Validity evidence of the sufficient life skill model

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Abstract

The sufficiency economy philosophy in King Bhumibol’s initiative is a principle for the development of people especially their ideas and the relationship of adequate living, that is providing guidance on appropriate conduct covering numerous aspects of life. This construct is a new model in educational measurement in Thailand. This study tried to examine the construct validity of the measurement model by using the sufficient life skill (SLS) scale. The scale was used to measure the SLS of 599 Thai students studying in basic education level and the lie scale was applied to detect faking of test takers. The confirmatory factor analysis was utilised for comparing the two different models, holistic and specific models. The result showed consequence of construct validity of the better model. In addition, findings also supported the importance of applying lie scale for detecting faking responses. Theoretical implications are discussed.

Keywords: Construct validity, confirmatory factor analysis, sufficient life skill, sufficiency economy philosophy.

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1. Introduction

Sufficiency economy philosophy (SEP) was introduced in 1974 by His Majesty the late King Bhumibol Adulyadej. SEP is an approach for sustainable development which espouses moderation, reasonableness and prudence as development framework based on knowledge and virtue. The Philosophy attaches great importance to human development at all levels and emphasises the need to strengthen community’s capacity to ensure a balanced way of life and resilience, with full respect for the environment (Chaipattana Foundation, 2015; Mongsawad, 2010; Thailand International Cooperation Agency, 2017). When the planet is under threat from conspicuous consumption and greed-driven development, moderation is SEP’s overriding principle. When globalisation brings with it economic uncertainties and risks, SEP advocates prudence and built-in self-immunity to cope with external shocks. And when things get tough, SEP’s advice is simple: persevere and strive on. In hindsight, the 1997 economic crisis was a blessing in disguise. It gave Thailand first-hand experience of how fragile unsustainable growth is. The economic pain when the system snapped prompted a nationwide soul-searching and quest for balanced development that gives people quality of life and protects the country from global volatility. Successive governments started to embrace sufficiency thinking in national policy to avoid similar mistakes. Businesses began to put in place measures to ensure good governance. People on the ground across the country especially welcome SEP because the bottom-up decision-making respects their voices, their environment and their way of life. Since then, the SEP has become Thailand’s development compass. Moderation has since become the guiding spirit of the country (Ministry of Foreign Affairs, 2017).

The principle of sufficiency economy stresses the importance of following or adopting the middle path for appropriate conduct by the population at all levels of society consisting of individual, family, community and nation in terms of development and administration in order to modernise in line with the forces of globalisation (Royal Thai consulate-general, 2015). All members of the nation, especially students and people in educational institutions, need to develop their commitment to the importance of knowledge, integrity and honesty, and to conduct their lives with perseverance, toleration and wisdom (Piyamat, 2006). In addition, the content of SEP was authentic to the students’ lives. They learned that, for most successful enterprises, honesty and fairness to customers were very important, both to social and economic development (Khunthongjan, 2010).

The Office of Basic Education Commission (OBEC) has launched the development centre to drive the sufficiency economic philosophy with plan that all education institutes will teach the sufficiency philosophy lessons in 3 years. The Minister of Education has revealed that the introduction of the sufficiency economy to educational institutions will continue to drive His Majesty the King’s philosophy, allowing the students to study under this ideology. This education programme will create a good sense of moral and will prepare the students to be ready for change in all dimensions. The establishment of the SEP development centre will be an important strategy to create a concrete outcome in teaching sufficiency economy development. In addition, the sufficiency economic philosophy has been incorporated in the 2008 Basic Education Core Curriculum, appointing all schools to hold classes and activities that will teach students the economic model with a sufficient foundation (OBEC, 2015).

As the importance of the SEP, there have been a lot of research studies for applying the content of SEP promoted students, for examples Puncaipech and Jogthong (2016) studied students’ language ability in the way that they integrated their previous experience they had got from other learning sources into the current knowledge of English through reading skill, followed by speaking and writing. The content of SEP provided the students with multiple exposures to vocabulary learned. Moreover, Wimontham (2012) focused on the integration of sufficiency economy with the Twitter website for enhancing the using of English for communication. It is similar to the research project of Kaewurai, Wattanathorn, Kearnamanerat, Suwannasri and Thummasit (2012) that based on constructing and validating a learning management model using the SEP for a teaching profession course and tested the
learning management model. Furthermore, Khemwong and Pranee (2010) developed adequacy characteristics rating scale following the philosophy of sufficiency. The research result defined three factors of measurement model consisted of moderation, rationality and immunity. Prasertsin (2015) developed the model to test the eight desired characteristics of secondary education students that sufficiency was a factor in the model. This study specified two factors of sufficiency, moderation and immunity. In addition, Itsarangkun Na Ayutthaya and Thammapiya (2009) explained the factors of SEP that sufficiency has three components: moderation, reasonableness and self-immunity. Reasonableness requires that the choices we make be justifiable by using academic approaches, legal principles, moral values or social norms. Self-immunity emphasises the need for built-in resilience against the risks which arise from internal and external changes by having good risk management; sufficiency economy recognises that the circumstances and situations that influence our lives are dynamic and fluid composed of four dimensions: material, social, environment and culture.

Because of the variety of the SEP component, this study tried to examine the construct validity of the measurement model by using the sufficient life skill (SLS) scale and compare the two different models, holistic and specific models of SLS.

2. Method

2.1. Participants

The participants were 599 high school students, who were studying in M.6 in schools under the Office of the Basic Education Commission of Thailand. The sample size was determined by G*Power 3. Multi-stage random sampling was used to select the sample from Northern, Central, Southern and North eastern regions.

2.2. Measures

The SLS scale was designed based on SEP and affective domain theory of Krathwohl, Bloom and Masia (1964) and then, inspected by the specialists before pre-testing for a psychometric properties inspection was conducted. The force choices items scale consisted of six levels of hierarchical behaviours and the 10 items of lie scale were applied for data collection. The first level of the construct was not sufficient level composed of 12 items using for basic screen. The second level of the construct was received and awareness level composed of eight items. The third level of the construct was responding along social expect level composed of eight items. The fourth level of the construct was value level composed of eight items. The fifth level of the construct was continuous acting level composed of eight items. The sixth level of the construct was personality level composed of 12 items. Each level consisted of four indicators which were materials, social, culture and environment. In addition, the lie scale was five-level rating scale created to detect faking response. All items of the scale got 1.00 of IOC index that showing basic content validity of the research instrument.

2.3. Procedure and design

This study started by documentary research to create a measurement model. Then, the SEP specialists interview was applied for basically construct validity examination. After that, the scale was designed based on the hypothesis model for data collection. Next, the scale was tried out for psychometric properties inspection. The data were collected by the 599 high school students, who were studying in M.6 in rural and urban schools classified by schools size. Faking responses score was screened by lie scale in order to correct the data. Finally, the data was analysed by classical test theory and confirmatory factor analysis (CFA). The item–total correlation was analysed for discrimination
power index and Cronbach’s alpha coefficient was analysed for reliability. The CFA was analysed to compare construct validity of the SLS model.

3. Results

3.1. The psychometric properties of the scale

The scale showed discrimination power index of 0.20–0.47 together with 0.75 of Cronbach alpha coefficient (α). Moreover, the lie scale indicated discrimination power index of 0.29–0.57 together with 0.72 of Cronbach alpha coefficient (α). These constituted the strong evidence showing discrimination power and reliability of the research instrument.

3.2. The construct validity of the model

The SLS model was tested for model fit by Chi-square difference testing. This helped to confirm the appropriateness of the model between the holistic model and the specific model. The data analysis indicated that the SLS model was better fit to the specific model than the holistic model at the level of significance 0.01 with Chi-square difference of 1,032.669, df = 6 and p = 0.000 as shown in Table 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Holistic model</th>
<th>Specific model</th>
<th>Chi-square difference testing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>χ²</td>
<td>df</td>
<td>χ²</td>
</tr>
<tr>
<td>Receive (RA)</td>
<td>1,878.711</td>
<td>254</td>
<td>820.985</td>
</tr>
</tbody>
</table>

As the specific model was better fit than the specific model, it was selected for construct validity. The CFA indicated that the hypothesis model had congruence to the empirical data with χ² = 170.221, df = 148, p = .01020, CFI = 0.989, TLI = 0.986, RMSEA = 0.016 and SRMR = 0.031. This portrayed the strong evidence of construct validity of the SLS model. In addition, the standardised coefficient of factor loading of all observes variables were at the level of significance 0.01 that meant the model was measured by all of indicators. Moreover, the coefficient of determination (R²) of all observes variables showed 14.30%–39.90% explaining the variance of the model as shown in Table 2 and Figure 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor loading</th>
<th>Factor score</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive (RA)</td>
<td>1.000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>RM</td>
<td>1.000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>RS</td>
<td>0.948**</td>
<td>0.151</td>
<td>6.290</td>
</tr>
<tr>
<td>RC</td>
<td>0.880**</td>
<td>0.138</td>
<td>6.355</td>
</tr>
<tr>
<td>RE</td>
<td>1.084**</td>
<td>0.168</td>
<td>6.469</td>
</tr>
<tr>
<td>Respond (AL)</td>
<td>1.181**</td>
<td>0.227</td>
<td>5.209</td>
</tr>
<tr>
<td>AM</td>
<td>1.000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AS</td>
<td>1.277**</td>
<td>0.176</td>
<td>7.263</td>
</tr>
<tr>
<td>AC</td>
<td>1.294**</td>
<td>0.193</td>
<td>6.692</td>
</tr>
<tr>
<td>AE</td>
<td>1.433**</td>
<td>0.207</td>
<td>6.939</td>
</tr>
<tr>
<td>Value (AV)</td>
<td>1.626**</td>
<td>0.276</td>
<td>5.891</td>
</tr>
<tr>
<td>VM</td>
<td>1.000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>VS</td>
<td>0.892**</td>
<td>0.130</td>
<td>6.858</td>
</tr>
<tr>
<td>VC</td>
<td>0.804**</td>
<td>0.120</td>
<td>6.692</td>
</tr>
<tr>
<td>VE</td>
<td>1.340**</td>
<td>0.171</td>
<td>7.835</td>
</tr>
<tr>
<td>Continue (DC)</td>
<td>1.626**</td>
<td>0.271</td>
<td>5.989</td>
</tr>
<tr>
<td>CM</td>
<td>1.000</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Figure 1. The measurement model of the SLS

4. Discussion and Conclusion

The SLS was defined as a multi-dimensional trait that showed hierarchical behaviours. It concerned moderation, reasonableness and self-immunity, with two accompanying conditions: appropriate knowledge and ethics & virtues which composed of four dimensions: material, social, environment
and culture. This was consistent with the research results of Khemwong and Pranee (2010), Prasertsin (2015) and Itsarangkun Na Ayutthaya and Thammapiya (2009) that determined several factors of sufficiency. Moderation within reason is in the sense of not too much or not too little. Reasonableness requires that the choices we make be justifiable by using academic approaches, legal principles, moral values or social norms. Self-immunity emphasises the need for built-in resilience against the risks. The behaviours consisted of five level as 1) received and awareness 2) responding 3) value 4) continuous acting and 5) personality. This model was integrated from many research findings that represented overall SLS. Furthermore, this issue was probably the highlight of the measurement model because the SLS was non-cognitive trait that was defined as affective domain by Krathwohl et al. (1964). They stated that receiving describes the stage of being aware of or sensitive to the existence of certain ideas, material or phenomena and being willing to tolerate them. Responding describes the second stage of the taxonomy and refers to a commitment in some small measure to the ideas, materials or phenomena involved by actively responding to them. Valuing means being willing to be perceived by others as valuing certain ideas, materials or phenomena. Organisation involves relating the new value to those one already holds and bringing it into a harmonious and internally consistent philosophy. The latest is characterisation by value or value set means acting consistently in accordance with the values the individual has internalised.

The measurement model of SLS indicated validity evidence that portrayed by the CFA. It may be the novel model for researchers for study sufficiency especially for development of students’ behaviours. This was consistent with the research results of Khemwong and Pranee (2010) who developed adequacy characteristics rating scale following the philosophy of sufficiency by the second order CFA. The research finding was the model that has construct validity for all three elements. In addition, Prasertsin (2015) developed the model to test the eight desired characteristics of secondary education students that sufficiency was a factor in the model. This study specified two factors of sufficiency and the research result had shown that the model conformed to empirical data.

The implication of this study was utility for school, educational service area office and the OBEC in measurement of students’ SLS and applying the measurement information for students’ development because it was important to sustainable development (Chaipattana Foundation, 2015; Ministry of Foreign Affairs, 2017; Mongsawad, 2010; Thailand International Cooperation Agency, 2017). All members of the nation, especially students and people in educational institutions, need to develop their commitment to the importance of knowledge, integrity and honesty, and to conduct their lives with perseverance, toleration and wisdom (Piyamat, 2006). In addition, the SLS was authentic to the students’ lives. They learned that, for most successful enterprises, honesty and fairness to others were very important (Khunthongjan, 2010). Moreover, this finding should apply for students’ ability (Kaewurai et al., 2012; Punchaipech & Jogthong, 2016; Wimontham, 2012).

References


