DOES SCHOOL COOPERATIVE PROGRAM INCREASE ENTREPRENEURIAL INTENTION? A STRUCTURAL EQUATION MODELLING APPROACH

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Abstract

Purpose of the study: The primary purpose of this empirical research is to investigate the impact of school cooperative involvement on entrepreneurial intention among Malaysian secondary school students. The school cooperative program was introduced in Malaysia in 1968, and presently, 2421 school cooperatives are operating nationwide. Despite so, the impact of school cooperative towards students’ entrepreneurial intention remains unclear.

Methodology: This research employed the quantitative method, using a cross-sectional survey. The data collected from secondary school students in the East Coast Peninsular of Malaysia involve three states, namely Kelantan, Terengganu, and Pahang. The study employed the Covariance Based Structural Equation Modelling (CB SEM) to analyze the data using the Analysis of Moment Structure (AMOS) graphic.

Principal finding: The result shows that the students’ involvement in the school cooperative increases their entrepreneurial intention.

Applications of this study: The Malaysian government should focus on nurturing entrepreneurship in schools. The Ministry of Education (MOE) and Angkatan Koperasi Kebangsaan Malaysia (ANKASA) need to enforce assessments on participating students to ensure the effectiveness of this entrepreneurship education program. Moreover, school administrators should support the school cooperative owing to its positive impact on students.

Novelty/Originality of this study: This research delivers the best way to increase entrepreneurial intention by measuring the impact of students’ involvement in school cooperatives. Also, the paper proposes a framework for enhancing entrepreneurial intention by clarifying the Theory of Students’ Involvement. Consequently, this research fills the previous research gap on entrepreneurial intention and lack of information on Malaysian school cooperatives.

Keywords: Cooperative Involvement, Entrepreneurial Intention, School Cooperative (coop), Structural Equation Modelling (SEM), Secondary School Students, Theory of Students Involvement.

INTRODUCTION

The school cooperative is an entrepreneurship education program, which was introduced by the Malaysian Ministry of Education (MOE) in 1968. Professor Diraja Ungku Aziz emphasised that one of the goals of the school cooperative program is to enlighten entrepreneurial characteristics in the students who are directly involved in this activity (Aziz, 1980);(Ahmad, 2004). However, the absence of a post-program assessment impedes the validation of its positive impact on students. Due to this limitation, the current research attempts to examine the entrepreneurial intention of secondary school students participating in school cooperatives, whether as school cooperative prefects or board members. Entrepreneurial intention is the best determinant of entrepreneurial behavior (Krueger et al, 2000). In other words, students with higher entrepreneurial intentions tend to choose entrepreneurship as their career path (Norliana and Zainol, 2019). Hence, this is important to measure the impact of school cooperatives as a component in the entrepreneurship education program (Norlianaet al., 2019). Also, Astin (1984) stated that students’ involvement in any institutional activities physically or psychologically would contribute to the students’ development. Therefore, the objective of this research is to determine the effect of school cooperative involvement on entrepreneurial intention among participating students, as the consequences of students’ development. At the end of this research, the researchers clarify the research question; does school cooperative involvement significantly affect entrepreneurial intention?

LITERATURE REVIEW

Previous researches have mainly proven that involvement affects intention in various fields. In entrepreneurship, the students’ involvement in entrepreneurial activities triggers entrepreneurial intention by intensifying their entrepreneurial skills, internal locus control, and creativity (Luca and Cazan, 2011). Another study by Xu et al. (2016) reported the same finding in their study among secondary school students in China. They explained that the students’ involvement in entrepreneurial learning activities enhances their confidence level, henceforth affect the tendency to choose a career in entrepreneurship. Cárcamo-Solis et al. (2017) supported this opinion when they stated that primary school students who take part in entrepreneurial projects remembered 90% of the experience, which then cultivated their entrepreneurial intention.

In another way, the prior exposure in family business increases the factors that contribute to entrepreneurial intention, Soria-Barreto et al. (2017) found that student’s prior exposure and educational environment influence the student’s
entrepreneurial intention by intensifying perceived behavior control. Meanwhile, Cieślak and Van Stel (2017), stated that students who take part in their family business have a high potential to take up business ventures in the future. Besides, Miralles et al. (2016) argued that involvement in entrepreneurial experiences triggers entrepreneurial intention by influencing the student’s attitude, social norm, and perceived behavioral control. They measured the student’s entrepreneurial knowledge to represent prior involvement and experiences. Also, Wang and Chen (2018) found that self-efficacy mediates the effect of prior business involvement and entrepreneurial intention among Chinese business families. All these findings indicate that student’s involvement in prior entrepreneurial activities affects entrepreneurial intention indirectly (Khalifa and Dhiaf, 2016); (Hutasuhut et al., 2020).

In the Malaysian context, Salmianti (2013) proved that the involvement of students in entrepreneurial activities at secondary school or higher level institutions is necessary to nurture their entrepreneurial characteristics. They will have a higher tendency to pursue a career in entrepreneurship. This idea is then supported by Baharu and Mohammed (2013) when they affirmed that students need to partake in entrepreneurial activities to develop the entrepreneurial outlook and determination. In other words, their involvement will form their entrepreneurial intention (Zaidatol and Hisyamuddin, 2010). Since the school-age, Malaysian students expose to formal and informal entrepreneurial learning activities. Noraishah (2013) stated that formal entrepreneurship education includes the student’s involvement in extra-curricular activities such as entrepreneurship clubs as well as school cooperatives. In this sense, research by Zaifurin et al. (2016), indicates that the students’ involvement in the Tunas Niaga program (entrepreneurship club) in Terengganu increase their intention to engage in entrepreneurship when they finish school. Besides, Norliana et al. (2019) have strengthened this opinion by stating that students who participate in the school cooperative show a high tendency to take up a future career in entrepreneurship.

Although there is an abundance of researches in entrepreneurship exist to examine the effect of prior entrepreneurial exposure on entrepreneurial intention, but there are limited researches to measure the impact of Malaysian school cooperatives activities on students. The previous researches on this topic showed the contention findings; whether the prior entrepreneurial exposure has a direct or indirect effect on entrepreneurial intention. Thus, this is an urgent need to study the impact of Malaysian school cooperative involvement on student’s entrepreneurial intentions, as this activity can be the best platform to develop entrepreneurs at an early age. Consequently, built upon the opinion by Astin, (1984), who affirmed that the students’ involvement in institutional activities would contribute to the students’ development, the researchers of this paper then proposed the following hypothesis:

**H1:** Secondary school students’ involvement in school cooperatives significantly affects their entrepreneurial intention.

![Figure 1: Conceptual Framework](image)

**DATA COLLECTION PROCEDURE**

The researchers applied the approaches by Hair et al. (2010), to obtain the appropriate sample size, observing that the minimum sample size depends on the complexity of the model. Based on this approach, the number of observed variables in the research model was multiplied by five (5) to get the minimum sample size. Next, the number of observed variables was multiplied by ten (10) (Awang, 2016). In this research, with the fourteen (14) observed variables, the acceptable range for the sample size falls between 70 and 140. Thus, the researchers collected the data higher than the number required to avoid insufficient sample size, which may lead to bias results. The researchers distributed two hundred (200) structured questionnaires to school cooperatives in three states; Kelantan, Terengganu, and Pahang using stratified sampling. The study employed the following procedures in the data collection; (1) the school cooperatives were selected, (2) students were chosen to answer the questionnaire, (3) all respondents were given 15-20 minutes to answer the questions. In the end, the researchers collected a total of 161 complete responses, which represents 81% of the response rate.

**VARIABLES AND MEASUREMENT**

The researchers adapted the observed variables in this study from the Entrepreneurial Intention Questionnaire (EIQ) by Liñán and Chen (2006) for the endogenous construct, entrepreneurial intention. The researchers then utilized the observed variables for cooperative involvement construct from Jamilah et al., (2012), who had measured the performance of school cooperatives in Malaysia by assessing the teachers’ engagement in school cooperatives. Some of the newly observed variables were added in this construct to enhance its meaning. All the measurements of the observed variables for entrepreneurial intention used the ten points-Likert scale (Rahlin et al., 2019) ranging from Strongly Disagree(1) to Strongly Agree(10) at the end. Meanwhile, the measurement of observed variables for cooperative involvement constructs used the ten points-Likert scales ranging from Never Been Involved(1) to Frequently Involved(10) at the end.
FINDINGS

Structural Equation Modelling (SEM) has become a method of choice in various social sciences researches, such as education (Afthanorhan, 2019a; Majid et al., 2019; Darwas et al., 2020), management (Dalia et al., 2020; Rahlin et al., 2019), tourism (Nasir et al., 2020; Mohamad et al., 2019a), marketing research (Afthanorhan et al., 2019b; Asnawi et al., 2019) and business (Aimran et al., 2017). The SEM method has two families namely covariance-based SEM (CBSEM) and variance-based SEM (VBSEM). Both SEM methods using a latent variable with an observed variable to estimate the relationships between constructs in a model. Therefore, many applied researchers using the SEM method when the research involves a huge number of construct and measurement items. Nevertheless, the researchers need to distinguish these different methods based on the purpose of the study. According to Mohamad et al., (2019b), CBSEM should be applied when the study is in confirmatory nature whereby VBSEM is preferable when the study is in exploratory nature. Thus, this study employed a CBSEM to test the proposed relationships between constructs in the model as the model here is developed from the previous study. On the same note, this technique is presumed as a covariance-based structural equation modeling (Mohamad et al., 2019b). By using the IBM-SPSS AMOS 21.0 software, this method enables the researchers to simultaneously model multiple exogenous and endogenous constructs in a single model. Before running the structural model, the researchers ran a measurement model to test the construct reliability and validity based on the approach of Gerbing and Anderson (1988). Finally, the researchers re-aligned the measurement model with the achieved fitness indexes to adapt to the structural model, test the hypothesis, and assess the parameter estimates.

Descriptive Analysis

Table 1 shows the demographic representation of the respondents. From the results, the sample from Pahang is dominantly represented by 37.9%, followed by Kelantan (33.5%) and Terengganu (28.6%). The gender ratio indicates a higher percentage of approximately 68.3% female respondents and only 31.7% male. Additionally, most of the students who participated in the school cooperative were appointed from the age of sixteen (40.4%) and seventeen (21.7%). Most of the students in the sample (55.9%) were cooperative board members. Table 1 below shows the respondents’ demographics.

<table>
<thead>
<tr>
<th>Table 1: Respondents’ Demographics</th>
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<tbody>
<tr>
<td>States</td>
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<tr>
<td>------------</td>
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<tr>
<td>Kelantan</td>
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<tr>
<td>Terengganu</td>
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<td>Pahang</td>
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<tr>
<td>Gender</td>
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<td>Male</td>
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<td>Female</td>
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<tr>
<td>Age</td>
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<tr>
<td>Thirteen (13)</td>
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<td>Fourteen (14)</td>
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<td>Fifteen (15)</td>
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<td>Sixteen (16)</td>
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<tr>
<td>Seventeen (17)</td>
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<td>Eighteen (18)</td>
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<tr>
<td>Position</td>
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<tr>
<td>School Cooperative Prefects</td>
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<td>Cooperative Board Members</td>
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</tbody>
</table>

Measurement Model

As suggested by Gerbing and Anderson (1988), the researchers assessed the convergent validity by examining the Average Variance Extracted (AVE). Then the Composite Reliability (CR) was calculated to ensure the construct reliability in the model. All assessments suggest that AVE>0.50, and CR>0.6 (Awang, 2016). As shown in Table 2, the value of AVE is greater than the threshold of 0.50, which indicates0.832 for entrepreneurial intention and 0.673 for school cooperative involvement. The CR is more than 0.6, as shown by 0.961 for entrepreneurial intention and 0.804 for school cooperative involvement which means all constructs satisfied the internal consistency. The factor loading yielded from each construct is higher than 0.60, which is in the range of 0.72-0.93 for entrepreneurial intention construct and; for school cooperative involvement construct, between 0.71-0.84. The researchers selected the value of RMSEA, Chisq/df, CFI, IFI and TLI to validate the recommendation that the models are for measurement model assessment. The fitness indexes reflected as the suggested values; as shown by RMSEA=.068; Chisq/df=1.735; CFI=0.966; TLI=0.955; and IFI=0.966. This research employed the approach of Fornell and Larcker (1981) to prove the discriminant validity, which implies the uniqueness of each construct applied in a model whereby it does not correspond to each other within the same model. Therefore, the current research compared the value of construct correlations with the square root value of AVE and found that the model is free from the redundancy problem as depicted in Table 2. Consequently, this study proves that the discriminant validity, as the square root value of AVE is higher than the construct correlation.
Table 2: Validity and Reliability Results

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>CR</th>
<th>AVE</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Intention</td>
<td>0.961</td>
<td>0.832</td>
<td>0.912</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative Involvement</td>
<td>0.804</td>
<td>0.673</td>
<td>0.530</td>
<td>0.820</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Structural Model

Ultimately, the researchers tested the proposed hypothesis by executing the full information maximum likelihood estimator (FIML) as suggested by Bollen (2019) to avoid the improper solution and non-convergence estimates. Figure 2 shows the value for each path in a model. The $R^2$ for the entrepreneurial intention was 0.28 or 28%, which exceeds the substantial value of $R^2$ (0.26 or 26%) as suggested by Cohen (1988) and Afthanorhan et al. (2017). As the researchers had predicted, the cooperative involvement construt has a positive effect on entrepreneurial intention ($\beta = 0.463, p<0.001$), which supports the hypothesis in this research. The researchers found that when the value of cooperative involvement increases by one (1) unit, then the value of entrepreneurial intention increases by 0.463 units.

![Figure 2: Structural Model](image)

Table 3: Structural Model Result

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Intention &lt;- Cooperative Involvement</td>
<td>.463</td>
<td>.089</td>
<td>5.202</td>
<td>***</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Discussion and Conclusion

The purpose of this research is to evaluate and test the effect of school cooperative involvement on entrepreneurial intention among secondary school students. This research employs the confirmatory method with standard factor-based SEM to answer the research questions. The empirical findings affirm that school cooperative involvement has a significant effect on students’ entrepreneurial intentions. The result is a clear sign that the students’ involvement in entrepreneurial activities at a school-age triggers their tendency to choose a career in entrepreneurship. Hence, the Malaysian government should focus on the effort of developing future entrepreneurs through entrepreneurial activities at school to cultivate students’ entrepreneurial intentions. For instance, a school cooperative program is a great platform to expose students with real experiences of handling entrepreneurial projects and businesses. Therefore, school administrators and teachers should give the students an opportunity and trusty to involve in school cooperatives activities with teachers’ supervision.

Subsequently, the researchers also propose an evaluation of the participating students’ entrepreneurial intention at the end of their school age. The proposed assessment is essential to ascertain the students’ entrepreneurial interests and potential. A positive result in the afore-mentioned assessment would contribute towards continuous entrepreneurial development at a higher level of education; henceforth reduce the dependency on wage-employment among graduates. On the other hand, if the students do not continue their studies to a higher level, they are well-prepared to take on a career in entrepreneurship.
Practically, this research offers recommendations to decision-makers on improving the quality of students’ involvement in school cooperatives. For instance, stakeholders such as the Ministry of Education and Angkatan Koperasi Kebangsaan Malaysia (ANGKASA) should enforce a form of post-completion assessment to ensure the effectiveness of this entrepreneurship education program. Also, the teachers and school administrators have to emphasize on the school cooperative involvement among secondary school students to ascertain the students’ development in the future. In terms of the theoretical contribution, this research clarifies the theory of students’ involvement by (Astin, 1984), who provided the validity of students’ involvement in their future development. This research also measured the students’ development by entrepreneurial intention.

Nevertheless, the researchers did experience some limitations in this study. First, this research focuses on the east coast peninsular region of Malaysia; hence the result cannot be generalized to all states in the country. With this narrow scope, the results may not be consistent due to the different cultures and backgrounds. Second, this research used a survey questionnaire and utilized the quantitative method to investigate the relationship between the factors in a model. As such, the researchers found that the result may be more accurate if they had utilized the mixed method (qualitative and quantitative) for a comprehensive investigation of the students’ entrepreneurial intention. Finally, the researchers assert that the results may change in a longitudinal study, which focuses on a sample with a different timeline.

ACKNOWLEDGMENT

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AUTHORS CONTRIBUTION

The first author writing the paper, collecting and analyze the data. The second author focus on preparing the manuscript based on journal format and the third author refines the statistical analysis and interpretation. Therefore, all authors contributed equally to this paper.

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