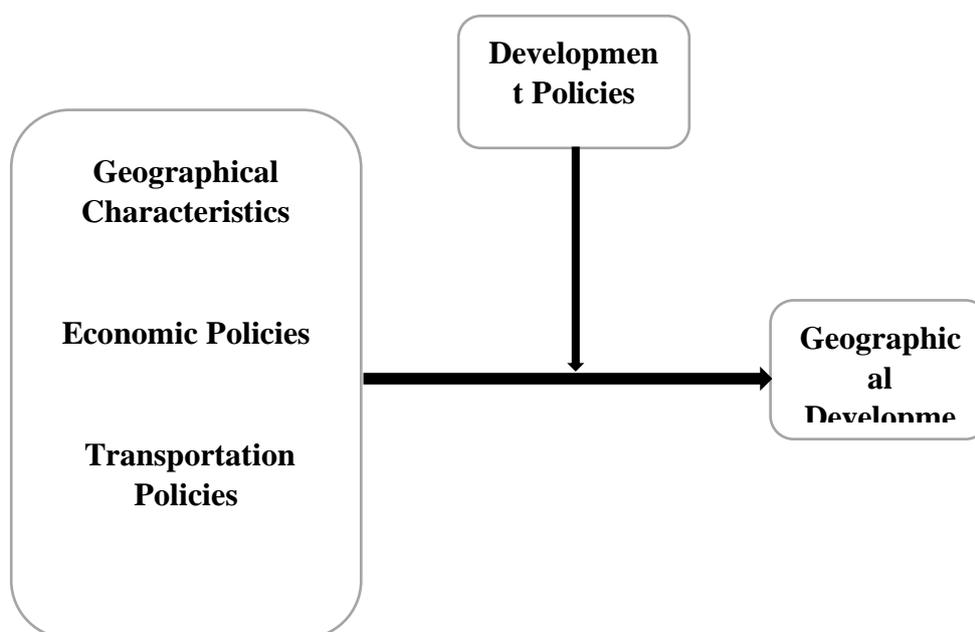
**H5:** Development policies are an appropriate moderator between economic policies and geographical development.

**H6:** Development policies are an essential moderator between transportation policies and geographical development.

## **RESEARCH METHODS**

The goal linked with this article is to analyze the impact of geographical characteristics, economic policies, and transportation policies on the

geographical development in Malaysia and investigate the moderating impact of development policies among the nexus of geographical characteristics, economic policies, transportation policies and geographical development in Malaysia. The study has adopted the primary and quantitative data collection method, and survey questionnaires were used to gather the data. The purposive sampling has been used to select the respondents while the respondents' geographical development and planning department are the respondents. During the first personal visit, a total of 490 surveys were forwarded to the respondents, but during the second visit, only 280 were returned that is 57.14 per cent rate of response. In addition, the smart-PLS has been employed to check the validity, reliability and hypotheses testing due to the complexity of the framework (Sarstedt & Cheah, 2019). The constructs that are taken by the articles show three predictors named as geographical characteristics (GC) that has eight items, economic policies (EP) that has four items and transportation policies (TP) that has five items. In addition, geographical development (GD) has been used as a dependent variable that has five items and development policies (DP) has been used as a moderator that has seven items. These constructs are shown in Figure 3.



**Figure 3:** Theoretical Framework

### *Findings*

The results section shows the validity and reliability of the constructs, along with hypotheses testing. Firstly, convergent validity has been examined related to the correlation between the items. The findings show that valid convergent validity and high correlation between items because the Alpha and CR values are higher than 0.70, and loadings and AVE values are bigger than 0.50. These values are exposed in Table 1.

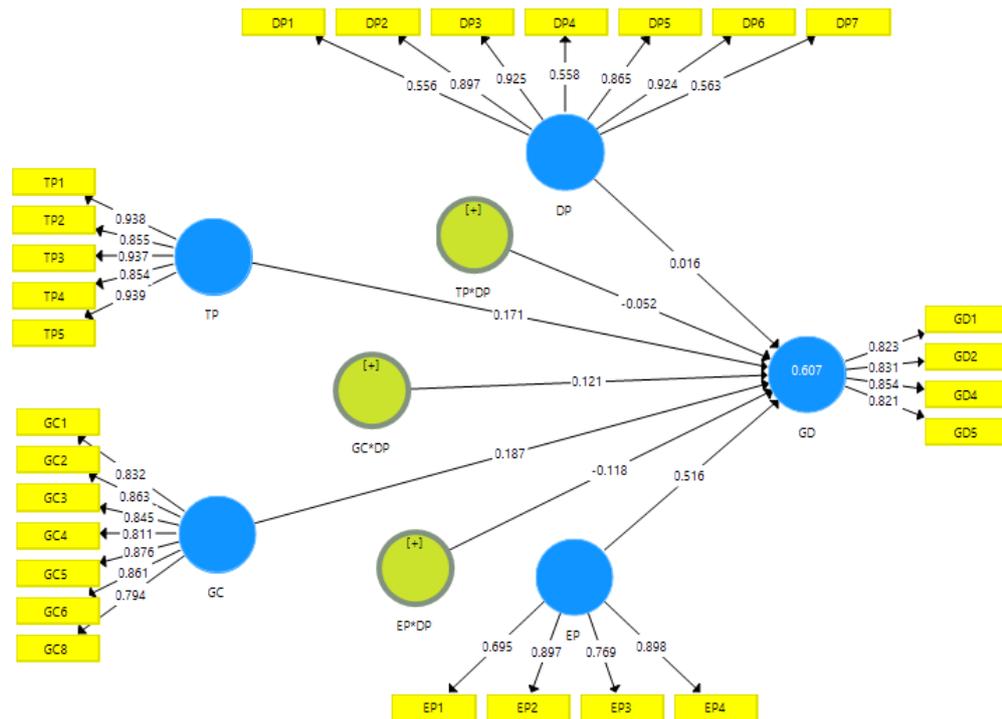
**Table 1:** Convergent Validity

<b>Constructs</b>	<b>Items</b>	<b>Loadings</b>	<b>Alpha</b>	<b>CR</b>	<b>AVE</b>
Development Policies	DP1	0.556	0.895	0.909	0.600
	DP2	0.897			
	DP3	0.925			
	DP4	0.558			
	DP5	0.865			
	DP6	0.924			
	DP7	0.563			
Economic Policies	EP1	0.695	0.835	0.890	0.671
	EP2	0.897			
	EP3	0.769			
	EP4	0.898			
Geographical Characteristics	GC1	0.832	0.931	0.944	0.707
	GC2	0.863			
	GC3	0.845			
	GC4	0.811			
	GC5	0.876			
	GC6	0.861			
	GC8	0.794			
	Geographical Development	GD1			
GD2		0.831			
GD4		0.854			
GD5		0.821			
TP1		0.938	0.944	0.958	0.820
TP2	0.855				
TP3	0.937				
TP4	0.854				
TP5	0.939				

Secondly, discriminant validity has been examined that is related to the correlation of the variables and the findings show that valid discriminant validity and low correlation between variables because the Heterotrait Monotrait (HTMT) ratios are less than 0.90. These values are exposed in Table 2.

**Table 2:** Discriminant Validity

	<b>DP</b>	<b>EP</b>	<b>GC</b>	<b>GD</b>	<b>TP</b>
DP					
EP	0.447				
GC	0.717	0.398			
GD	0.454	0.633	0.468		
TP	0.488	0.457	0.429	0.566	



**Figure 4:** Measurement Model Assessment

Finally, path analysis has been shown at the end of the result section. The figures revealed that geographical characteristics, economic policies and transportation policies have a positive association with geographical development in Malaysia and accept H1, H2 and H3. The results also exposed that development policies are moderating among the nexus of geographical characteristics, economic policies and geographical development in Malaysia and accept H4 and H5. However, development policies do not moderate the nexus of transportation policies and geographical development in Malaysia and reject H6. These nexuses are shown in Table 3.

**Table 3:** Path Analysis

Relationships	Beta	S.D.	t-statistics	p-values	L.L.	U.L.
EP -> GD	0.516	0.037	14.087	0.000	0.450	0.582
EP*DP -> GD	-0.118	0.052	2.286	0.027	-0.220	-0.025
GC -> GD	0.187	0.076	2.457	0.018	0.043	0.307
GC*DP -> GD	0.121	0.045	2.725	0.009	0.003	0.174
TP -> GD	0.171	0.049	3.523	0.001	0.067	0.231
TP*DP -> GD	-0.052	0.053	0.992	0.326	-0.161	0.020

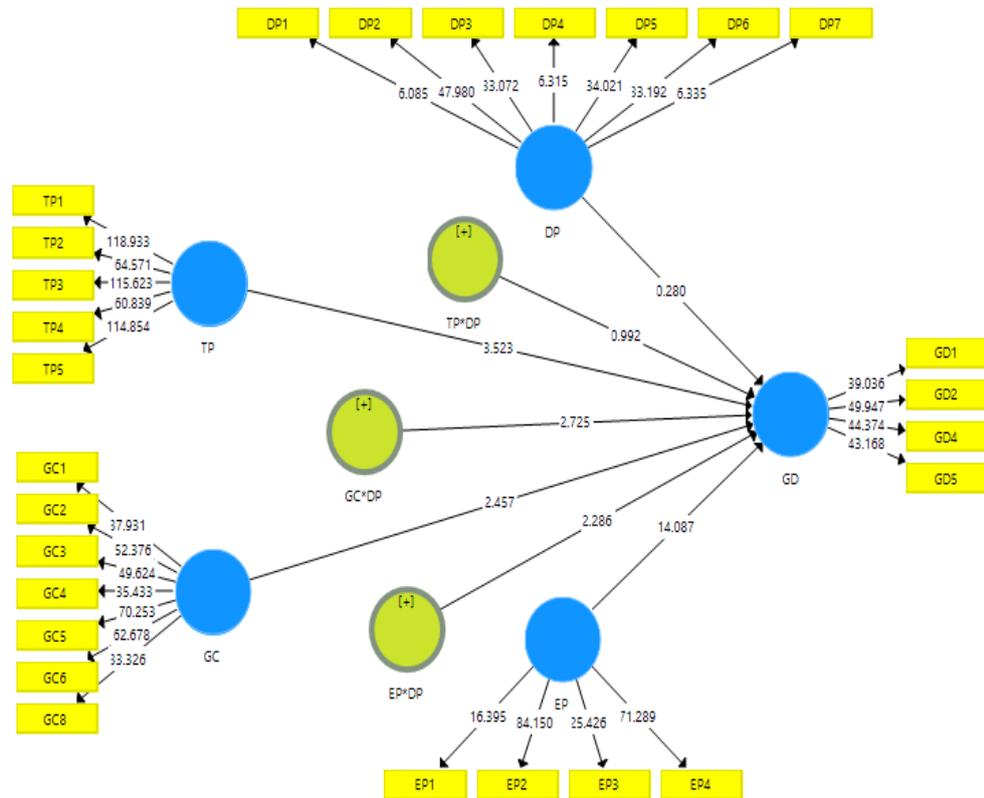


Figure 5: Structural Model Assessment

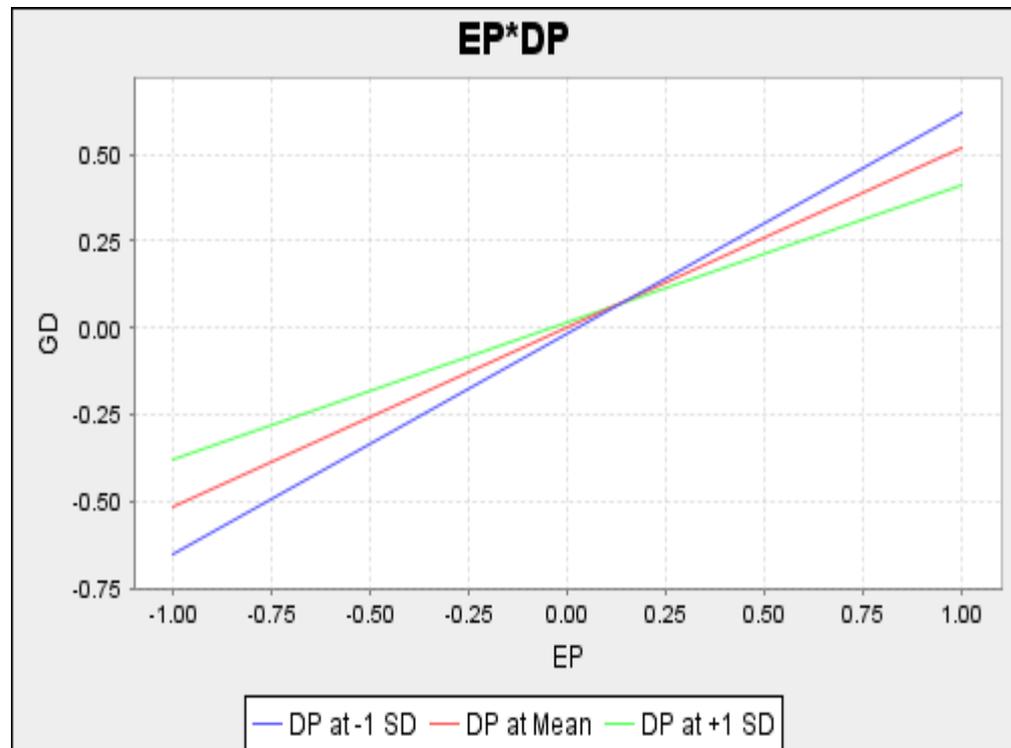
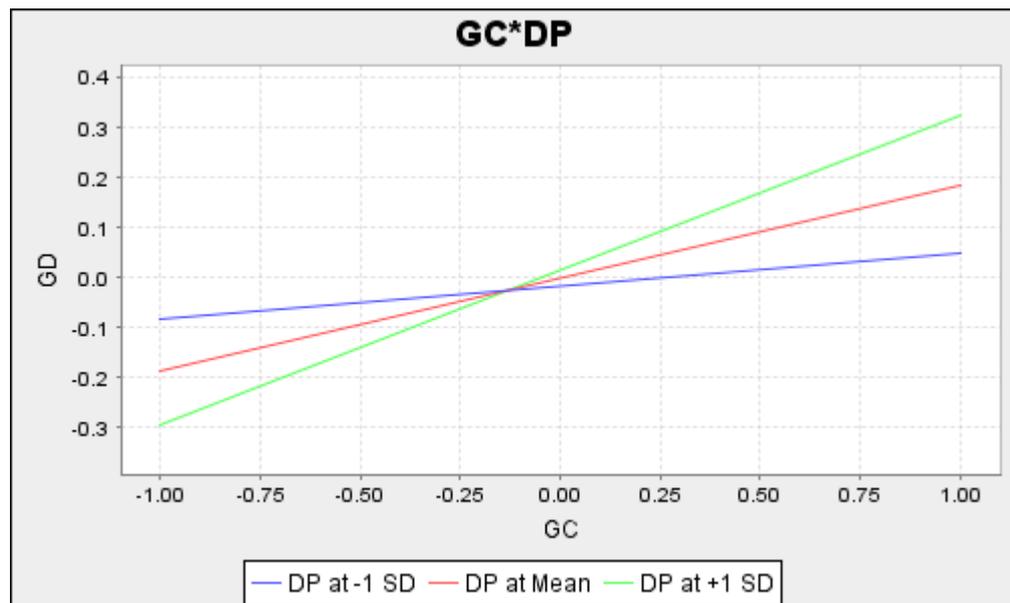
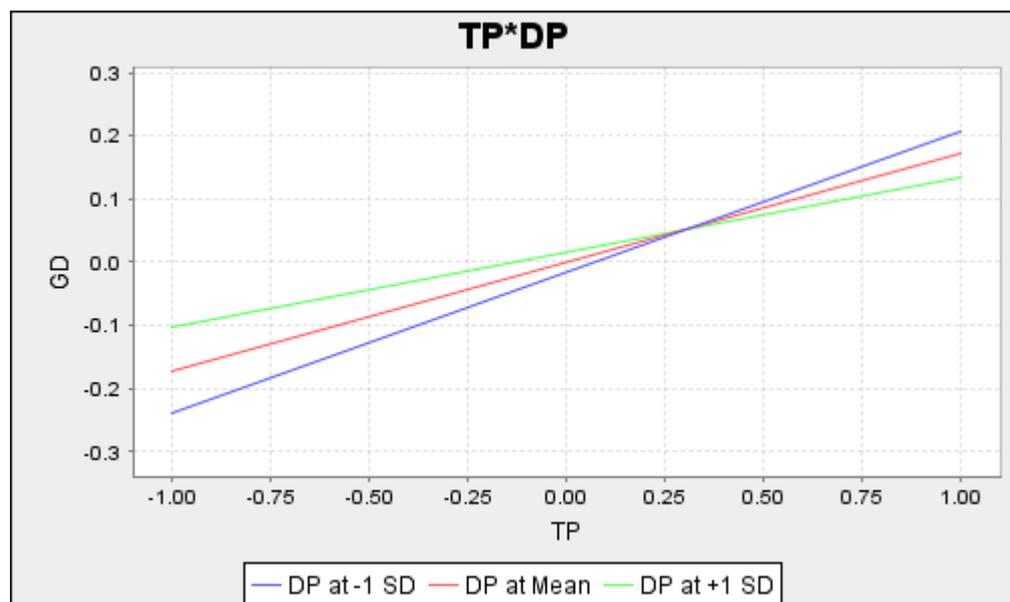


Figure 6: EP\*DP



**Figure 7:** GC\*DP



**Figure 8:** TP\*DP

### DISCUSSION AND IMPLICATION

The goal of the existing study is to analyze the impact of geographical characteristics, economic policies, and transportation policies on Malaysia's geographical development. The aim also shows the investigation of the moderating impact of development policies among the nexus of geographical characteristics, economic policies, transportation policies and geographical development in Malaysia. The current study results have revealed that geographical characteristics are in a positive link with geographical development. These results are supported by the past studies Hadjimichalis (2011), showing that the favorable geographical characteristics add to the geographical development. The results have also indicated that economic

policies' nature has a positive association with geographical development. These results are in line with the previous studies of Büscher and Arsel (2012), according to which if the economic policies are flexible, favorable, and convenient, the geographical development is fast and easy. Moreover, the results have revealed that transportation policies are linked with geographical development positively. These results agree with the studies of Hendrikx et al. (2017), which prove the considerable contribution of transportation policies to geographical development. Furthermore, the findings of the study have represented that the application of development policies play a moderating role between geographical characteristics and geographical development. These findings are in line with the previous studies of Itskhoki and Moll (2019), which imply that under the implementation of development policies favorable geographical characteristics put a stronger impact on geographical development. In addition, the results have exposed that the development policies are a significant moderator between economic policies and geographical development. These results match with the results of past studies of Syphard, Massada, Butsic, and Keeley (2013), which shed light on the point that the nature and implementation of development policies positively impact the economic policies geographical development as well as on their mutual association. Besides this, the results have shown that development policies are not a considerable moderator between transportation policies and geographical development. These results match with the previous studies of Mangrum and Pozzebon (2012), according to which the implementation of development policies does not affect the transportation policies and geographical development and their mutual association.

The current study makes both theoretical and empirical implications. This paper makes theoretical implications as it contributes to the literature on geographical management. In this context, the study elaborates three variables, such as geographical characteristics, economic policies, and transportation policies on geographical development. The study also implies that development policies' nature is an appropriate moderator between geographical characteristics, economic policies, transportation policies, and geographical development. The study carries empirical implications while it gives a guideline to the geographical management of how to bring geographical development with favorable geographical characteristics, suitable economic policies, and transportation policies. It also clears on geographical management to accelerate the influence of geographical characteristics, economic policies, and transportation policies on geographical development with favorable development policies.

## **CONCLUSION AND LIMITATIONS**

To be cut short, the study elaborates that the relationship between geographical characteristics and geographical development is positive as the favorable geographical characteristics help to increase the rate of geographical development. The study also examines that the association between economic policies and geographical development is of great significance as the favorable economic policies bring forth geographical development. Moreover, the results prove that transportation policies have a positive association with geographical development. The study examines that better transportation policies enhance the

rate of geographical development. Furthermore, the study shows development policies as a significant moderator between geographical characteristics, economic policies, transportation policies, and geographical development. The implementation of better development policies improves geographical characteristics, economic policies, and transportation policies, leading to geographical development.

Although the current study gives a detailed description of three geographical development contributors such as geographical characteristics, economic policies, and transportation policies and throws ample light on their influences on geographical development, it has certain limitations as well. First of all, various other variables have direct and considerable impacts on geographical development but are not considered this paper. Future scholars should address these variables. Moreover, only a specific source of data collection and analysis has been applied by the author of this study while future scholars should adopt more than one source for collection and analysis of data in support of their study. Besides this, the study introduces development policies as a moderator between geographical characteristics, economic policies, and transportation policies, and geographical development while the same should be used as a mediator in future literature.

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