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MEASURING THE DETERMINANTS FOR DIFFERENTIATION IN VILLAGE ECONOMIC PERFORMANCE IN RURAL MALAYSIA

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Abstract

In rural Malaysia, the variation of villages has its unique economic backgrounds as well as the differentiation in its village economic performance. The marginalised village often faces many challenges in achieving socio-economic sustainability, especially those who having low economic performance. However, there are also other villages were having a different situation of economic performance level. This mosaic of rural village's situations appears a query on the endogenous and exogenous factors that affects this kind of pattern in economic performance and does the rate of economic performance varying among the villages in rural areas. Therefore, this paper aims to identify the factors for differentiation in village economic performance in rural Malaysia. Besides that, the evaluation of factor's significance towards the village economic performance according to five capitals, namely economic, environmental, cultural, human and social is one of key analysis in this research. This paper discusses the methodology used in this study which was implemented on the six selected villages in six different rural regions surrounding the Johor state as the key spatial component. Finally, this paper reveals the key findings on the identification of factors and its significance towards village economic performance in rural Malaysia.

Keywords: Economic, performance, factor rural areas, differentiation.

1. Introduction

Rural villages are always considered as necessary in the agenda of national development (Preston & Ngah, 2012; Blakely & Leigh, 2013; Cheshire, 2016; Valdes, 2019). Today, approximately about 46 per cent of the world's population are living in rural areas. However, various scholars described that the world today facing the issue of rural decline due to the rural variation and its economic performance. Most of rural villages faced the issue on the rural decline and towards a complicated issue of breaking the cycle of declining (Jansson & Terluin, 2009; Li, Westlund, Zheng, & Liu, 2016; Jentsch, 2017; Murdock, Leistritz, & Leistritz, 2019; Wuthnow, 2019). Hence, rural villages must solve these issues using the approach of economic revitalization as appropriate strategies to be implemented in which require to identify significant factors contributes to the rural economic performance (Liu & Li, 2017; Onitsuka & Hoshino, 2018). Acknowledging rural variation and rural economic performance is very important in planning for rural development since different rural areas have differentiation in economic performance and potential. Previous rural development policy and scholars in Malaysia does not adequately address the issues of rural variation in assessing the differentiation in rural economic performance. Therefore, this paper aims to identify factors for differentiation and its significance towards the village economic performance of rural Malaysia.

2. Problem Statement

The emergence of rural images should be seen preferably in terms of 'a new mosaic of rural areas' with winners, in-betweens, and losers (Phelps, 2017). This mosaic of situations in rural villages directly raises a question about driving factors behind this pattern of economic performance. In economic literature, the key questions arise: how come the rural villages having differentiation in economic performance level and economic growth rates? With this question, this research is scientifically and politically relevant in determining the factors for differentiation in the rural economic performance. Several scholars highlighted that the interplay between five capitals namely economic, social, human, cultural and environmental that involves both endogenous and exogenous forces as main factors behind these rural differentiation (Terluin, 2001; Bowen, 2010). Thus, this research tried to explain on identified factors and indicators involving five capitals which applied by researchers as mentioned in Table 1.

Table 01. Overview of factor/indicator selection method applied by researchers

Source of Benchmark	Spatial Level	Factor/Indicator				
		Economic	Social	Human	Cultural	Environmental
Terluin (2001)	Region	Employment growth, Economic activities	Connection of local and external, Communities	Knowledge, Population growth, Innovation	Local character	Natural resources, Amenities and infrastructure
Courtney and Moseley (2008)	Region	Businesses, Investment, Economic linkages	Networking, Trust, Norms, Quality of governance	Health, Skill, Education, Rest taking	Attitudes, History, Customs and heritage	Natural asset, Peripherality, Accessibility to facilities

Agarwal et al. (2009)	Region and Village	Employment, Enterprise business	Participation rates, Engagement	Skills, Education	Resilience	Transportation, Infrastructure, Location, Natural beauty
Sánchez-Zamora et al. (2014)	Village	Income, Employment, Economic structure, Infrastructure	Public-Private sector network, Community co-operative	Demography, Skill, Education, Access to service	Identity, Heritage, Civic engagement	Peripherality, Natural resource, Environmental quality
Straka and Tuzova (2016)	Village	Employment, Income, Property ownership	Social infrastructure, Political engagement	Demography, Education, Knowledge, Skill, Health	Historical environment, Resilience, Attitudes	Attractiveness of environment, Location, Infrastructure

Scholars like Terluin (2001) highlighted that integration between both endogenous and exogenous determinants which involves five capitals as main factors behind this rural differentiation using the method of pattern-matching on capitals in economic performance. The continuity of Terluin's work has been shifted to a new paradigm where the application of five capitals have been conducted by Courtney and Moseley (2008) and Agarwal, Rahman, and Errington, (2009) as district-level analyses to evaluate the economic performance of regional level and village level. It is proven that the application of this method in the context of village level could successfully be implemented (Sánchez-Zamora, Gallardo-Cobos, & Ceña-Delgado, 2014). Therefore, it is vital in order to explain the differentiation of economic performance factors using five capitals in each level of rural areas especially in the developing countries as Straka and Tuzova (2016) explains that the importance of village level in assessing the economic performance of rural areas using correlation matrix analyses. These five capitals that initiated by Agarwal et al. is significance to the Terluin's effort which would help future research on working new framework in measuring rural economic performance. Besides, it does take into consideration on the endogenous and exogenous factors integration in assessing the performance at village level.

3. Research Questions

These significant of works raised the research questions which need to be highlighted:
- Factors that affect to the differentiation in economic performance.
- To what extent the level of differentiation of village's economic performance.

4. Purpose of the Study

The purpose of this study is to identify factors for the differentiation in economic performance and its significance towards the village economic performance of rural Malaysia

5. Research Methods

The instrument of questionnaire survey is the only primary data for this study. It is used to gaining knowledge on capitals which affects the village economic performance. Likert-scale in the questionnaire is the accurate methods to evaluate the perception on economic, cultural, human, social and environmental capitals. Purposive sampling is one of sampling method implemented that involved every head of

households in the study areas. The mean score is conducted that measures the level of differentiation of the village's economic performance based on identified factors and indicators in five capitals of rural economic performance. It was arranged accordingly using a scale based on the analysis of mean score (performance level). Then, the F-test analysis (ANOVA) was used to determine whether the means of six villages are statistically significant differences between the six villages. Besides that, the spearman correlation analysis also implemented to identify factors that influenced the village's economic performance (dependent variable-income level) using identified factors in five capitals using a scale-based (value of correlation) (Table 2).

Table 02. Methodology aspects of research

| Aspects of Research	Questions	Type of Analysis
▪ Village level studies. ▪ Five capitals as independent variables for measurement village economic performance: -Economic (5 factors and 9 indicators) -Social (3 factors and 8 indicators) -Human (4 factors and 8 indicators) -Cultural (4 factors and 7 indicators) -Environmental (4 factors and 9 indicators) ▪ Dependent variable as a measurement of village economic performance: -Income level	To what extent the level of differentiation of the village's economic performance?	▪ Quantitative data analysis (Descriptive analysis-Mean Scores) -0.00 – 2.00: Very low level -2.01 – 4.00: Low level -4.01 – 6.00: Moderate level -6.01 – 8.00: High level -8.01 – 10.00: Very high level ▪ (Inferential analysis-F-test)
▪ Data collection from the selected head of household in the village based on three-level of rural density. ▪ Collection of data is from a household's survey of a village.	Factors that affect to the differentiation in village's economic performance?	▪ Quantitative data analysis (Inferential analysis-Spearman Correlation) -0.00 - No correlation/relationship -0.01 – 0.30: Very weak -0.31 – 0.50: Weak -0.51 – 0.70: Moderate -0.71 – 0.90: Strong -0.91 – 1.00: Very strong

The definition of rural in different countries appears to vary based on specific criteria adopted. Among the criteria to determine rural areas include geographical location, size, and density of the population, distance from urban areas, socio-demographic characteristics, administrative, as well as infrastructural and economic features (Gallent, Juntti, Kidd, & Shaw, 2008; Surchev, 2010). However, OECD (2016) has introduced the standard definition for the rural area, which has to be an area that has a population density of fewer than 150 people per square kilometre. Therefore, the selected study area is based on the category of rural density level. There are about 60 *mukim* out of 93 *mukim* in Johor is categorised as rural regions whereas 33 *mukim* are categorised as urban areas.

The selection of six villages is based on two criteria. First, the selection must be based on three different of rural density levels which are low-density rural level (0-50 people/km^2), medium-density rural level (51-100 people/km^2) and high-density rural level (101-150 people/km^2). Most importantly is the selection must be involved in all three levels. Second, the selection needs to represent each of the Johor regions (northern, southern, western and eastern) in which is based on the geographical context and characteristics of demography in each place. Therefore, six villages were selected as the study area, which comprised of 302 selected respondents (Table 3 and Figure 1).

Table 03. Selection of study areas

Density Level	District	*Mukim*/ Sub-District	Village	Main Occupation and Economic Activities	Village's Income Level (RM)	Details	
						Families	Sample
0-50 people/ km²	Mersing	Penyabong	Kampung Simpang Penyabong	Resort and Chalet; Tourism; Fisheries; Seafood business; Palm oil	2,424	288	65
	Johor Bahru	Sungai Tiram	Kampung Tanjung Langsat	Fisheries; Seafood business; Small-medium industry (food); factory worker	3,509	178	42
51-100 people/ km²	Pontian	Ayer Baloi	Kampung Parit Puteri Menangis	Pineapple; Palm oil; Business; Services (Teacher; Contractor)	4,515	220	52
	Ledang	Kundang	Kampung Teluk Rimba	Paddy; Palm oil; Rubber; Homestay	3,150	142	33
101-150 people/ km²	Batu Pahat	Minyak Beku	Kampung Sungai Lurus	Fisheries; Palm oil; Coconut, Seafood business	3,479	275	65
	Segamat	Pogoh	Kampung Paya Besar	Palm oil; Rubber; Crops (Durian, Banana, Vegetables)	3,122	190	45

*Source of data is based on the first site visit to every selected village by discussing to the representative officer from District Office,

Penghulu Mukim and head of the village (*Ketua Kampung*).
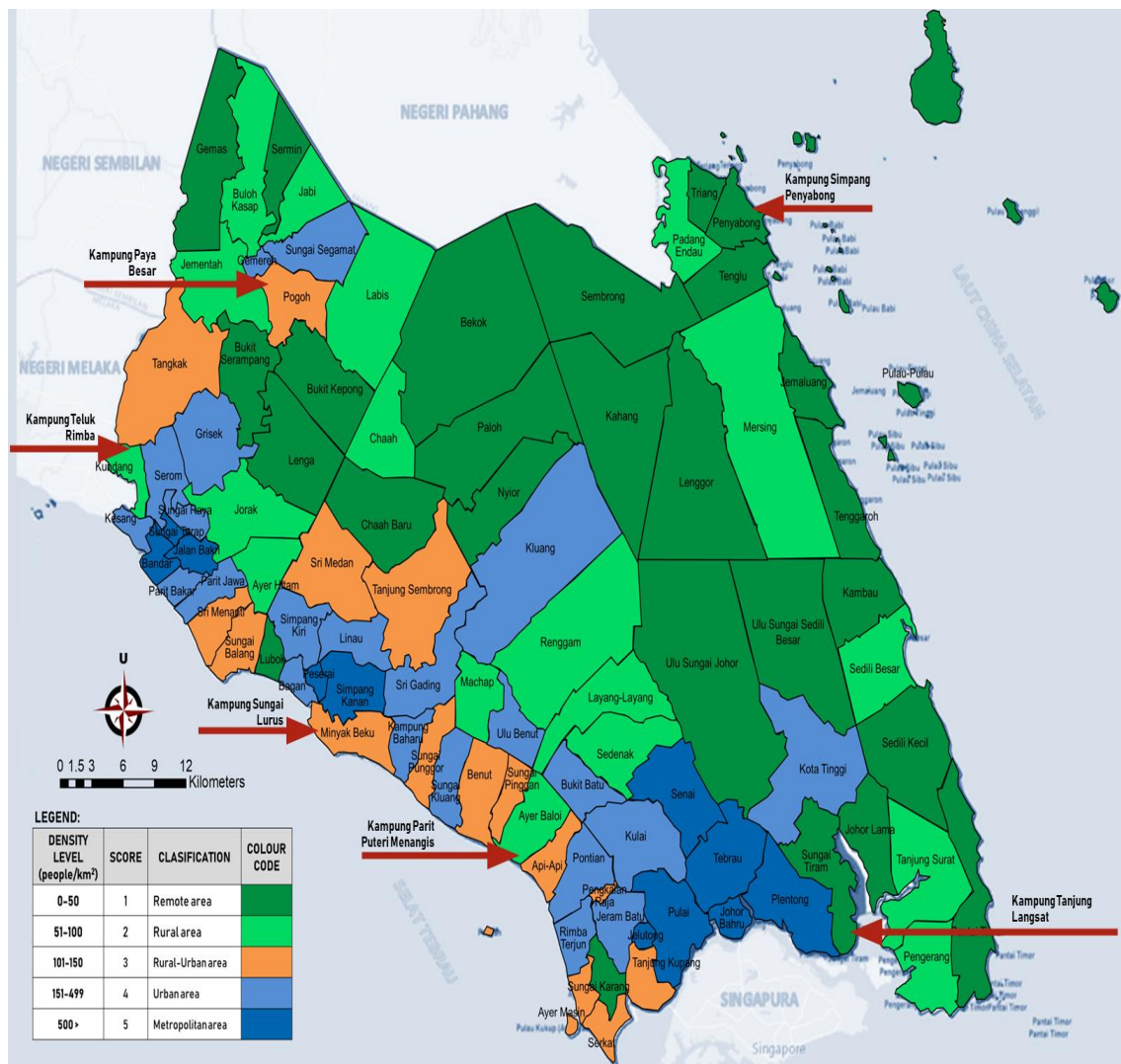
Figure 01. Six villages as study areas in Johor

6. Findings

The finding on the existence of differentiation's significance using the analysis of F-test have shown that there exist differentiations of overall economic capital (0.010*), social capital (0.017*), human capital (0.026*), cultural capital (0.017*), and environmental capital (0.000*) performance between the villages. Besides that, other results have revealed that Kampung Parit Puteri Menangis (6.28) and Kampung Teluk Rimba (6.02) have generally indicated well-performing in the overall of economic performance in village level. Meanwhile, Kampung Tanjung Langsat (5.99), Kampung Simpang Penyabong (5.77), Kampung Sungai Lurus (5.75) and Kampung Paya Besar (5.64) have generally indicated moderate performing in overall of economic performance in village level which was shown in Table 4.

In terms of five types of capital, Kampung Parit Puteri Menangis, Kampung Tanjung Langsat and Kampung Paya Besar have the highest number of good performing capitals with three capital consists of social capital, cultural capital and environmental capital. Meanwhile, the economic capital and human capital of these villages are categorised as moderate performing capitals. It can be deduced that overall, Kampung Parit Puteri Menangis is considered relatively the highest performing in the overall of economic performance in village level, particularly in term of the number of capital achieving a good index of performance compared to other villages. Nevertheless, Kampung Paya Besar is considered as the most relatively lowest-performing compared to other villages in overall of economic performance in the village level.

Table 04. Summary of village economic performance of rural areas

CAPITAL (FACTOR/ INDICATOR)		VILLAGE						F-Test
		KSP	KTL	KPM	KTR	KSL	KPB	
ECONOMIC CAPITAL (EC)		4.63	4.69	5.41	5.71	4.65	4.76	0.010*
FACTOR	INDICATOR							
Occupations and Income	Increase income every year	5.35	4.81	5.23	6.06	4.68	5.22	0.026*
	Stable in occupation	5.51	5.40	6.56	6.18	6.03	5.76	0.037*
	Provide good support for family members	6.12	6.43	7.69	6.94	7.15	6.31	0.036*
	Gaining extra income from other sources	5.11	4.67	4.77	6.42	4.98	5.51	0.148
People Employed in Households	Better income with an appropriate occupation by family members	6.06	6.57	7.08	7.18	5.95	6.53	0.012*
Remittance	Improve living of family by money received	4.83	4.67	6.08	5.52	5.08	4.13	0.018*
Assistance from Government and Private Agencies	Government support in terms of financial welfare	4.17	3.81	1.65	4.27	1.57	2.80	0.000*
	Private and government support in rural economic activities	2.43	2.95	2.87	3.27	2.20	2.00	0.221
Resources Proprietorship	Profitable yields from generated assets	2.11	2.93	6.75	5.58	4.23	4.56	0.000*
SOCIAL CAPITAL (SC)		5.77	6.52	6.22	5.97	5.58	6.30	0.017*
FACTOR	INDICATOR							
Trust and Norms	Trust in neighbours	8.17	8.57	9.02	7.21	8.37	7.98	0.009*
Membership and Participation in Community	Involved in social organisations inside the village	4.72	4.62	3.88	4.73	3.57	5.73	0.027*
	Community activities engagement and participating	5.78	6.36	6.44	5.36	5.51	6.20	0.498
Collective Action and Neighbourhood Connection	Gaining support and help through financial contacts	2.94	3.95	4.13	4.00	3.52	3.11	0.150
	Great connection with village leaders	6.74	9.26	8.23	7.82	7.94	7.89	0.000*
	Great affiliation with people's representative	5.65	6.00	6.08	5.48	5.46	6.53	0.503
	Strong connection with business owners	4.91	5.45	4.38	5.27	3.85	4.47	0.138
	Villagers inequity and intolerance	7.25	7.98	7.60	7.91	6.42	8.47	0.001*
HUMAN CAPITAL (HC)		4.70	4.89	5.39	5.21	4.63	4.76	0.026*
FACTOR	INDICATOR							

Factor	Indicator							
Health	Good level of health	8.12	8.07	8.25	7.91	7.57	8.31	**0.059**
	Able to do hard work	7.72	6.79	7.58	7.24	7.15	8.07	**0.028***
Education	Have a perfect formal education	6.42	6.74	8.12	7.73	6.75	6.96	**0.002***
Skill	Follow training and skills	3.14	3.24	3.56	3.61	3.95	2.96	**0.603**
	Skills inherited by previous generations	2.75	3.64	4.25	4.06	3.89	3.00	**0.138**
	Skills by elders are passed down to youth	2.83	3.24	4.42	4.24	3.08	2.36	**0.015***
	Transfer skills by youth to elders	2.40	3.71	2.87	3.21	2.46	2.07	**0.057**
Leader's Faith	Ability to lead the administration	4.23	3.67	4.08	3.70	2.17	4.36	**0.001***
CULTURAL CAPITAL (CC)		**5.88**	**6.13**	**6.34**	**6.07**	**5.38**	**6.07**	**0.017***
FACTOR	**INDICATOR**							
Attitude	Self-adaption towards neighbours	7.98	8.55	8.60	8.33	7.97	8.36	**0.371**
Faithful to Religion	Performing worshiper's responsibility	7.32	5.83	7.90	7.15	5.57	7.56	**0.000***
	Self-devoted to God	7.57	9.52	8.98	8.27	9.31	7.73	**0.000***
Lifestyle and Culture	Frequently physical activity and sports	3.75	5.55	4.06	5.52	3.85	5.07	**0.001***
	Local cultural activities involvement	2.20	2.55	3.52	2.91	1.77	3.00	**0.001***
	Religious activities involvement	6.94	5.83	6.54	5.67	5.82	6.47	**0.249**
Resilience	Financial assistance to relatives/ neighbours/ villagers	5.42	5.10	4.81	4.61	3.38	4.27	**0.003***
ENVIRONMENTAL CAPITAL (AC)		**7.87**	**7.72**	**8.06**	**7.16**	**8.50**	**6.31**	**0.000***
FACTOR	**INDICATOR**							
Natural Environment	Interesting environmental assets	8.58	8.64	8.00	9.18	8.28	7.91	**0.017***
	Good maintenance of environmental assets	8.28	8.83	8.69	9.09	7.43	8.60	**0.000***
	Absent of environmental calamity occurrence	5.91	6.19	8.13	6.12	8.57	5.33	**0.000***
	Frequently visited by visitors/tourists	8.72	8.57	6.73	4.36	7.85	1.67	**0.000***
Quality of Land and Environment	Absent of environmental issues	7.25	4.45	8.08	7.33	9.37	7.18	**0.000***
	High level of fertile land	6.97	9.29	9.04	9.30	9.60	8.51	**0.000***
Facility Approachability	Quality of amenities and facilities	8.65	9.60	9.42	9.21	9.52	8.51	**0.000***
	Village linkages with transportation alternatives	8.65	5.33	5.15	1.61	6.37	1.40	**0.000***
Services Proximity	Nearest proximity to get services in urban areas	7.80	8.62	9.33	8.21	9.49	7.64	**0.000***
OVERALL ECONOMIC PERFORMANCE OF VILLAGE LEVEL		**5.77**	**5.99**	**6.28**	**6.02**	**5.75**	**5.64**	**0.015***

* Significant value at 0.05

KSP (Kampung Simpang Penyabong), KTL (Kampung Tanjung Langsat), KPM (Kampung Parit Puteri Menangis), KTR (Kampung Teluk Rimba), KSL (Kampung Sungai Lurus), KPB (Kampung Paya Besar)

The finding reveals that there is a significant relationship between all five capitals with the income level of the village (dependent variable), especially Kampung Simpang Penyabong, as illustrated in Table 05. In term of village level, Kampung Parit Puteri Menangis and Kampung Simpang Penyabong have the highest number of capital which had the significant relationship with income level while Kampung Teluk Rimba has the lowest number capital having the significant relationship. On top of that, there is a highest number of significant relationship in all the villages between economic capital (Occupations and Income; People Employed in Households), social capital (Collective Action and Neighbourhood Connection), human capital (Education), cultural capital (Cultural and Way of Life; Resilience) with village's income level. Therefore, this research found out that four capitals namely economic (2 indicators), social (1 indicator), human (1 indicator) and cultural (2 indicators) are leading factors that influenced the village's economic performance (income level) in all six villages.

Table 05. Summary relationship of factors in capital and income level of village

Capital (Factor)	Village					
	KSP	KTL	KPM	KTR	KSL	KPB
Economic Capital	**0.507***	**0.503**	**0.720***	**0.529**	**0.734***	**0.460***
Occupations and Income	0.366*	0.370*	0.618*	0.524*	0.451*	0.457*
People Employed in Households	0.454*	0.441*	0.465*	0.445*	0.554*	0.408*
Remittance	0.071	-0.061	0.087	0.094	0.281*	0.032
Assistance from Government and Private Agencies	-0.179*	-0.218	-0.237*	-0.166	0.241*	0.245*
Resources Proprietorship	0.198*	0.168	0.393*	0.093	0.307*	0.007
Social Capital	**0.279***	**0.311***	**0.754***	**0.401**	**0.415***	**0.458***
Trust and Norms	-0.048	0.029	-0.055	0.071	0.167*	0.193*
Membership and Participation in Community	0.156*	0.240*	0.550*	0.167	-0.124	0.209*
Collective Action and Neighbourhood Connection	0.214*	0.197*	0.526*	0.364*	0.332*	0.285*
Human Capital	**0.617***	**0.665***	**0.577***	**0.438***	**0.562***	**0.316**
Health	0.366*	0.141	0.224*	0.159	-0.058	-0.111
Education	0.267*	0.365*	0.363*	0.408*	0.494*	0.337*
Skill	0.383*	0.389*	0.423*	0.081	0.417*	0.062
Leader's Faith	0.217*	0.434*	0.144	0.228*	0.154	0.122
Cultural Capital	**0.390***	**0.452***	**0.432***	**0.351***	**0.370***	**0.455***
Attitudes	0.226*	0.075	-0.129	-0.065	0.078	0.206*
Faithful to Religion	-0.019	0.199*	0.186*	0.221	0.175*	0.124
Lifestyle and Culture	0.292*	0.299*	0.280*	0.192*	0.313*	0.369*
Resilience	0.243*	0.330*	0.269*	0.224*	0.173*	0.210*
Environmental Capital	**0.483***	**-0.328***	**-0.268**	**0.320**	**-0.270**	**0.639***
Natural Environment	0.253*	0.197*	-0.116	-0.077	-0.147	0.362*
Quality of Land and Environment	0.206*	-0.090	0.056	0.133	-0.025	0.277*
Facility Approachability	0.311*	-0.123	-0.192*	0.279*	-0.249*	0.156
Services Proximity	0.196*	0.245*	0.172	0.151	0.118	0.483*

*Significant value at 0.05

7. Conclusion

This study concludes that village level is essential part measuring the economic performance of rural areas that make this research is significance by providing a clear view on how rural areas, especially in Malaysia, could revitalise their economy by developing an aggregated framework that integrates factors differentiation in village economic performance. Besides that, this study also provides a broader angle of understanding and perspectives of rural development in terms of economic for justifying how the village economic performance, either growth or decline or stagnant.

Significantly, the identified factors in five capitals was implemented as an integrated method to tackle rural variation and economic performance involving village level of spatial scale which consists of five capitals, 20 factors and 41 indicators. In summary, the findings reveal that in the context of the study area which involves six villages, out of 20 factors, 17 factors are identified as main significance factors, while for 41 indicators; only 29 indicators are identified as main significance indicators in all five capitals. Therefore, these identified factors and indicators in five capitals are significant towards new paradigm for rural development and serves as an essential method in measuring the economic performance differentiation in rural villages.

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