

## **The Model of Effectiveness in Driving the Public-State Policy In Buriram Province**

**By**

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### **Abstract**

The research aimed to examine a conformity of the developed model of effectiveness in driving the public-state policy in Buriram Province with the empirical data. The population in the study was 400 residents in the province, aged 18 and over. They were derived by means of a simple random sampling. The research instrument was a questionnaire. The results showed that the co-relation coefficient of the variables was statistically different at 0.861, and the relation was at a high level ( $0.70 < r < 1.00$ ). In other words, the relation of the variables in the study was a linear one. A maximum co-relation coefficient was found in the variable of society and life quality (DBRC) and that of security, peace and order (DBRS). As regards the variables with a minimum relation, the variables of natural resources and environment (DBRN), and that of administrators' leadership were found.

Concerning the model of effectiveness before having been modified, it was found that the model developed by the researchers was not in conformity with the empirical data. This was because Chi-square was sensitive to the samples. The larger the sample group was, the more significant Chi-square became. Chi-square ( $\chi^2$ ) was equivalent to 7386.956, and the degrees of freedom (df) was equivalent to 3803. Chi-square ratio ( $\chi^2/df$ ) was equivalent to 1.942, which was less than a set criterion, that is,  $< 2$ . The result was 'pass the criterion'. An index of TLI was equivalent to 0.895 (a required criterion  $> 0.90$ ). It meant 'not pass the criterion'. An index of CFI was equivalent to 0.898 (a set criterion  $> 0.95$ ). It meant 'not pass the criterion'. The value of Standard Root Mean Square Residual (SRMR) was equivalent to 0.034 (a required criterion  $< 0.05$ ). It meant 'pass the criterion'. The value of the Root Mean Square Error of Approximation (RMSEA) was equivalent to 0.049 (a criterion  $< 0.05$ ). It meant 'pass the criterion'. The values that passed the criterion were as follows: the Chi-square ( $\chi^2/df$ ) which was equivalent to 1.942 (less than the set criterion  $< 2$ ), the value of

SRMR which was equivalent to 0.034 (the set criterion  $< 0.05$ ), and the value of RMSEA which was equivalent to 0.049 (the set criterion  $< 0.05$ ).

The researchers had modified the model by using MI, and it was found that the developed model of effectiveness under the study was in accordance with the empirical data. P-value was equivalent to 0.000. The set value was to be less than 0.05. The result was 'pass the criterion'. Chi-square ( $x^2$ ) was equivalent to 237.562, and the value of the degrees of freedom (df) was equivalent to 119. The ratio of Chi-square ( $x^2/df$ ) was equivalent to 1.996 which was less than the set criterion ( $< 2$ ). It meant 'pass the criterion'. The value of TLI was equivalent to 0.983 (the set criterion  $> 0.90$ ). Moreover, the value of CFI was equivalent to 0.987 (the set criterion  $> 0.95$ ). It meant 'pass the criterion'. The value of SRMR was 0.013 (the set criterion  $< 0.05$ ) and the value of RMSEA was equivalent to 0.050 (the set criterion  $< 0.05$ ). It meant 'pass the criterion'. Considering the statistics found, the model of effectiveness in driving the public-state policy in Buriram Province was in conformity with the empirical data as set in the research hypothesis.

**Keywords:** Model, Effectiveness, Policy, Public State, Buriram Province

## Introduction

The government currently set up the public-state policy for all state sectors so that the state performance or operations are transparent, effective and efficient. Power is decentralized more extensively to allow the locals, communities and private sectors to participate in the development of local communities, society and the country as a whole. To implement the principles according to the state guidelines, the general publics are required to participate in the country development to bring about maximum benefits for the nation. The public state policy is an economic policy proposed by Prime Minister Prayut. The policy was set to close the gap or weak points of the populism. The core of the public state policy is to exercise the state power for the common benefits. Hence, this policy is not aimed to gain the public's short-term favor. It was found by the working committee that the public state policy comes in two main forms. The first is the policy aimed at the grass roots level. It is the measures specifically meant for the public at the local level. The second is the policy meant to support the business sector to deal with the production issues. The objectives are to generate more products, employments and new investments. The second policy includes an exemption of taxes for the incomes spent to purchase real estates, and 15,000 baht tax reduction for buying goods and services. Two forms of the policy would be beneficial to the people at different levels. The first policy seems to have a more effect as it provides an assistance to the general public. Meanwhile, the second policy offers an indirect profit by supporting a business sector. It can be said that what the public gain depends on where the working committee will direct the designated policy. If the public state policy is primarily focused on the grass roots level, then the general publics are expected to reap full benefits of the policy (Pisonyabut, 2016).

The public state policy proves crucial in the country development at all levels. The targets of the state policy include local, social, and national development, with harmony of people, communities, and civil society. The administration focuses on participatory administration of people at all levels. The government operations should be effective and efficient including decentralization in all sectors. The country development according to the public-state policy provides more opportunities to get access to divergent services provided by the state. The ultimate goals of the development are "economy development, happiness people, natural and environmental sustainability, and national security".

### ***Research Question***

Is the developed model of the structure equation of effectiveness in driving the public state policy in Buriram Province in accordance with the empirical data?

### ***Research Objective***

To investigate the validity and conformity of the developed model in accordance with an empirical data

### ***Research Hypothesis***

The developed model of the structure equation of effectiveness in driving the public state policy in Buriram Province is in accordance with empirical data.

## **Research Methodology**

### ***Population and Samples***

**Population** was 1,224,619 eligible voters aged 18 and over in Buriram Province (Office of the Election Commission, 2021: 1).

**Samples** were 400 individuals eligible to votes aged 18 and over in Buriram Province. They were derived by using Taro Yamane's formula at a confidence level of 95.5%. (Taro Yamane; Suwanrak, 2012).

### ***Research Instruments***

The instrument used was a questionnaire divided into six parts.

Part 1 Questionnaire on a status of respondents: the questionnaire has a check list on sex, age, educational degrees, occupations and monthly incomes.

Part 2 Five-rating scale questionnaire: it was used to gauge an effectiveness of driving a state policy through five variables: solution of poverty, reduction of social inequality, development of life quality, equilibrium and justice, and satisfaction towards the public state policy.

Part 3 Five-rating scale questionnaire: It was used to measure an effectiveness of driving the public policies through six variables: targets and objectives, leadership of administrators, resources and practical empowerment to allocate resources, public relations and technological use, and people's participation.

Part 4 Five-rating scale questionnaire: it was used to gauge an effectiveness of driving a public state policy in developing the province through four variables: economics, social and life quality, natural resources and environments, security and peace.

Part 5 Five-rating scale questionnaire: it was used to evaluate an effectiveness of the public state policy in developing local communities through three variables: strength of communities and local sustainability, economic growth of local communities, and efficient access to the state services.

Part 6 Recommendations on the effectiveness of the public state policy in Buriram Province.

### ***Data Analysis***

1. A conformity of the effectiveness model in driving the public state policy in Buriram Province with the empirical data was examined. The structural equation model was employed, which integrated the factor analysis and path analysis.
2. A factor analysis was conducted to find out a construct validity by means

of a confirmatory factor analysis.

3. To estimate the model parameter, researchers used ML (maximum likelihood) as it was consistent and efficient (Wiratchai, 1999). The outcomes showed 1) relation value between a latent variable and an observed variable; 2) value of correlation coefficients of internal latent variables (beta,  $\beta$ ); 3) value of correlation coefficients between external latent variables and internal latent variables (gamma,  $\gamma$ ); 4) R2 of the structural equation; and 5) R2 of observed variables of internal and external latent variables (Prasitrat, et al. 2008).

4. Goodness-of fit measures were employed to study how much the model was in conformity with the empirical data. The following statistics were used:

4.1 Chi-square statistics were used to test a statistic hypothesis. If Chi-square was low or closer to a zero and it had no significant value, it meant that the model was in conformity with empirical data (Wiratchai, 1999).

4.2 The ratio of  $\chi^2/df$  was examined. As the samples were numerous, Chi-square was inevitably bound to be high. It was possible that the final results might not be correct. Therefore, the  $\chi^2/df$  should not exceed 2.00 (Angsuchot, et al. 2011).

4.3 Goodness-of-fit index (GFI) indicated a proportion of different outcomes of conformity between a previous model and a modified one. If GFI ranged from 0.90 to 1.00, it meant that the model was in accordance with the empirical data (Wiratchai, 1999).

4.4 Adjusted goodness-of-fit index (AGFI) was employed with consideration of degrees of freedom including the number of variables and samples' size. If AGFI ranged from 0.90 to 1.00, it indicated that the model was in line with the empirical data (Wiratchai, 1999).

4.5 A comparative fit index (CFI) was used to compare the research assumption model whether how much there was a conformity as regards the empirical data. The value ranging from 0.90 to 1.00 indicated that the model was in accordance with the empirical data (Wiratchai, 1999).

4.6 Standardized Root Mean Squared Residual (Standardized RMR) was examined to assess the average magnitude of discrepancies of the model. If the value was less than 0.01, it meant that the model was in consistency with the empirical data (Wiratchai, 1999).

4.7 Root mean square error of approximation (RMSEA) was indicative of the non-conformity of the model with a variance matrix. The value of RMSEA lower than 0.05 showed that the model was in accordance with the empirical data (Wiratchai, 1999).

4.8 Critical N (CN) was an index showing the size of the samples that could accept a conformity of the model. The CN should be more than 200 of the samples (Diamantopoulos & Siguaw, 2000 cited in Angsuchot, et al. 2011).

4.9 Fitting residual matrix refers to the one having different results of matrix S and Sigma. It comprises an error value in the form of raw scores and standardized scores. If the residual value was closer to a zero, it meant that the model was likely to be consistent with empirical data. A suitable residual ranged between -2 and 2 (Wiratchai, 1999).

4.10 Model modification index (MI) was employed. Researchers modified the model based on theories and research works. An attempt was made to evaluate parameter whether it was valid, and to consider a squared multiple correlation. An overall fit of the model was also considered if it was in accordance with empirical data. Modification discontinued when the residual was found lower than 2.00 (Wiratchai, 1999).

Researchers used the criteria to examine a conformity between the developed model and the empirical data as shown in table 1.

**Table 1** Statistics used to examine a conformity of the model of the structure equation and the empirical data

<b>Statistics used</b>	<b>Accepted Level</b>
1. ( $\chi^2$ )	$\chi^2$ not significant or P-value higher than 0.05
2. $\chi^2$ /df	Should not exceed 2.00
3. GFI, AGFI, CFI	Ranging from 0.90 – to 1.00, meaning that the model is in conformity
4. Standardized RMR, RMSEA	Lower than 0.05
5. CN	Higher than or equivalent to 200 of the samples
6. largest standardized residual	From -2 to 2

## Results

### *Symbols and Abbreviations*

The following symbols and abbreviations were used in presenting the results of data analysis.

### *Abbreviations for Variables*

#### *Mediator Variables*

**DBR for effectiveness in driving the public state policy in development of Buriram Province which can be measured in four variables:**

- DBRE for economy
- DBRC for society and life quality
- DBRN for natural resources and environments
- DBRS for security, peace and order

**DBRL for effectiveness in driving the public state policy in development of local communities, which can be measured from three observed variables:**

- DBRLE for strength and sustainability of local communities
- DBRLG for economic growth of local communities
- DBRLA for efficient access to the state services

#### *Independent Variables*

**PP for effectiveness in driving the public policy in Buriram Province, which can be evaluated by six variables.**

- PPG for goals and objectives of the policy
- PPL for leadership of administrators
- PPR for resources and authority in allocating resources
- PPP for clear, continuous and practical policy
- PPT for public relations and use of technology
- PPA for public's participation

#### *Dependent Variables*

**Y for effectiveness in driving the public state policy in the province. It can be measured in six observed variables.**

- Poor for poverty eradication
- Over for social inequality reduction
- Qua for quality-of-life development
- Fair for equality and justice
- Sati for satisfaction towards the public state policy

## 1. Analysis of simple correlation coefficients of variables of effectiveness in driving the public state policy in Buriram Province

A value of correlation of 18 variables was examined. It was found that the

value of correlation coefficients of variables was statistically significant at .01. And the value of correlation of all variables was positive between 0.646 and 0.861. It indicated that the relation of variables under the study was a linear one. The variables with a maximum relation were that of society and life quality (DBRC) and that of security, peace, and order (DBRS). The variables having a minimum relation were that of natural resources and environments (DBRN) and that of leadership of administrators as shown in table 2.

**Table 2** Simple correlation coefficients' value of variables regarding the effectiveness in driving the public state policy in Buriram

ตัวแปร	Poor	Over	Qua	Fair	Sati	PPG	PPL	PPR	PPP	PPT	PPA	DBRE	DBRC	DBRN	DBRS	DBRLE	DBRLG	DBRLA	
Poor	1.000																		
Over	.824**	1.000																	
Qua	.776**	.803**	1.000																
Fair	.784**	.804**	.811**	1.000															
Sati	.788**	.762**	.798**	.851**	1.000														
PPG	.761**	.743**	.768**	.843**	.818**	1.000													
PPL	.726**	.707**	.679**	.742**	.724**	.840**	1.000												
PPR	.745**	.735**	.760**	.800**	.794**	.827**	.820**	1.000											
PPP	.745**	.726**	.727**	.787**	.790**	.835**	.804**	.859**	1.000										
PPT	.712**	.737**	.792**	.771**	.754**	.768**	.700**	.773**	.766**	1.000									
PPA	.742**	.730**	.777**	.805**	.782**	.828**	.778**	.802**	.794**	.801**	1.000								
DBRE	.762**	.735**	.740**	.797**	.760**	.833**	.776**	.811**	.798**	.762**	.806**	1.000							
DBRC	.727**	.727**	.761**	.795**	.781**	.829**	.747**	.772**	.768**	.750**	.802**	.854**	1.000						
DBRN	.660**	.671**	.709**	.720**	.723**	.744**	.646**	.713**	.700**	.748**	.736**	.790**	.835**	1.000					
DBRS	.720**	.750**	.740**	.781**	.765**	.807**	.755**	.767**	.778**	.760**	.825**	.833**	.861**	.808**	1.000				
DBRLE	.741**	.734**	.740**	.762**	.768**	.771**	.722**	.789**	.769**	.762**	.817**	.791**	.809**	.770**	.830**	1.000			
DBRLG	.742**	.750**	.753**	.762**	.776**	.781**	.711**	.768**	.752**	.768**	.798**	.792**	.813**	.789**	.812**	.845**	1.000		
DBRLA	.727**	.723**	.701**	.767**	.720**	.758**	.735**	.753**	.770**	.735**	.793**	.802**	.792**	.708**	.809**	.819**	.796**	1.000	

From table 2 considering the simple correlation coefficient of the variables, it was found that the variables were positively related at a statistical significance of .01. The variables which had maximum relations were that of society and life quality and that of security, peace and order (DBRS). The simple co-relation coefficient value was equivalent to .861, followed by the variables of clear, continuous and practical policy (PPP) and resources and allocation (PPR). The simple correlation coefficient value was equivalent to .859.

As regards the observed variables with the lowest relations, it was found that the variables of natural resources and environments and of administrators' leadership had the value of simple correlation coefficients equivalent to .646, followed by the variables of natural resources and environments and of solving the poverty. However, there was a positive relation with a statistical significance at .01 found in all variables.

## ***2 Results of study on conformity of the model of a structure equation of effectiveness in driving the public-state policy in Buriram Province and the empirical data before the model modification***

The study results on conformity of the model of a structure equation of effectiveness and the empirical data are shown in table 4.7 and figure 4.1

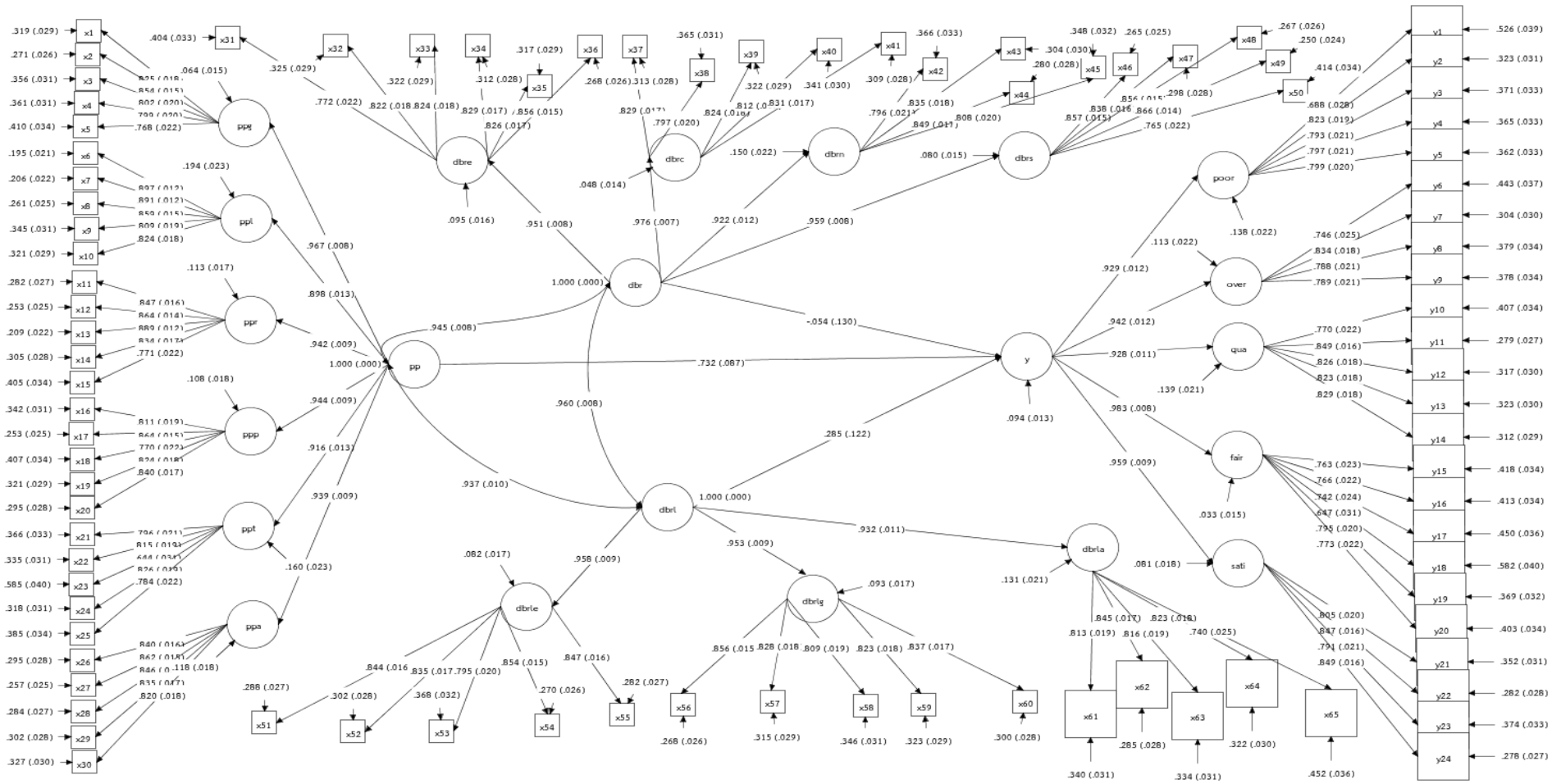
**Table 3** Statistics of conformity of the model of the structure equation of effectiveness in driving the public state policy in Buriram Province and the empirical data before the

<b>index value</b>	<b>Criteria Used</b>	<b>Statistics</b>	<b>Results</b>
$\chi^2$ - test	$p < 0.05$	0.00	not pass
$\chi^2 / df$	$< 2.00$	$7386.956/3803 = 1.942$	pass
TLI	$> 0.90$	0.895	not pass
CFI	$> 0.95$	0.898	not pass
SRMR	$< 0.05$	0.034	pass
RMSEA	$< 0.05$	0.049	pass

### ***Model Modification***

In table 3, it was found that p-value had statistical significance equivalent to 0.00. The set value had to be more than 0.05. The result was 'not pass the criterion'. Chi-square ( $\chi^2$ ) was equivalent to 7386.956. The value of degrees of freedom (df) was equivalent to 3803. The ratio of  $\chi^2/df$  was equivalent to 1.942, less than the set criterion ( $< 2$ ). The result was 'pass the criterion'. The index value of TLI was equivalent to 0.895 (the set criterion  $> 0.90$ ). The index for CFI was equivalent to 0.898 (the set criterion  $> 0.95$ ). The value of SRMR was equivalent to 0.034 (the set criterion  $< 0.05$ ). RMSEA was equivalent to 0.049 (the set criterion  $< 0.05$ ). The result was 'pass the criterion'.

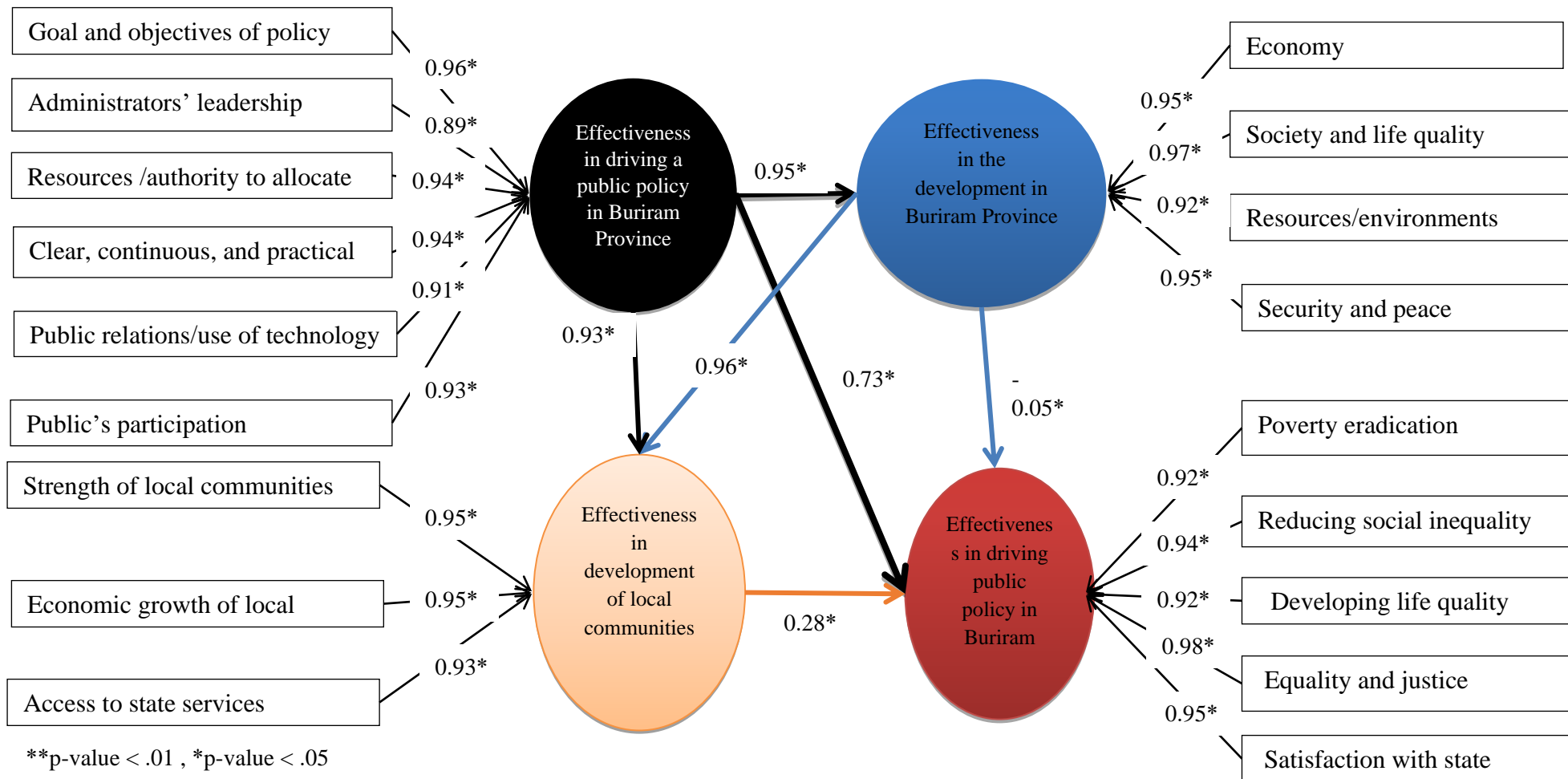
It can be concluded that there was a conformity of the model developed by the researchers and the empirical data before the model modification. Chi-square was extremely sensitive to the samples. Thus, the larger the samples are, the more statistically significant the Chi-square becomes. In reality, the model was conformed with the data (Moonmueang, 1996)



Chi – square = 7386.956, df = 3803, p = 1.942, CFI = 0.898, TLI = 0.895, SRMR = 0.034, RMSEA = 0.049

**Figure 1:** Diagram of the model of the structure equation developed by researchers and empirical data before the model modification





**Figure 2:** Result of studying a conformity of the model of a structure equation of effectiveness in driving the policy and the empirical data before the model modification

### ***3 The results of a study of a conformity of the model developed by the researchers and the empirical data after the model was modified***

After the conformity of the model was examined for the first time, it was found that the model under study was not in conformity with the empirical data. Then, the researchers modified the research model by considering a theoretical possibility and using model modification indices (MI). The modified values were specific statistic values of each parameter, which was equivalent to reduced chi-square.

As regards the model modification indices (MI), it was found that the index having a maximum value as suggested by the program as follows: increased influence routes between variables, solving the poverty, and reducing a social inequality. In the modified model, a total of 39 lines of error relation were added (shown in a diagram 4.3). There were 18 lines shown in the form of Theta Delta (TD), 12 lines shown in the form of Theta Epsilon (TE), and nine lines shown in the form of Theta Delta Epsilon (TH). The model modification stopped when the statistic value of the index criterion was acquired. The model which was obtained was the model of the structure equation of effectiveness in developing the public state policy in Buriram Province as per the hypothesis the researchers had established. Details were shown in table 4 and figures 3.

**Table 4** Statistics of conformity of the model of a structure equation of effectiveness in driving the public state policy in Buriram and the empirical data after the model modification

<b>Index</b>	<b>Criteria used</b>	<b>Statistics</b>	<b>Results</b>
$\chi^2$ - test	$p < 0.05$	0.000	Pass
$\chi^2/ df$	$< 2.00$	$237.562/119 = 1.996$	Pass
TLI	$> 0.90$	0.983	Pass
CFI	$> 0.95$	0.987	Pass
SRMR	$< 0.05$	0.013	Pass
RMSEA	$< 0.05$	0.050	Pass

Table 4 shows that P-value was equivalent to 0.000. The set value was to be less than 0.05. The result was 'pass the criterion'. Chi-square ( $\chi^2$ ) was equivalent to 237.562, and the value of degrees of freedom (df) was equivalent to 119. The value of chi-square ratio ( $\chi^2/df$ ) was equivalent to 1.996, which was less than the set criterion  $< 2$ . It meant 'pass the criterion'. The value of TLI was equivalent to 0.983 (the set criterion  $> 0.90$ ). It meant 'pass the criterion'. An index of CFI was equivalent to 0.987 (the set criterion  $> 0.95$ ). It meant 'pass the criterion'. The value of SRMR was 0.013 (the set criterion  $< 0.05$ ). It meant 'pass the criterion'. The value of RMSEA was equivalent to 0.050 (the set criterion  $< 0.05$ ). It meant 'pass the criterion'. Considering the statistics found, it indicated that the model of effectiveness in driving the public-state policy in Buriram was in conformity with the empirical data as set in the research hypothesis.

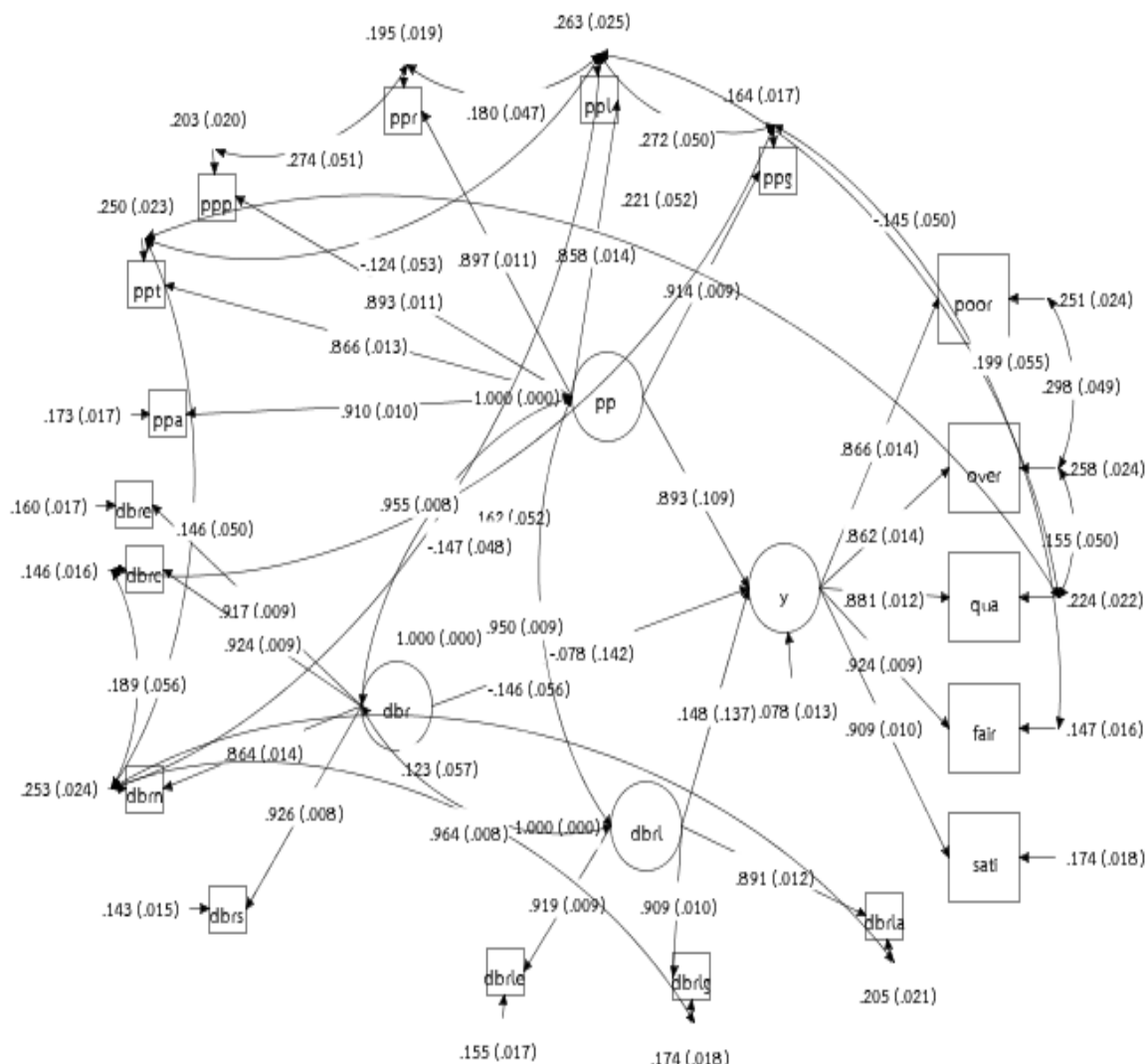
The Factor Loading of the variables was examined and shown in table 5.

**Table 5** Factor Loading of the variables in the model of the structure equation of effectiveness in driving the public state policy in Buriram Province and the empirical data after the model modification

<b>Observable Variables</b>	<b>Factor Loading (<math>\lambda</math>)</b>	<b>SE</b>	<b>T</b>	<b>R<sup>2</sup></b>
Poverty eradication (Poor)	0.866	0.014	62.929	0.749
Reducing a social inequality (Over)	0.862	0.014	61.068	0.742
Improving life quality (Qua)	0.881	0.012	70.914	0.776
Equality and justice (Fair)	0.924	0.009	105.427	0.853
Satisfaction with the public policy (Sati)	0.909	0.010	90.822	0.826
Goals and objectives (PPG)	0.914	0.009	98.893	0.836
Administrators' leadership (PPL)	0.858	0.014	59.755	0.737
Resources and allocation (PPR)	0.897	0.011	84.304	0.805
Clear, continuous and practical policy (PPP)	0.893	0.011	79.740	0.797
Public relations and use of technology (PPT)	0.866	0.013	65.001	0.750
Public's participation (PPA)	0.910	0.010	95.007	0.827
Economy (DBRE)	0.917	0.009	100.285	0.840
Society and life quality (DBRC)	0.925	0.009	106.814	0.854
Natural resources/ environments (DBRN)	0.864	0.014	62.431	0.747
Security, peace and order (DBRS)	0.926	0.008	111.346	0.857
Strength/ sustainability of local communities (DBRLE)	0.919	0.009	98.137	0.845
Economic growth of local communities (DBRLG)	0.909	0.010	89.137	0.826
Effective access to state services (DBRLA)	0.891	0.012	77.196	0.795

Table 5 shown the study results of conformity of the model on effectiveness in driving the public state policy in Buriram. It was found that the observed variable with a maximum factor loading was society and life quality (DBRC) at 0.925. The variable with a minimum factor loading was administrators' leadership at 0.858.

Considering the coefficients of observed variables, it was found that the observed variables had predictive coefficients between 0.737 -0.857. The variable having a maximum predictive coefficient was security, peace and order (DBRS) at 0.857. The variable having a minimum coefficient was administrators' leadership equivalent to 0.737 as shown in figure 3.



Chi – square = 237.562, df = 119, p = 1.996, CFI = 0.987, TLI = 0.983, SRMR = 0.013, RMSEA = 0.050

**Figure 3:** The model of the structure equation of effectiveness in driving the public state policy in Buriram Province reflecting the conformity with the empirical data after the model modification

## Conclusions

Model of efficacy in driving civil state policy in Buriram province by assessing policy effectiveness in solving many people's concerns such as poverty, social disparity reduction, and equitable allocation of available resources. Citizens have the same level of access to government services. People engage in policy, have a higher quality of life, contain a job, earn money, are in excellent bodily and mental health, and live in a decent society. Operational success is the outcome of policy objectives with defined goals and concrete policies. Through increasing public relations of the policy, as well as the use of contemporary technologies to assist implement the policy. Executives should demonstrate strong leadership, which will impact the success of policy implementation in Buriram province and the majority of the nation.

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