



A strategic framework of good governance, infrastructure development and community empowerment in Indonesian Public Sector Management

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Abstract

Sustainability of public sector management on provincial, regional and city council levels will bring a significant impact on the continuous movement and competitive advantage of the region. The present study hypothesised a strategic framework of good governance, infrastructure development and community empowerment in Indonesian public sector management. System management, governance and contingency theory were employed as underlying theories on the strategic framework. Advanced quantitative approach using a Structural Equation Modeling (SEM) approach through a 2nd order confirmatory factor analysis (CFA) technique was utilised to examine the interaction of governance, infrastructure development and community empowerment on the level of local government in Indonesia. Proportionate stratified random using was employed to maximise 304 public sector managers as the selected sample. the hypothesised model, generated model, and re-specified model of Structural Equation Modeling analysis of moment structure (AMOS) was successful in establishing, examining and validating the strategic framework for Indonesian local government on the short, middle and long-term sustainability agenda. The strategic framework plays a significant role as a main guidance for public sector managers in Indonesia for the further sustainability agenda. Validated measurements of good governance, infrastructure development and community empowerment contributed as strategic decision making issues for Indonesian public sector managers as well as to the empirical contribution to the body of knowledge of Public Sector Management.

Keywords: Good governance, infrastructure development, community empowerment, Structural Equation Modeling, 2nd order confirmatory factor analysis.

Introduction

Sustainability plays an important role on the journey of public sector management in Indonesia. The dynamic journey of democracy brings a clear figure on the changes based on the political interest and economic trends for each era (Luis, Romani, de Souza, Rodriguez-Abita, 2019; Simangunsong & Hutasoit, 2018; Gosh, 2015). The present study has established an empirical model on the public sector sustainability (Ali & Sentosa, 2009), which hypothesised, tested and validated good governance, infrastructure development and community empowerment as measurements. Dynamic movement on the journey of Indonesian public sector management brings an uncertainty to the management practices in term of governance, infrastructure as well as local empowerment (Perry & Christensen, 2015; Gosh, 2015; Rodriguez, 2015). Public sector managers have to synchronise their walk with the rhythm of their political environment (Morandi, Rolando & Di Vita, 2016) both up and down of their position, related to their lobby to the top management. There are many possibilities of uncertainty and road-blocks in their careers (Simangunson & Hutasiot, 2017; Rodriguez, 2015). The present study intended to determine a detail guideline on how to conduct sustainability among public sector management in Indonesia local government bodies. An



urgent need on the sustainability of public sector management in Indonesia, brings a clear picture on the need for guideline establishment for public sector managers (Deakin, 2014). After 1998, Indonesia's public sector reformation, and a series of economically turbulent times in 2007, 2011 and 2017, public sector organisations have been looking for a dynamic guideline which is easy and user friendly for them to apply, as well as flexible to counter the movement and challenges in the future (Perry & Christensen, 2015; Mintzberg, 1996), which the researchers call public sector sustainability. Public sector managers responses to the industrial 5.0 dynamic changes using public administration in the age of digitalisation will configure through the establishment of the public sector sustainability model (Luis et. al., 2019).

Literature Review

Public sector sustainability was hypothesised as a univariate variable which measured with good governance, infrastructure development and community empowerment as a latent construct (dimensions). An underpinning governance theory by Lynn (2001) configured as an underlying on the establishment of the proposed model (Rodriguez, 2015). Sustainability for public sector organisations is determine with a governance theory which bureaucracy must perform in their daily work and business continuity management has to perform very well in this regard (Deakin, 2014; Kotler & Lee, 2007; Mintzberg, 1983).

Public Sector Sustainability

Public sector sustainability is defined as a short, middle and long-time strategic movement for public sector organisations (Kotler & Lee, 2007). Persons in charge to operationalize the strategy are public sector managers, especially in the context of local government. Indonesia's local autonomy role provides a clear direction for public sector managers to run their creativity and innovation (Rodriguez, 2015). Currently, sustainability also relates to how the public sector is indeed able to adopt a dynamic change of ICT usage. Smart city implementation is one of the examples of the good governance, strategic infrastructure development and community empowerment direction on the sustainability agenda of public sector organisations (Leong, Ping and Muthueloo, 2017; Deakin, 2014). The eco-system on the sustainability is a must and also password for public sector managers to identify a strategic direction for the future (Leong, et al., 2017; Rodriguez, 2015; Mintzberg, 1996).

Good Governance

Good governance for Public sector sustainability is defined as empirical ethics for public sector organisations and managers in performing governmental tasks. Transparency, compatibility and synchronised mechanisms are the main engines of the bureaucracy (Deakin, 2014). Influencing positive public sector organisation behaviours through the internal consistency on the public service performance, brings a clear picture on the direction of good governance (Ali & Sentosa, 2009; Kotler & Lee, 2007). Implementation of good governance plays a significant role in the sustainability of public sector organisations (Rodriguez, 2015). Stakeholders have to apply good governance as a strategic platform of long-term business continuity management for public sector organisations (Morandi, et al., 2016).

Administrative state to stateless administration (Perry & Christensen, 2015) could be applied as a strategic direction on the implementation of good governance on the setting of provincial, region and city government objectives. Good governance in the sustainability context will focus on the transparency usage to reinforce responsibility and responsiveness (Table 2).

Infrastructure Development

Infrastructure movement is indicated as one of the key-success factors in the public sector sustainability (Luis et. al., 2019). Speed progression on the infrastructure development brings a clear figure to the internal and external customer of public sector organisations (Deakin, 2014). A tangible perspective of development leads to the accomplishment of the journey, especially for a real-time project which is directly in touch with the public (Kotler & Lee, 2007). Changing environments will lead to the dynamic transformation of public sector organisations using governance in an era of partnership (Simangunsong & Hutasoit, 2018; Leong, et. al., 2017; Perry & Christensen, 2015). The present study also hypothesized that infrastructure development is a dimension of public sector sustainability (Table 2).

Community Empowerment

Community Empowerment for public sector sustainability is categorised as creativity and innovation in public sector managers on the utilisation of internal and external resources and building infrastructures for accountability (Perry & Christensen, 2015) among the community within public sector projects or related activities. Using public participation to enhance citizens voice and promote accountability (Perry & Christensen, 2015) through direct and indirect involvement of locals in the daily project sector projects is a must (Morandi, et al., 2016). As a part of the system, the public have to contribute on the movement as well as active participation (Ali & Sentosa, 2009). Community empowerment is a public enhancement through their hands on the public sector activities (Deakin, 2014). Local government has to prioritise locals through bottom-up planning approaches. Sustainability could be achieved and is in-line with an active public participation. Governing for collective action (Perry & Christensen, 2015; Nicolaidis, 2019) and understanding the public sector market is the best practice on the community empowerment, and as a part of public sector sustainability, it may be applying to the developing and enhancing popular programmes and services (Ali & Sentosa, 2009; Kotler & Lee, 2007).

Table 1. Operational Definition of Variable and Dimensions

Constructs	Definitions	Study	Indicators
Public Sector Sustainability	Communicating effectively with Key Publics.	Luis et al., 2019; Perry & Christensen, 2015;	GG, ID, CE
Good Governance	Influencing positive public sector organisation behaviours.	Perry & Christensen, 2015; Ali & Sentosa, 2009; Kotler & Lee, 2007;	GG1-GG5
Infrastructure Development	Improving public sector performance by seizing opportunities to meet citizen needs.	Luis et al., 2019; Deakin, 2014	ID1-ID8
Community Empowerment	Developing and enhancing popular program and services through governing for collective action.	Perry & Christensen, 2015; Deakin, 2014; Kotler & Lee, 2007;	CE1-CE6

Conceptual Development on the Public Sector Sustainability

Based on the review on the good governance, infrastructure development and community empowerment (Pirzada, 2017), this research hypothesized (Figure 1) an establishment of

public sector sustainability model as a strategic framework for public sector organisation on the context of local government setting to survive on the dynamic journey of democracy and rapid changes in the economy (Gosh, 2015). Literature and empirical gaps on the public sector management leads to the need for the construction of the model as a main guideline for public sector managers in their daily work (Morandi, et al., 2016; Deakin, 2014). A creative and innovative approach is totally needed, but a platform to synchronize the changes is a must, and the present study has hypothesized the detail (Table 2) to fulfill the gaps and need on the empirical level of public sector management research (Figure 2a, Figure 2b and Figure 2c).

Table 2. Hypothetical Development

Hypothesis	Statement	Supported Sources
Hy.1	Good Governance confirm as a significant measurement of public sector sustainability	Deakin, 2014; Ali & Sentosa, 2010;
Hy.2	Infrastructure Development confirm as an important dimension on the construction of public sector sustainability.	Simangunsong & Hutasoit, 2017 Perry & Christensen, 2015;
Hy.3	Community Empowerment confirm as strategic construct of public sector sustainability.	Perry & Christensen, 2015; Kotler & Lee, 2007;
Hy.4	Interaction of Good Governance, Infrastructure Development and Community Empowerment confirm as a significant measurement of Public Sector Sustainability	Proposed, Tested and Validated Strategic Framework (Developed by Authors, 2019)

Research Methodology

An advanced quantitative analysis using Structural Equation Modeling (SEM) was employed to establish the public sector sustainability model (Garson, 2016; Schumacker & Lomax, 2016). A positivism research paradigm using exploratory approach succeed in hypothesizing, testing and validating public sector sustainability as a single construct (variable) and measured with good governance, infrastructure development and community empowerment as a series of latent construct (Figure 1). Hypothesised model of public sector sustainability was established, examined and tested using 2nd order confirmatory factor analysis (CFA) approach (Khan, Sentosa & Salmabn, 2018; Tabachnick & Fidel, 2007).

A proportionate stratified random sampling techniques was employed to determine 304 samples of public sector managers of local government within provincial, region and city government. Line managers were involved on the closed ended structured questionnaire (Ali & Sentosa, 2008; Tabachnick & Fidel, 2007). Data collection was conducted within 2018 until end of April 2019. Multivariate data outliers using Mahalanobis Distance succeed to identify 68 outliers, and series of data screening of normality, reliability test (Cronbach's Alpha) also confirmed the consistency of measurements as hypothesised (Schumacker & Lomax, 2016; Hadi, Abdullah & Sentosa, 2016). Exploratory factor analysis (EFA) was performed to observe the construction of detail items and Figure 1 confirmed the structure as hypothesised (Khan et al., 2018; Garson, 2016). 1st order CFA for each dimension (Figure 2) were shown the goodness of model fit (Table 3).

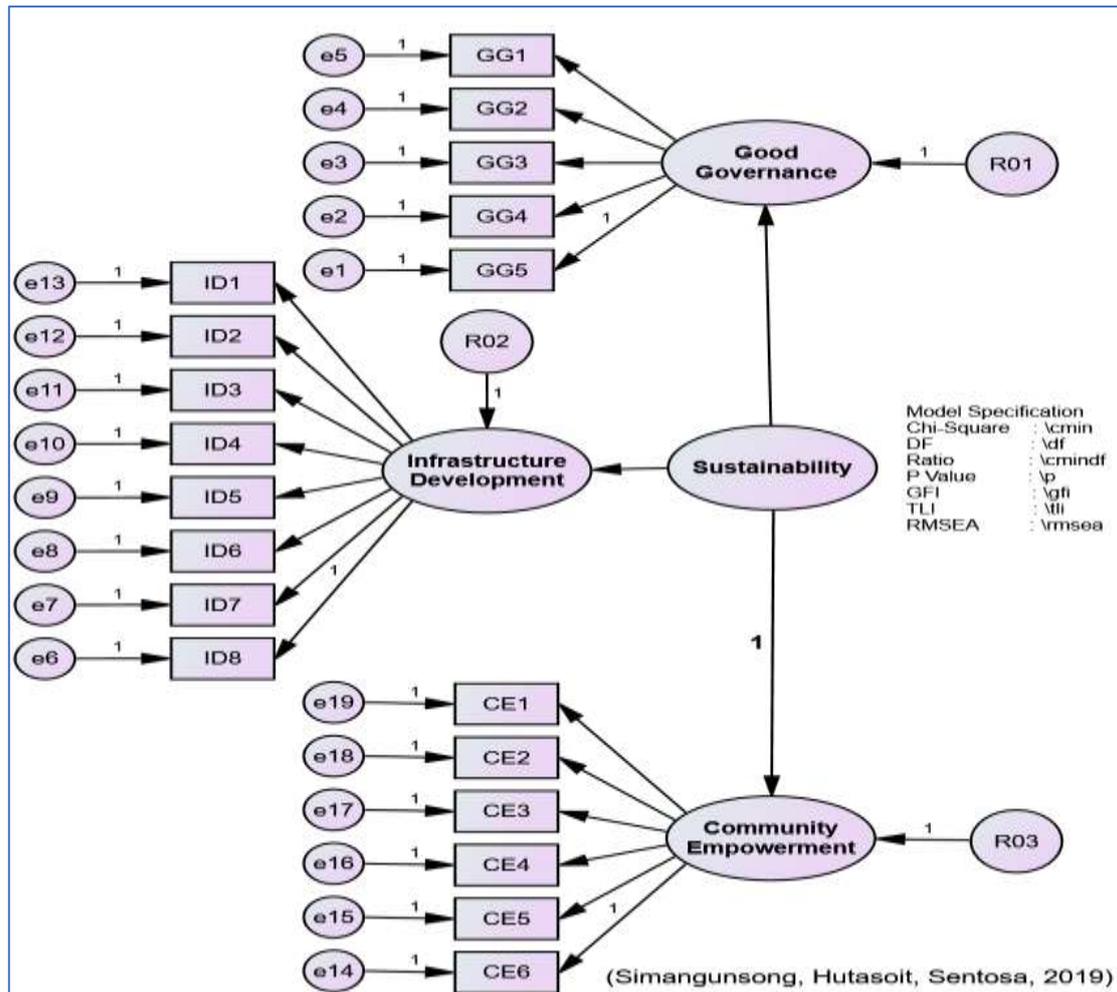


Figure 1. Hypothesised Model

Findings

Demographic Profiles

A total of 304 questionnaires were completed and received. From the total respondents, 54% were male while 46% were female. The majority of them were from the age group of 31-45 which represented 69.2% compared to other age groups. There is a significant 20.1% of the respondents who were in their 46-55 as well. More than 75% of the respondents had some tertiary education of at least certificate studies. In terms of position, 59% were Head of Department on the local government level, and there were 24.5% currently serving in administration agencies, 19.8% serve in services agencies, and 33.8% in technical agencies. All respondents were categorized as public sector managers on the level of provincial, region and city government.

1st Order and 2nd Order Confirmatory Factor Analysis (CFA)

Based on modification indices of 1st order CFA result, there were 2 items deleted (GG1 and ID8) to fulfill P-Value ($P > 0.05$) for model fit of good governance, infrastructure development and community empowerment (Figure 2a, Figure 2b and Figure 2c). 1st order CFA for each dimension shows the univariate level has fulfilled significant criteria of model validation on the single stage (Schumacker & Lomax, 2016; Hadi et al., 2016). The journey was then continued with a combination of all dimension and 2nd order CFA of public sector sustainability was

performed (Figure 3) (Osman & Sentosa, 2013). The present study totally concerns on the goodness of model fit (Table 3) for each stage of model fit using values of chi-square, degree of freedom, ratio (chi-square/df < 2), P-Value ($P > 0.05$), goodness of fit (GFI > 0.9), Tucker and Lewis Index (TLI > 0.9) and root mean square error of approximation (RMSEA < 0.08) (Garson, 2016; Sentosa & Nik Mat, 2012).

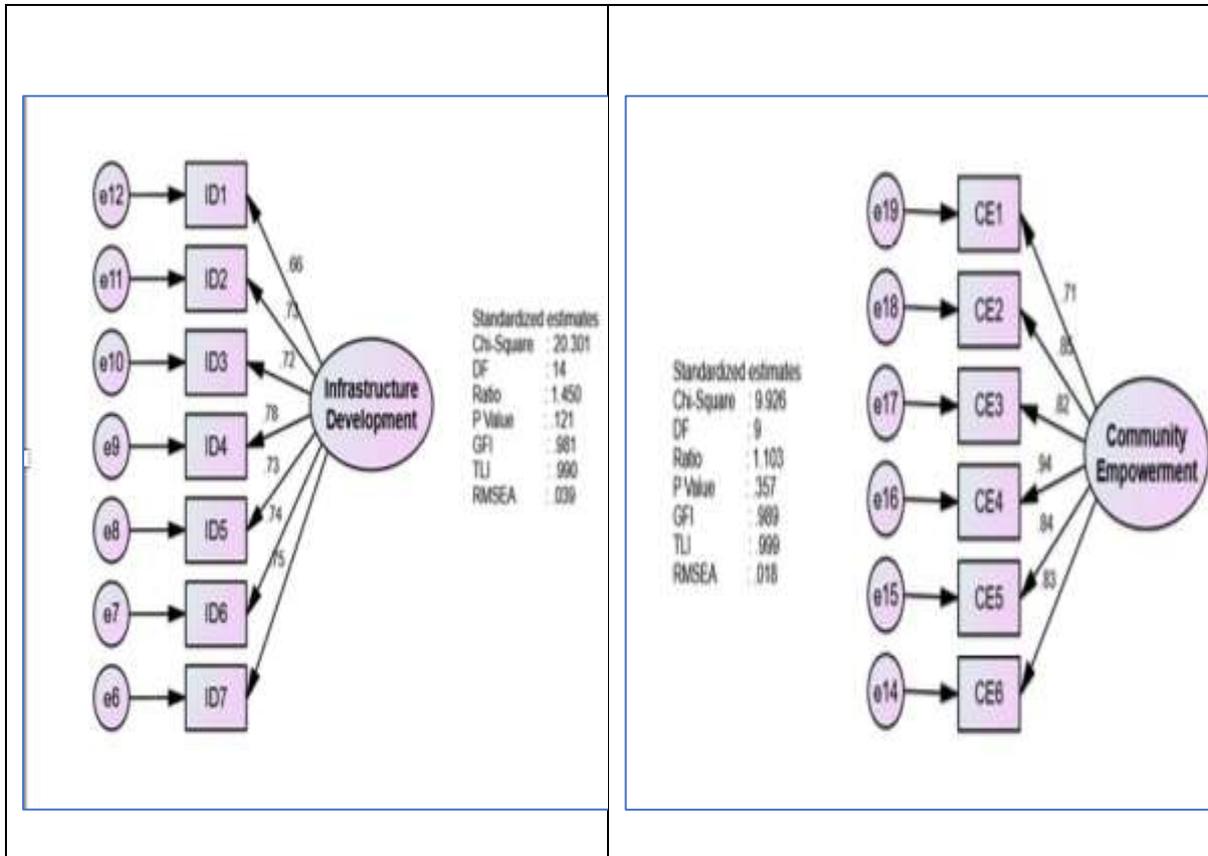


Figure 2a. 1st Order CFA of Infrastructure Development & Community Empowerment

Re-Specified model of 2nd order CFA public sector sustainability (Figure 3) confirmed the convergent reliability (> 0.7) of factor loading for each item (Table 4). This study validated 3 latent constructs (Good Governance, Infrastructure Development and Community Empowerment), and 17 items (Table 4) as a significant measurement of observe variables. The present study succeeds to establish a structural model based on the 2nd order CFA (Schumacker & Lomax, 2016; Sentosa & Nik Mat, 2012).

Goodness of fit index for 1st order and 2nd order CFA also confirmed the validation of the model (Table 3). Hypothesis direction number 1, 2 and 3 has achieved through the path analysis for each dimension on the public sector sustainability as a main construct, and lastly the final hypothesis also achieved (Table 6), it's confirmed a construction and validation of public sector sustainability (Garson, 2016; Schumacker & Lomax, 2016; Osman & Sentosa, 2013). An empirical model also established as a main guideline for bureaucrat and public sector practitioners (Figure 4).

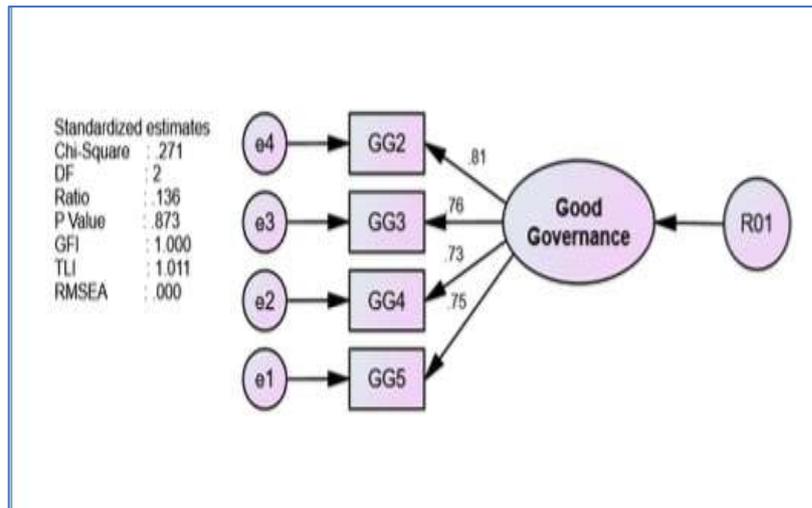


Figure 2b. 1st Order CFA of Good Governance

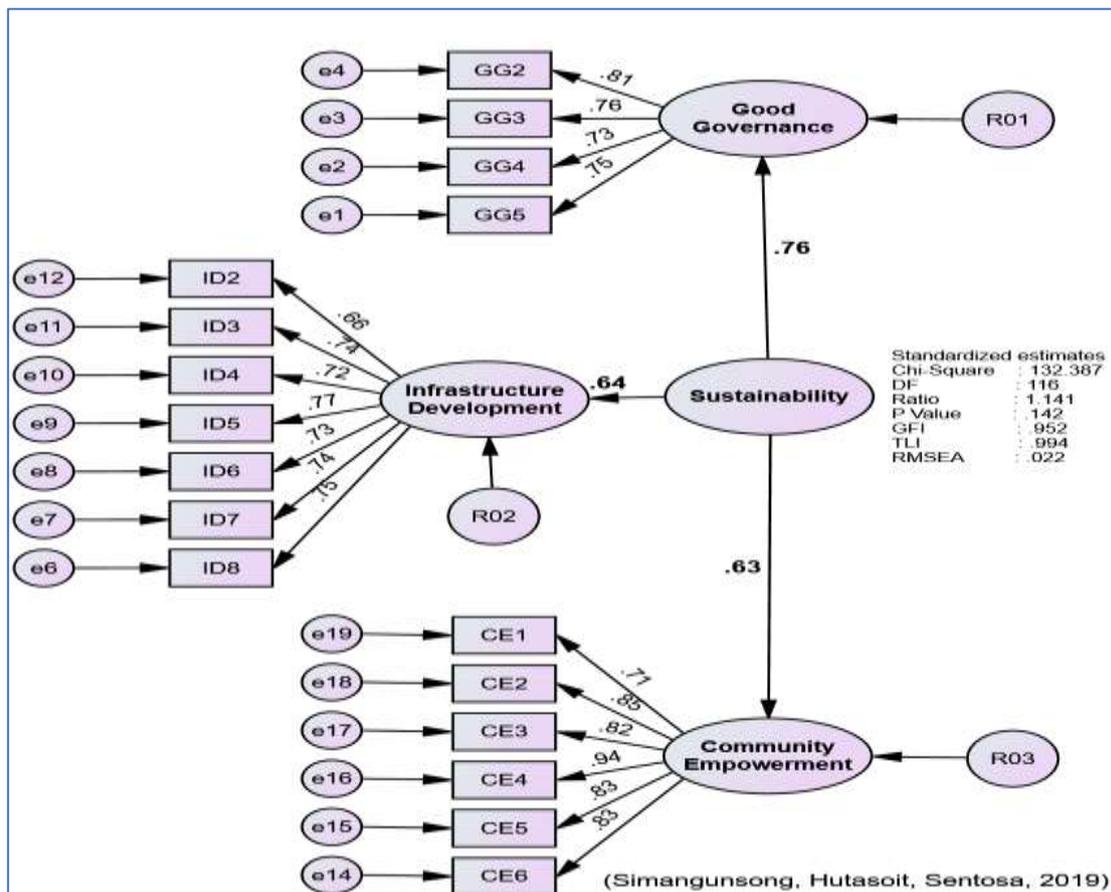


Figure 3. Re-Specified Model of Public Sector Sustainability (2nd Order CFA)

Table 5 also shows the result of the calculated variance extracted (VE) to support discriminant validity of constructs. Average variance extracted (AVE) is the average VE values of two constructs (Table 5) (Ali & Sentosa, 2009). According to Fornell and Larcker (1981), average variance extracted (AVE) should be more than the correlation squared of the two constructs to support discriminant validity (Hadi et. al., 2016). Each AVE value is found to be more than

correlation square. The present configuration discriminant validity is supported, or multicollinearity is absent (Garson, 2015; Sentosa & Nik Mat, 2012).

Table 3. Journey on the Goodness of Model Fit

Index	Hypothesised Model	CFA Good Governance	CFA Infrastructure Development	CFA Community Empowerment	2nd Order CFA Public Sector Sustainability
					Re-Specified Model
Chi-Min	200.030	0.271	20.301	9.926	132.387
DF	149	2	14	9	116
Ratio	1.342	0.136	1.450	1.103	1.141
P-Value	0.003	0.873	0.121	0.357	0.142
GFI	0.935	1.000	0.981	0.989	0.952
TLI	0.982	1.011	0.990	0.999	0.994
RMSEA	0.034	0.000	0.039	0.018	0.022

Table 4. Standardised Regressions Weight of Measurements

Variable & Variance Extracted	Dimensions/ Items	Factor Loading	Std-Error	Critical Ratio	P-Value	R2	Error Var ϵ_j
Sustainability	GG	0.759	0.207	5.950	0.000	0.576	0.576
	ID	0.640	0.155	6.117	0.000	0.410	0.410
	CE	0.631	0.090	5.926	0.000	0.398	0.602
Good Governance (GG CR. 0.849) (GG VE. 0.795)	GG2	0.814	0.083	12.813	0.000	0.663	0.337
	GG3	0.764	0.077	12.009	0.000	0.584	0.416
	GG4	0.725	0.076	12.642	0.000	0.526	0.474
	GG5	0.753	0.074	13.353	0.000	0.567	0.433
Infrastructure Development (ID CR. 0.889) (ID VE. 0.533)	ID2	0.659	0.088	12.334	0.000	0.434	0.566
	ID3	0.737	0.075	12.709	0.000	0.543	0.457
	ID4	0.718	0.077	12.528	0.000	0.516	0.484
	ID5	0.773	0.070	13.340	0.000	0.598	0.402
	ID6	0.729	0.075	12.334	0.000	0.531	0.469
	ID7	0.738	0.072	12.673	0.000	0.545	0.455
Community Empowerment (CE CR. 0.906) (CE VE. 0.657)	CE1	0.710	0.054	18.317	0.000	0.504	0.496
	CE2	0.852	0.057	17.710	0.000	0.726	0.274
	CE3	0.823	0.052	21.681	0.000	0.677	0.323
	CE4	0.945	0.060	17.371	0.000	0.893	0.107
	CE5	0.834	0.055	18.317	0.000	0.696	0.304
	CE6	0.826	0.059	14.035	0.000	0.682	0.318

Table 5. Discriminant Validity of Dimensions

Dimensions	Average Variance Extracted (AVE) Matrix			Correlation and Correlation Square Matrix		
	(1)	(2)	(3)	(1)	(2)	(3)
Good Governance	1.00	0.664	0.726	1.00	0.486 (0.236)	0.479 (0.229)
Infrastructure Development	0.664	1.00	0.595	0.486 (0.236)	1.00	0.404 (0.163)
Community Empowerment	0.726	0.595	1.00	0.479 (0.229)	0.404 (0.163)	1.00

Results of Hypothesis Testing

The present study confirmed an achievement of research objective on the establishment of public sector sustainability model (Figure 3). Table 6 determine results on the hypothesis testing which confirmed the re-specified model of 2nd order CFA (Figure 3) as a main result of the analysis. Good governance ($\beta = 0.759$); Infrastructure Development ($\beta = 0.640$) and Community Empowerment ($\beta = 0.631$) are confirmed as a significant ($P = 0.000$) measurement of public sector sustainability (Table 5). Hypothesis 1, 2 and 3 were accepted and the final hypothesis also fulfill modeling requirement which contribute to the significant interaction among dimensions joint together as a model of public sector sustainability (Hypothesis 4). This research has configured **4** items of good governance (GG2, GG3, GG4 and GG5), **7** items of infrastructure development (ID2 – ID8) and **6** items of community empowerment (CE1-CE6) as a main guideline for bureaucracy practitioners in doing public sector sustainability (Table 4 and Table 6).

Table 6. Results of Hypothesis Testing

Hypothesis	Statement	Path-Coefficient	P-Value	Remark
Hy.1	Good Governance confirm as a significant measurement of public sector sustainability	0.759	0.000	Hypothesis Asserted
Hy.2	Infrastructure Development confirm as an important dimension on the construction of public sector sustainability.	0.640	0.000	Hypothesis Accepted
Hy.3	Community Empowerment confirm as strategic construct of public sector sustainability.	0.631	0.000	Hypothesis Asserted
Hy.4	Interaction of Good Governance, Infrastructure Development and Community Empowerment confirm as a significant measurement of Public Sector Sustainability	0.000		Hypothesis Accepted

Discussion

This research has succeeded in confirming an achievement of the research objective on the construction of a public sector sustainability model and focusing this within the local government context. There were four hypothesis statements which examined the establishment of public sector sustainability measurement. Good governance, infrastructure development and community empowerment were hypothesised as the domain of



sustainability, and its confirmed (Table 6). Hypothesis testing also confirmed the re-specified model of 2nd order CFA as the fundamental result of the analysis (Garson, 2016). Hypothesis 1, 2 and 3 which configured the examination of dimensions were accepted, and the present study also found a significant interaction of good governance, infrastructure development and community empowerment dimensions as main guideline for public sector sustainability. The present study also determined four indicators of good governance, seven indicators of infrastructure development, and six items of community empowerment.

Based on those three dimensions, good governance has a higher contribution to the model's establishment rather than infrastructure development and community empowerment (Deakin, 2014). It is an important practice for sustainability on the usage of good governance and will be followed by infrastructure development and community empowerment by public sector managers (Rodriguez, 2015). An empirical view using practitioners' points of view also agreed with these findings. Good governance as one of the main pillars, plays a dominant role for public sector organisation on the sustainability agenda (Leong, et al., 2017). This research also discussed the importance of infrastructure development and community empowerment. An interesting finding was the interaction of those dimensions on the structural model, and these items have to synchronize on the platform of public sector management.

Conclusion, Recommendation and Further Research

A fundamental model of public sector sustainability has confirmed good governance, infrastructure development and community empowerment as a series of significant dimensions and was also measured with 17 items. This research also brings a fundamental contribution to the public sector management body of knowledge through the establishment of the model. Bureaucrats and practitioners alike, may proceed to implement the empirical validated model. An advanced quantitative technique using structural equation modeling (SEM) has examined, tested and validated the model. Further study may proceed with causal effect relationship between public sector sustainability as an exogenous variable and other possibilities on the endogenous constructs in the public sector management context. A mediating and moderating variable could apply on the mentioned causal effect pathway. This study has configured the detail on the context of public sector management, focusing within the local government in Indonesia.

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