National stability expectation in responding Thailand 4.0 policy: The confirmatory factor analysis

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Abstract

National stability expectations (NSE) were what people expected they would be appropriately served from the local organization. It was the response to Thailand 4.0 policy that every public sector has to implement. The purposes of this research were to investigate modifications of work forms of public officers in local organizations and validate the consistency of national stability expectation in response Thailand 4.0 policy and empirical data.

The samples are selected by stratified random sampling and using Taro Yamane. The population consisted of people who live in Rangsit Municipality, Pathum Thani Province area. The total was 450 individuals. There was one questionnaire that comprised demography and expectations of the people. The internal consistency reliability of the questionnaire is 0.936. The descriptive statistics are analyzed by SPSS for Mac version 24.0 while confirmatory factor analysis (CFA) and structural equation model (SEM) are analyzed by LIRREL 8.80.

The result from the exploratory factor analysis exhibited three factors in national stability, i.e., enforcement equally (EE), welfare system (WS), and government service upgrades (GSU). CFA showed two structural models which are analyzed by first and second order CFA. The NSE model was fit indices and most of the indicators correlation was significantly positive ($p<0.01$) with the highest factor variation of GSU 89 percent. EE and GSU were co-relationship highest ($\beta = 0.80$). SEM was good fit with EE highest influence to WS.

The NSE model can be insisted through CFA, as it revealed a good reliability index and co-relationship between the scales consistent with the theory and three factors described.

Keywords: national stability expectations, Thailand 4.0 policy, confirmatory factor analysis, structural equation model

Introduction

National stability expectations (NSE) was what people's reflection of how organizations implement particular response the government policy. Central and regional administration were the mechanism to control local administration activities in order to supply implementation (Brusca & Motesino, 2016). Moreover, performance information was observed to make better-informed decisions. Globalization involved democracy and good governance building because it was a response to the preference of people who considered it as equality of politics. People must have the chance to determine their own satisfaction to insure they have the freedom to gather together the expression of freedom (Dahl, 2000).

Thailand 4.0 policy is a national strategy to develop all dimensions in the country under military government era. A part of the national strategy is a national stability development response from local administration via providing a strategic plan (2017-2027). Stability is related to state ability and legal public service of the state, righteousness, good governance and

corruption, income, democracy and human rights (Karl & Goldfinch, 2012). As a finding, bad governance is a weakness causing underdevelopment and poverty in Nigeria (Arisi & Ukadike, 2013). They found that governance was the process of making decisions and processes, some of which are not implemented. It can be utilized in various contexts including good governance for international, national, or local government. National governance is a guideline or perspective that focuses on government institutions, society, and relationship as well as methods and rules. They are established in a society that is recognized as legitimate and adds value by individuals and groups within society to create national stability and stable political system.

Further, good governance does not have certain criteria for determining objectives, e.g., political stability, rule of law, regulation, formulation, management, policy corruption control, and responsibility (Nanda, 2006; Jachtenfuchs, 2001). In addition, high levels of domestic poverty and weak governance are linked. As a result, it is difficult to choose to practice local governance. The globalization context, democratic concept, and the concept of decentralization are an important factor that affects policy formulation participation and implementation the policy. On the other hand, form of good governance is associated with democracy which is consistent the elements of the management model of government organization in term of participation and legitimacy (Bevir, 2010). The administration in public organization needs to modify their management along policy from central government namely Thailand 4.0.

Confirmatory Factor Analysis (CFA) implies a tool to evaluate the structure obtained in empirical data that is currently popular for investigation. Index factors (latent variables) of national stability expectation from observed variables that can not be directly measured but it can be measured or referenced indirectly from behavior. Exploratory factor analysis (EFA) and Confirmatory factor analysis (CFA) are the tools to examine factors and indicators which are associated with scales. NSE needs to be examined as well to by them. Therefore, the aim of the study was to investigate modifications of work forms of local organization and validate the consistency of national stability expectations of people through confirmatory factor analysis in response to Thailand 4.0 policy with empirical data.

National stability expectation & local organization

Thai administration is divided into three forms (i.e., central administration, regional administration, and local administration). National stability was an issue that every government must implement to be effective via policy, rule, or law. Local organization was between people and government which served public goods and was subsidized from central government. According to Thailand 4.0 policy, it focused to reducing inequality, equality, and reducing conflict among political interest groups. Public officers also were reformed in terms of implementation response to the policy such as national stability reform to develop their performance. In addition, the government sector must reform the roles, duties, structures and work processes of government agencies to be transparent, honest, efficient and effective. The ultimate goal of work was that people and public sector can work seamlessly with the private sector smoothly. The role of good governance depends on the nation's income level (Ngobo & Fouda, 2012). When the income was lower, improvement of public governance tended to affect the company's performance more than when revenue was high (Ngobo & Fouda, 2012). On the other hand, there was a tension between administration reform and the stability of the regime, especially in the Middle East as promoting democracy and good governance (Pal, 2018).

Seventeen statements that are designed by researcher to determine if current Thailand policy, would it be good and suit to fit model? And have they associated among themselves? It was a big issue to prove and to confirm with any tool that is accepted by academic. It was

confirmatory factor analysis via structural equation model (SEM) (Schreiber, Stage, King, Nora, and Barlow, 2006).

Methods

The survey used quantitative method with questionnaire for 450 participants based on Comrey & Lee (1992) and Tabachnick & Fidell (2007) and should have at least 300 respondents. The sample included the people who live in Rangsit municipality area, Pathum thani Province, Thailand. The random sampling used stratified random sampling from three villages. The percentage of questionnaires returned was 93.2% (450 respondents). Statistical analysis used to examine the hypothesis were exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The questionnaire comprised of two parts including individual information (gender, age, education, occupation, & income), and expectation of public officer performance, i.e., nation stability (17 items), reductional inequality-create equality (15 items), and promote participation (18 items). The scale was five levels, i.e., most, much, moderate, little, and least (Likert, 1961). Cronbach's Alpha for reliability value is 0.976 through SPSS for Window version 24.0.

Data analysis techniques were exploratory factor analysis to investigate latent variables that related to factors. Second, confirmatory factor analysis to test the goodness of fit indices of consistency of model via first and second order confirmatory factor analysis.

Participants of this study were male (55%) with 41-50 years old (37.42%) and less than Bachelor degree (99.1%). Their occupation was merchant / business owner (48.4%) and income was 10,001-20,000 Baht (60.5%) as table 1.

Table 1 Demographic Characteristics of the Sample

Characteristics, Category	n	%
Gender		
Male	246	55
Female	201	45
Age		
22-30 years old	14	3.65
31-40 years old	102	26.56
41-50 years old	143	37.24
51-60 years old	91	23.70
60 years old up	34	8.85
Education		
Lower than bachelor/bachelor	442	99.1
Higher than BA	4	0.9
Occupation		
Employee	207	46.2
Merchant/business owner	217	48.4
Public officer	7	1.6
Temporary/Permanent employee	2	0.4
Private company officer	13	2.9
Others	2	0.4
Monthly Income (Baht)		
Lower than 10,000	169	37.9
10,001-20,000	270	60.5
20,001-30,000	2	0.4
30,001-40,000	3	0.7

Higher than 40,001	2	0.4

Result

The result revealed factors which related to national stability (NS) comprised Enforcement Equally (EE), Welfare System (WS), and Government Service Upgrades (GSU) with factor loading 0.43-0.81, 0.51-0.57, and 0.52-0.60 respectively via exploratory factor analysis (EFA) to uncover complex patterns by exploring the dataset (Chil, 2006; Hair, Black, Babin & Anderson, 2010) as table 3. Standard errors of three factor were ranges 0.04**.** Single factor was cut-off range from 17 indicators to 13 indicators with factor loading range 0.43-0.81 ($p<0.05$) and standard errors range (Hair et al., 2010) as detail in table 3. Three factors (latent variables) was poor fit indices to the data, resulting in $\chi^2 = 187.75$, $\chi^2/df = 3.03$, GFI = 0.94, AGFI = 0.91, CFI = 0.97, RMSEA = 0.067.

The analyzed values of EFA of NS exhibited as Table 2. It displayed the adequacy of the sample, validity and suitability of the responses. Kaiser-Meyer-Olkin Measure (KMO) of sampling adequacy (cut-off above 0.50) and Bartlett's test showed patterned relationships amongst the variables ($p < 0.05$).

Table 2 The KMO and Bartlett's Test of National Stability Expectation (NSE)

Factors	KMO	Bartlett's Test	df	p
NSE	0.910	2294.72	136	<0.05

First order CFE, Model fit was proved by three factors and indicated that only EE_4 (item No. 4) indicator has changed increase factor loading ranges. The fit indices to the data displayed as table 5.

Table 3 standard factor loading and standard error for indicator and factor

Item Number	Observed variables	First order (Three latent variables) EE	WS	GSU
1. Concrete local resource allocation, the public is more evenly.	0.81(0.04)	0.81(0.04)		
2. Determining the policy of collecting all types of income tax appropriately for the economic conditions of people in all sectors.	0.58(0.04)	0.58(0.04)		
3. Education distribution is thorough and youth have more access to opportunities.	0.51(0.04)		0.51(0.04)	
4. The power of local influencers (i.e., municipal members, mayor, as well as government officials in all sectors) have been investigated when there was misconduct.	0.49(0.04)	0.53(0.04)		
6. The poor get more opportunities both legal and dark influence (i.e., mafia)	0.51(0.04)		0.51(0.04)	
7. The government sector defines laws, regulations, policies, and benefits for all classes.	0.53(0.04)	0.53(0.04)		

8. The corruption suppression is more clear, transparent, and concrete.	0.43(0.04)	0.43(0.04)		
10. The government has a mechanism to monitor and to control the cheating behavior.	0.54(0.04)		0.54(0.04)	
11. Slack laws were modified and developed a stronger.	0.60(0.04)			0.60(0.04)
12. Some government services are as efficient as services from the private sector.	0.53(0.04)			0.53(0.04)
13. Strong welfare system and meets the needs of all citizens.	0.57(0.04)		0.57(0.04)	
15. Government responsibility for reducing income differences between high-income and low-income people.	0.54(0.04)			0.54(0.04)
16.Determining the appropriate standard of living for the unemployed.	0.52(0.04)			0.52(0.04)
Second order (three latent variables)		0.83(0.06)	0.88(0.08)	0.89(0.07)

Next, the cause model was analyzed by first order CFA and second order CFA to confirm the consistency of causal factors. The figure 1 exhibited the first order CFA. On the other hand, the figure 2 displayed the second order CFA. They were consistency with fit indices (Schumacher & Lormax, 2004; Hair et al., 2010) as table 4. Variable indexes displayed acceptable correlation for three factors whereas GSU and NSE were highest correlation (r=0.89) and EE and WS were lowest (r=0.72) with significant ($p<0.05$) as table 5.

Table 4 fit indices for first and second order CFA of NSE model

Model	χ^2	χ^2 /df	AGFI	GFI	CFI	RMSEA
NSE (1st order)	93.71	1.62	0.91	0.94	0.97	0.037
NSE (2nd order)	187.75	3.03	0.91	0.94	0.97	0.067

Note: NSE= National stability expectation

Table 5 PHI matrix correlation of factors for second order CFA

Factor	EE	WS	GSU	NSE
EE	1.00			
WS	0.72	1.00		
GSU	0.73	0.78	1.00	
NSE	0.83	0.88	0.89	1.00

P<0.05

Note: EE= enforcement equally, WS = welfare system, GSU = government service Upgrades, NSE = national stability expectation

Table 6 Correlation of indicator of NSE

Item	EE_1	EE_2	WS_1	EE_3	WS_2	EE_4	EE_5	WS_3	GSU_1	GSU_2	WS_4	GSU_3	GSU_4
EE_1	1												
EE_2	.621**	1											
WS_1	.489**	.270**	1										
EE_3	.484**	.400**	.255**	1									
WS_2	.359**	.299**	.409**	.242**	1								
EE_4	.430**	.380**	.313**	.418**	.279**	1							
EE_5	.372**	.323**	.253**	.361**	.252**	.328**	1						
WS_3	.353**	.273**	.312**	.302**	.349**	.364**	.269**	1					
GSU_1	.378**	.326**	.261**	.347**	.268**	.313**	.359**	.375**	1				
GSU_2	.300**	.241**	.248**	.266**	.255**	.351**	.341**	.296**	.433**	1			
WS_4	.272**	.190**	.307**	.255**	.429**	.284**	.249**	.449**	.361**	.313**	1		
GSU_3	.300**	.219**	.222**	.257**	.273**	.351**	.303**	.353**	.467**	.404**	.415**	1	
GSU_4	.392**	.327**	.309**	.299**	.290**	.289**	.306**	.359**	.365**	.408**	.326**	.357**	1

**p < 0.01

Due to table 6, the results identified the internal indicator correlation that all indicators were positive associated significant ($p<0.01$). Internal correlation of factor revealed, i.e., EE_1 and EE_2 (r = .621), EE_1 and EE_3 (.484), and GSU_1 and GSU_3 (r = .467) while external correlation of factor indexed EE_1 and WS_1 highest range (r=.489). Otherwise, lowest was EE_2 and WS_4 (r=0.190). Correlation values identified that the NSE model suited analysis by using CFA because of all associations were confirmed ($r<0.85$) (Kline, 2011) with no problem about multicollinearity.

In the model displayed in Figure 1, all co-relationships were significant from beta positive (β=0.74) between EE and WS to a highest positive (β=0.80) co-relationship between EE and GSU.

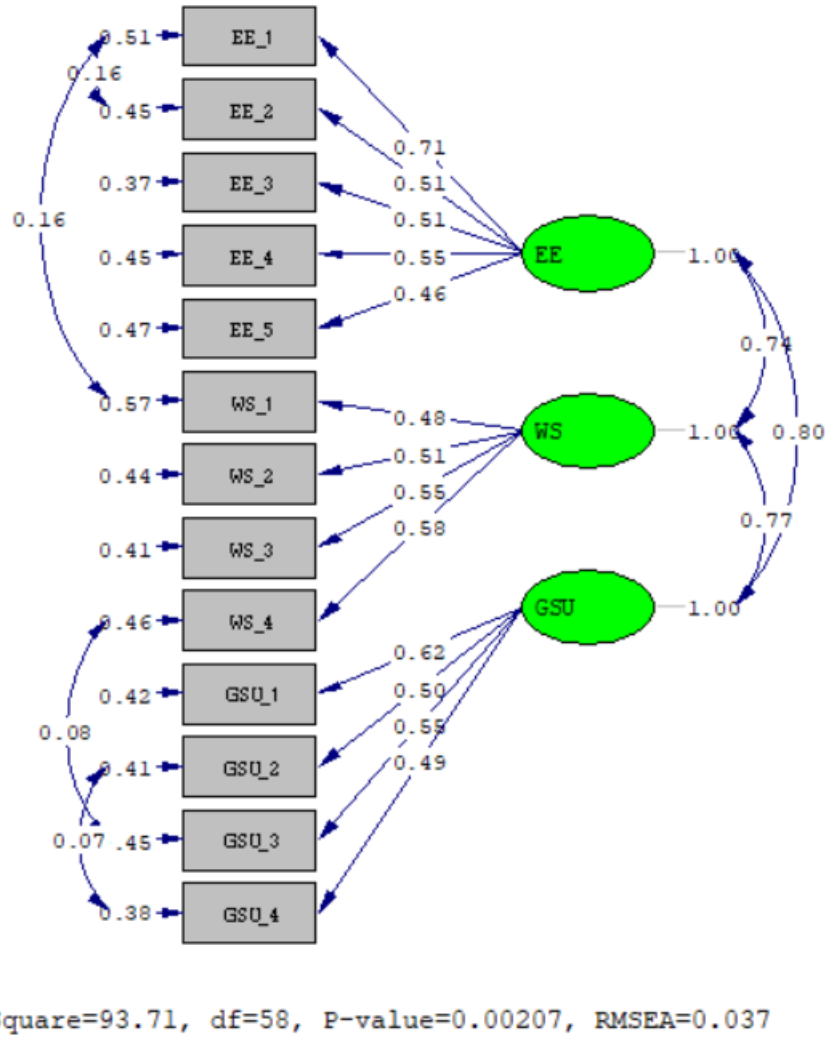

Figure 1 First order CFA fit indices of NSE model
Note: EE= enforcement equally, WS=welfare system, GSU=government service upgrades

The second order CFA of NSE as figure 2, all regressions from NSE to its variables were significant. Variation from β = 0.89 for GSU to β = 0.83 for EE were given.

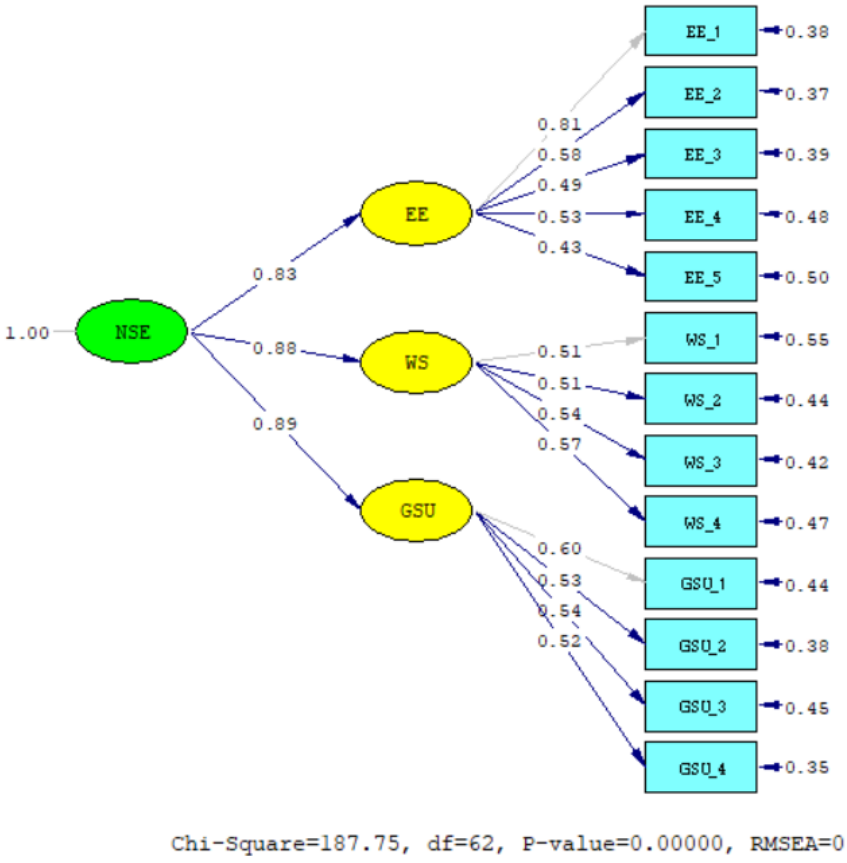

Figure 2 Second order CFA fit indices of NSE model
Note: EE= enforcement equally, WS=welfare system, GSU=government service upgrades, NSE=national stability expectation

Due to structural equation model (SEM) results, the SEM was good fit of the empirical data (Schumacher & Lormax, 2004; Hu & Bentler, 1999) as figure 3. In addition, direct effects and indirect effects indicated that EE has positive influence to WS 58 percent (R^2=0.58) while EE and WS have influence to GSU 64 percent (R^2=0.64) as table 7.

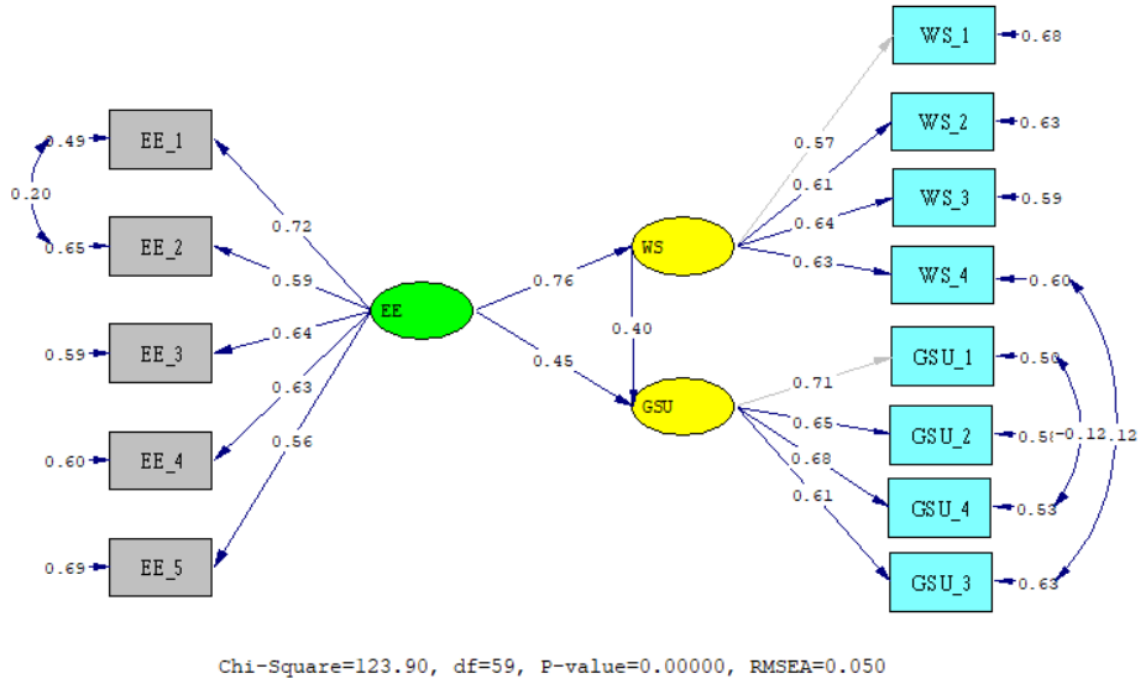

Figure 3 Results for the structural equation model (SEM) of NSE. NNFI=0.98, CFI= 0.98, GFI=0.96, AGFI=0.94, χ^2/df = 2.1.

Table 7 Results of Direct, indirect, and total effects of structural equation model

Variable	WS			GSU		
	DE	IE	TE	DE	IE	FE
EE	0.76	0.18	0.94	0.45	0.30	0.75
WS	-	-	-	0.40	0.34	0.74
R^2		0.58			0.64	

Note: **Note:** EE= enforcement equally, WS=welfare system, GSU=government service upgrades, DE= direct effect, IE=indirect effect, TE=total effect.

Discussion

The aim was to investigate the latent structures of the NSE on people with public officer performance in local organization and validate the consistency of NS in response Thailand 4.0 policy and empirical data. Specifically, EFA and CFA demonstrated that first order and second order CFA model provided a good fit for the observed NSE data among a sample of people who receive services from local government. According to Tedeschi & Calhourn (2004) referred that if the studies have designed statements from original questions, they would insert any questions that appropriate to study the original context. The researcher should use analysis via EFA to inspect all statements that uncover complex patterns. Next, using CFA analyzes to confirm theoretical analysis the model. First, EFA identified three latent variables, i.e., EE, WS, and GSU which indicated factor loading (0.46-0.81, 0.51-0.57, and 0.52-0.60 respectively). Second, the CFA identified poor fit (Schumacher & Lormax, 2004; Hair et al., 2010) while if model was inconsistent with empirical data, it must be adjusted accordingly (Jöreskog & Sörbom, 1989).

Further, the first order CFA was modification that exhibited good fit indices (χ^2=93.71 χ^2/df =1.62, GFI = 0.94, AGFI=0.91, CFI = 0.97, RMSEA = 0.037) (Bollen & Long, 1993; Wang et al., 1996; Mueller, 1996; Diamantopoulos & Siguaw, 2000; Hu & Bentler, 1999)

while EE and GSU have highest co-relationship (β = 0.80), WS and GSU (β=0.77), and EE and WS lowest (β=0.74). Theoretically, if the model has each factor include three indicators up, it meant the model more accurate data analysis results, parameters more accurately, and the reliability of the observed variable increased (Kenny & McCoach, 2003; Marsh et al., 1998). Therefore, first order can identify that NSE has structural accuracy of the observed variables that related into three factors.

Moreover, while first order CFA was fit model with structural accuracy, the second order CFA displayed also fit to confirm the NSE model (χ^2 = 187.75 χ^2/df =3.03, GFI = 0.94, CFI = 0.97, RMSEA = 0.067) (Mueller, 1996; Bollen & Long, 1993; Wang et al., 1995; Diamantopoulos & Siguaw, 2000; Hair et al., 2010). Comparatively, three factors weight and observed variables weight to empirical data revealed that GSU weight increased two indicators (i.e., GSU_2, from 0.50 to 0.53, GSU_4 from 0.49 to 0.52) and standard residuals also were changed reducing except GSU_3 (Marsh et al., 1998; Kenny & McCoach, 2003). However, GSU was highest factor weight. There were thee indicators reducing for EE as well for standard residuals (i.e., EE_2, EE_4, EE_5) while EE_1 and EE_3 increasing. On the other hand, WS_3 and WS_4 were changed reducing standard residuals. Therefore, second order CFA indicated that three factors have important to NSE with variation 89 percent, 88 percent and 83 percent respectively.

In term of internal consistency of factor and indicator, the NSE total score exhibited positive significantly ($p<0.01$). That meant those indicators appropriated to analyze via CFA and SEM ($r<0.85$) (Kline, 2011). Next, structural equation model revealed both direct and indirect effects of NSE model that it was fit indices with NNFI=0.98, CFI= 0.98, GFI=0.96, AGFI=0.94, χ^2/df = 2.1, RMSEA= 0.050 (Schumacher & Lormax, 2004; Hair et al., 2010; Schreiber et al., 2006; Yu, 2002; Hu & Bentler, 1999). Therefore, NSE can be good model to use predict the people expectation of organization performance reform related to Thailand policy under military government driven. Otherwise, the latent variable (i.e., enforcement equally, welfare system, and government service upgrades) exhibited from investigation via SEM showed the result was appropriate to measure the national stability expectation of people.

Conclusion

The study of the national stability expectations (NSE) by the structural equation model for the confirmatory factor analysis in initial data in the current sample revealed a good reliability index and co-relationship between the scales, consistent with the theory. Enforcement equally, welfare system, and government service upgrades were positively significant association. First and second order CFA testing confirmed the structure initially proposed for NSE model. Scales in the foreground, the relationship between them and being accepted, not only the tools but also theoretically as previously emphasized.

Moreover, the modification of work forms in local organization displayed three factors which influence to NSE both direct and indirect effects among themselves scales.

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Compliance with Ethical Standards

Conflict of Interest The author declares that there is no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the author.

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