Entrepreneurial Self-Efficacy of Vocational High School Students in Makassar City

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This study aims to examine the entrepreneurial self-efficacy of vocational high school students in Makassar City and its correlation with the backgrounds of the school and parents. The study used a quantitative expose-facto approach with a population of vocational students in Makassar. The number of research samples was 880 students. The sampling procedure used proportional random sampling techniques by considering proportional representation of sub-population categories, such as areas of expertise, proficiency in vocational study programs and gender. The measurement of entrepreneurial self-efficacy variable used a scale developed and adapted from the Entrepreneur Self-Efficacy Scale from De Nobel, AF, Jung, D. & Ehrlich, SB (2000). Data analysis was conducted through descriptive and inferential methods with Anova statistical techniques and the IBM SPSS Statistics 24 program. The results of the study showed that the value of entrepreneurial self-efficacy of students at the Makassar vocational high school was in a fairly high category. A significant difference existed in the values of entrepreneurial self-efficacy viewed from the areas of expertise and study programs, while no significant difference was found in values viewed from education level or occupation type of students’ parents of students.

Key words: Entrepreneurial self-efficacy, vocational high school, expertise study program, parents’ background.
**Introduction**

Vocational education primarily aims to “prepare students to enter the workforce and develop professional attitudes” (Government Regulation Number 29 of 1990) and to meet the labour needs of the community (Evans in Djojonegoro, 1998: 36). Vocational students will therefore be faced with certain demands to adequately prepare themselves for the workforce and to make decisions when entering professional industries. Self-efficacy is a particularly important indicator of career determination and directly influences decision-making in the workforce (Bandura, 1997; Creed, Patton, & Prideaux, 2006; Pappas & Kounenou, 2011). Self-efficacy contributes to the effectiveness of performance and increases personal stability through determination, commitment, hard work, flexibility and resistance to pressure and depression (Bandura, 2000; Bandura & Locke, 2003).

Results found by Budiningsih (2012) indicate that self-efficacy is able to predict career decision-making by up to 45.22%. Similar results were also found by Widyastuti and Pratiwi (2013), who noted that self-efficacy was more influential on the stability of career decision-making than family social support, with a contribution of 30.8%. Based on these findings and the explanation above, it appears that self-efficacy is an important factor that can determine a person’s career decision-making behaviour.

The inability of an individual to make career decisions can similarly be influenced by his or her levels of self-efficacy (Osipow, 1987: Betz et al, 1997). Low self-efficacy in relation to career decision-making processes is related to lack of guidance in career decision-making, problems in developing clear vocational identities, and uncertainty in making choices indicated by frequent changes in work. Low self-efficacy can prevent individuals from realising their interest in a career due to perceived inability to properly perform in their careers. Such individuals therefore lack experience, and less able to compete for jobs and may be unaware of how to overcome obstacles in finding a job successfully (Collins in Lyon & Kirby, 2000).

Given the importance of self-efficacy, particularly within one’s current or prospective career, experts have attempted to apply the concept of self-efficacy to the domain of entrepreneurship. This research led to the concept of entrepreneurial self-efficacy, a term which is limited to “the strength of one’s perceived capabilities to successfully perform the roles and tasks of an entrepreneur” (Chen, et al, 1998). Pihie and Begheri (2011) see entrepreneurial self-efficacy as “a distinctive characteristic that can distinguish entrepreneurship students from management and organisation of psychology disciplines,” and conclude that entrepreneurial self-efficacy is one of the core personal characteristics that influences entrepreneurial intentions and behaviours. Entrepreneurial self-efficacy allows individuals to be able to deal with uncertainties and challenges during the process of entrepreneurship and the activities associated with it. Individuals with high entrepreneurial self-efficacy therefore tend to show motivation
and the ability to engage in entrepreneurial activities. They receive more opportunities that others may perceive as frightening or risky, are willing to set challenging goals, try harder to achieve their vision, and are able to overcome work challenges and crises (Erikson, 2003; Zhao, et al., 2005). Those who perceive a lack of entrepreneurial skills and abilities will consequently avoid all activities related to entrepreneurship (Chen, et al, 1998).

The researchers also emphasized the importance of entrepreneurial self-efficacy for students at the age of adolescence because students with high entrepreneurial self-efficacy were more likely to step into entrepreneurial worlds (Wilson, et al, 2007). Middle school students are of the ideal age to develop positive attitudes towards entrepreneurship and enhance their entrepreneurial knowledge and abilities (Fillion, 1994). Entrepreneurial self-efficacy is a construct that measures a student’s confidence in his or her ability to successfully perform tasks and roles as an entrepreneur (Pihie and Bagheri, 2011).

This study examines the picture of self-efficacy in the career trajectory of students in self-employment. This entrepreneurial self-efficacy will be investigated in vocational students from Makassar City, and its correlation to school characteristics and parental backgrounds will be evaluated. Specific questions to be examined include:

1. What is the general description of the level of self-efficacy of entrepreneurship in vocational high school students in Makassar?
2. Is there any influence of the school background (field of expertise and expertise program) on the level of self-efficacy of vocational student entrepreneurship in Makassar?
3. Is there any influence of parental background (level of education and type of work) on the level of self-efficacy of entrepreneurship in vocational students in Makassar?

Theoretical Review

Self-efficacy is a personal quality that does not come by itself, but is rather the result of various experiences, knowledge gained, responsibilities, diverse relationships, tasks performed and the interactions with others (Capara et al, in Sawitri, 2009). Self-efficacy arises from the gradual acquisition of cognitive, social, linguistic and/or physical skills through experience (Bandura, 2000). The quality of one’s self-efficacy is therefore the result of learning and can be developed by obtaining appropriate experience.

The assessment of entrepreneurial self-efficacy will refer to Bandura’s social cognitive theory of which self-efficacy is a key concept (Bandura, 2000). Based on social cognitive theory, the development of self-efficacy, including entrepreneurial self-efficacy, can be done through the provision of learning experiences. Such experiences can include vicarious experiences of others, social persuasion, mastery experience and social experience (Bandura, 1997;
Zimmerman & Cleary, 2005; Erikson, 2003). In essence, entrepreneurial self-efficacy can be improved by involving students in social learning experiences and activities (Rae & Carswell, 2000).

Research conducted in Nigeria by Olakitan (2011) found that entrepreneurs who are classified as possessing high extroversion show higher innovative behaviour than those who have low extroversion. Such individuals tend to be enthusiastic and curious, always seeing opportunities that others may deem impossible. They are more friendly, initiate conversations and take ideas from discussions with others. In addition, entrepreneurs are open to experience a high level of innovative behaviour. They tend to appreciate art, act with curiosity, live adventurously and have unusual ideas.

In his research at Pakistan universities, Khan, et al (2011) found that a strong relationship between personal nature and entrepreneurial tendencies or intentions. However, some demographic characteristics such as gender, initial experience and family involvement in business have significant effects on the intention to become an entrepreneur. Further research by Toma, et al (2011) shows a positive relationship with all psychological dimensions (self-efficiency, self-determination, self-consequences, meaningfulness and trust in others) with entrepreneurial behaviour. Based on the results of another study of 300 students, Enkankumo and Kemebaradikumo (2011) concluded that most negative behaviours displayed in young people such as militancy, unemployment or low financial status can be reduced by involving the youth in entrepreneurial work. They also recommended that the government mobilise competent entrepreneurs to enter schools and communities, both formally and informally, to train young people in entrepreneurship.

In the current study, the assessment of entrepreneurial self-efficacy will be focused on school factors, particularly school background (the school’s vocational program) and parental background (education level and type of parents’ work, especially fathers). Considering that these two factors are an important part of most students’ daily lives, it can be said that they strongly influence many in providing and stimulating a variety of learning experiences that underlie the development of self-efficacy for students.

Referring to the conceptual model, the framework of this study can be described in Figure 1 below.
Research Methods

This study employed the expose-facto research method with a quantitative approach to examine the influence of school characteristics and parental backgrounds as variables on entrepreneurial self-efficacy variables. The population studied comprised of 27,400 vocational students in Makassar City. The research sample of 880 represented 8 areas of expertise and 24 expertise programs in SMK. Samples were taken using the proportional cluster random sampling technique by paying attention to the proportion of representation in the field of expertise and the existing expertise program in SMK.

The measurement of entrepreneurial self-efficacy variables used a scale developed and adapted from De Nobel, AF, Jung, D. & Ehrlich, SB (2000). The scale measures six aspects, including 1) developing new products and market opportunities; 2) building an innovative environment; 3) starting investor relations; 4) defining core objectives; 5) facing unexpected challenges, and 6) developing critical human resources. The scale was constructed in the form of a statement of 25 items. Each item is followed by five answer options ranging from 1-5, with 1 meaning “not sure can do” and 5 meaning “very sure can do”. The score range thus moves from the numbers 25-125. This score is then converted to the percentile index value, which is calculated based on the ideal score of the scale so that the range of numbers moves from 25/125 x 100 to 125/125 x 00, or a range of 20-100.
Data analysis was conducted using descriptive and inferential analysis with Anova statistical techniques. The IBM SPSS Statistics 24. Program was also used to analyse data.

**Research Results**

*Student descriptions of self-efficacy students*

In general, the value of self-efficacy of entrepreneurship vocational students is in the medium category. Average values from the total sample were 74.91, with 23.20 as the lowest value and 99.20 as the highest. The range of achievements among the fields of expertise moves from the highest value, which is the Agribusiness and Agrotechnology group (78.56) and the lowest from the field of Arts and Creative Industries (71.22). The lowest scores were shown by students from the Business Management group (23.20) with the highest also from Business Management, along with Agribusiness and Agrotechnology, and Health and Social Workers with a score of 99.20.

**Figure 1.** Graph of self-efficacy value of entrepreneur by expertise

Viewed from the background of the expertise study program, the range of students’ self-efficacy score ranges from the highest indicated by students from Textile Works (84.84) and the lowest by students from the Electronics Industry (68.35). The complete results of entrepreneurial self-efficacy from the 24 skills programs studied can be seen in Figure 2 below.
Based on the level of parental education, the results of the descriptive analysis indicate variability in the value of entrepreneurial self-efficacy among students in terms of differences in parental education levels. There was a tendency that the higher the level of parental education, the higher the self-efficacy value of vocational student entrepreneurship. The relationship between students’ self-efficacy values and their parents’ educational levels is illustrated graphically in Figure 3, as follows.
Based on the kinds of parent work, the descriptive analysis shown in Figure 4 indicate variability in the value of self-efficacy among students viewed from the differences in parental education work. The highest self-efficacy value is shown by students from parents who work in professional fields, followed by educators, then employees. The lowest self-efficacy value of entrepreneurship is shown by children with parents from the Army / Police category, followed by entrepreneurs and labourers.

Figure 4. Graph of self-efficacy value of entrepreneurship according to parents’ education level
Effect of school characteristics and background

The test results of the one-way ANOVA statistics, as shown in Table 1, show significant differences in the self-efficacy values of vocational high school (SMK) students’ entrepreneurship, both in terms of differences in the area of expertise and in the expertise programs. This means that the background characteristics of the expertise programs significantly influence the value of students’ entrepreneurial self-efficacy.

Table 1: One-way ANOVA test results of school characteristics influence

<table>
<thead>
<tr>
<th>Statistics of ANOVA</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graph of self-efficacy value of entrepreneur by expertise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4006,312</td>
<td>7</td>
<td>572,330</td>
<td>3,361</td>
<td>.002</td>
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<tr>
<td>Within Groups</td>
<td>148508,222</td>
<td>872</td>
<td>170,308</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>152514,534</td>
<td>879</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Entrepreneurial self-efficacy and expertise program</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>12051,061</td>
<td>23</td>
<td>523,959</td>
<td>3,193</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>140463,473</td>
<td>856</td>
<td>164,093</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>152514,534</td>
<td>879</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the analysis with the two-way ANOVA, as seen in Table 2 below, show that interactions between the field of expertise and the program produce a significant effect on the value of student self-efficacy in SMK. The influence of both variables was 0.54 or 54%.
**Table 2: One-way ANOVA test results of school characteristics influence**

<table>
<thead>
<tr>
<th>Tests of Between-Subjects Effects</th>
<th>Dependent Variable: Self-efficacy of entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Type III Sum of Squares</td>
</tr>
<tr>
<td>Corrected Model</td>
<td>12051,061*</td>
</tr>
<tr>
<td>Intercept</td>
<td>4462553,321</td>
</tr>
<tr>
<td>Program</td>
<td>80447,50</td>
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<tr>
<td>Field</td>
<td>.000</td>
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<tr>
<td>Program * Bidang</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>140463,473</td>
</tr>
<tr>
<td>Total</td>
<td>5091240,960</td>
</tr>
<tr>
<td>Corrected Total</td>
<td>152514,534</td>
</tr>
</tbody>
</table>

*a. R Squared = .079 (Adjusted R Squared = .054)*

**Influence of students’ parents’ backgrounds**

Represented in Table 3 below, the one-way ANOVA test statistics indicate no significant difference in the value of student self-efficacy in terms of parental education levels or type of parent occupation. This suggests that parental background, both in the category of parent education level and field of work, do not substantially influence the self-efficacy value of vocational student entrepreneurship.

**Table 3: One-way test results of parent background influence**

<table>
<thead>
<tr>
<th>Statistics of ANOVA</th>
<th>Business self-efficacy and parent education level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of Squares</td>
</tr>
<tr>
<td>Between Groups</td>
<td>1292,382</td>
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<tr>
<td>Within Groups</td>
<td>151222,152</td>
</tr>
<tr>
<td>Total</td>
<td>152514,534</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statistics of ANOVA</th>
<th>Business self-efficacy and parent employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of Squares</td>
</tr>
<tr>
<td>Between Groups</td>
<td>645,161</td>
</tr>
<tr>
<td>Within Groups</td>
<td>151869,373</td>
</tr>
</tbody>
</table>
Table 4 depicts results of the two-way ANOVA analysis and indicate that the interaction of parental education level and parental work field do not produce a significant effect on the value of students’ entrepreneurial self-efficacy. The influence of both variables was 0.54 or 54%.

Table 4: One-way ANOVA test results of parent background influence

<table>
<thead>
<tr>
<th>Tests of Between-Subjects Effects</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Type III Sum of Squares</td>
<td>df</td>
<td>Mean Square</td>
<td>F</td>
</tr>
<tr>
<td>Corrected Model</td>
<td>6048,126</td>
<td>33</td>
<td>183,277</td>
<td>1.059</td>
</tr>
<tr>
<td>Intercept</td>
<td>609323,450</td>
<td>1</td>
<td>609323,450</td>
<td>3519,494</td>
</tr>
<tr>
<td>Pendidikan</td>
<td>546,796</td>
<td>4</td>
<td>136,699</td>
<td>,790</td>
</tr>
<tr>
<td>Kerja</td>
<td>1229,222</td>
<td>7</td>
<td>175,603</td>
<td>1.014</td>
</tr>
<tr>
<td>Pendidikan * Kerja</td>
<td>4029,244</td>
<td>22</td>
<td>183,147</td>
<td>1.058</td>
</tr>
<tr>
<td>Error</td>
<td>146466,408</td>
<td>846</td>
<td>173,128</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5091240,960</td>
<td>880</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>152514,534</td>
<td>879</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .040 (Adjusted R Squared = .002)

Discussion

The results of the descriptive analysis showed that the average value of entrepreneurial self-efficacy of Vocational High School (SMK) students was 74.91 of the maximum value of 100. This means that the achievement value of self-efficacy of SMK students’ entrepreneurship in Makassar City was in the medium category, with the lowest score of 23.20 and the highest of 99.20. This result also confirms that the achievement of SMK in Makassar City had not been maximised in improving the self-efficacy of students entering the workforce, especially in entrepreneurship. The goal of SMK is to “prepare students to enter the workforce and develop professional attitudes” (Government Regulation No. 29 of 1990) and to meet the needs of the community for labour (Evans in Djajonegoro, 1998: 36). As self-efficacy one of the core personal characteristics that influences entrepreneurial intentions and behaviours, the development of entrepreneurial self-efficacy in SMK requires special attention (Pihie and Begheri, 2011). Students who have high entrepreneurial self-efficacy tend to show motivation and ability to engage in entrepreneurial activities. They receive more opportunities that others
may perceive as frightening or risky, they set more challenging goals, try harder to achieve their visions, and are able to overcome challenges and crises related to entrepreneurship (Erikson, 2003; Zhao, et al., 2005). Conversely, those who lack entrepreneurial skills and abilities will avoid all activities related to entrepreneurship (Chen, et al, 1998).

The results also indicated that the value of entrepreneurial self-efficacy tended to differ among students from different fields and programs of expertise. This variation is thought to be related to differences in interactions between educators, learning environments and learning tasks while studying at the level, department or expertise program that is now occupied. Vocational school students, especially from business-oriented study programs such as agribusiness and management, will inevitably interact a lot with issues related to the career world. Bandura (1980) suggests that an individual’s type and quality of self-efficacy is formed and changed due to learning outcomes through one or a combination of four main sources. These scores include performance achievement and experiences related to the success or failure of expected results; vicarious learning, meaning observations of other people’s behaviour; emotional arousal, or the level of emotional tension in dealing with challenging situations and obstacles, and verbal persuasion, or receiving convincing encouragement or motivation from others (Hjelle and Zieggl, 1980: 354; Betz, 1992: 23).

This study also showed a significant difference in the value of entrepreneurial self-efficacy between female and male students, with female students scoring higher than male students. This finding is rather unique considering that particularly within the context of South Sulawesi and Indonesian society, boys are more likely to be oriented towards and prepared for work than girls. This may be related to the level of emotional tension (emotional arousal) in dealing with challenging situations (Bandura in Hjelle and Zieggl, 1980: 354; Betz, 1992: 23) experienced by boys due to the gender burden of males being expected to support the family economy.

The level of education of parents of students also appeared to be related to the high and low values of entrepreneurial self-efficacy of students. Although the difference is not significant enough, descriptively there is a tendency that the value of entrepreneurial self-efficacy increases in line with the high background of parental education qualifications. This finding supports Bandura’s argument (Betz, 1992: 22) that the process of modeling or learning from others will affect self-efficacy. Individual self-efficacy will increase if it is influenced by relevant models. The experience of others thus determines the perception of an individual’s success or failure.

The results of this study also revealed no significant influence of parental work on the value of students’ entrepreneurial self-efficacy. These results are different from Karnoto’s (1999), who found that parental treatment influenced the attitudes and interests of students in entrepreneurship. These influencing factors were through encouragement, giving examples and
providing guidance, which resulted in students engaging in more frequent activities, developing better habits and wanting to learn things related to entrepreneurs. Self-employed parents gave more entrepreneurial treatment than typically employed parents, meaning that such students were more interested in entrepreneurship than those whose parents were normal employees.

Lastly, no significant differences were found in the values of entrepreneurial self-efficacy based on different types of parental work. Descriptively, however, there was a tendency for children whose parents employed in labour or who were not working to have lower self-efficacy values of entrepreneurial ability than children whose parents who work in other fields. This can also be related to the modeling factors obtained from Bandura’s studied parents (Betz, 1992: 22) who are generally at a low level of work challenges.

Conclusion and Suggestions

Conclusion

This study found that in general, the value of entrepreneurial self-efficacy in vocational students of Makassar City was in the medium category, with variants from low to high. Descriptively, these results seem to indicate a variation in the value of self-efficacy according to different fields of expertise and expertise programs, and the educational background and work of students’ parents. Further, a significant correlation was found between the characteristics of the school, both in terms of field of expertise and expertise programs, and the value of student self-efficacy. Finally, parental education and work background produced no significant influence on the value of student self-efficacy in the vocational high school of Makassar.

Suggestions

In line with the results of the study, several suggestions and recommendations can be made for future research. First, policymakers and parties responsible for organising education in vocational schools can integrate curriculums in vocational schools with efforts to develop students’ entrepreneurial self-efficacy. These entities could also provide opportunities and experiences for students to interact with job prospects and successful workers in the entrepreneurship field. Second, study programs from prospective counselor educational institutions can incorporate the concept of entrepreneurial self-efficacy into the curriculum and lecture material, especially within career guidance courses. They can also provide experiences to strengthen students’ abilities in aspects of entrepreneurial self-efficacy, allowing students to act as role models for peers in developing similar attitudes and mentalities. Third, counselors or teacher guidance counseling at school can make efforts to include entrepreneurial self-
efficacy material in career guidance services provided to students, whether through classical, group or individual services. They can also apply strategies that enable students to interact directly with successful workers in the field of entrepreneurship, for example by inviting speakers from successful companies, conducting field trips to entrepreneurial environments, or displaying videos about success stories. Finally, researchers can progress this study further through deepening the differences in career-related communication patterns between parents and children from various fields of parent work. Exploratory research could also investigate the efforts that have been made by schools and counseling guidance teachers in developing entrepreneurial self-efficacy students in vocational schools (SMK). Lastly, career guidance models and educational programs in schools can be further developed to enhance student entrepreneurial self-efficacy.
REFERENCES


