Impact of education and training on performance of women entrepreneurs in Indonesia: Moderating effect of personal characteristics

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1. Introduction

The means of education and training programs have been one of the major aspects for the employees and the entrepreneurs for gaining improvement in their performance and having a better system of working styles. According to the assessment of Ong et al. (2016), the women entrepreneurs also have a major role in contributing towards the economic growth and gross domestic product (GDP) of the country. The study conducted by Kanapathipillai and Azam (2019) has highlighted that the government and other legislative bodies have been making a huge contribution within the educational and training programs for the women that can be effective in their performance and showing better role within the development of entrepreneurial activities within the country. It has been argued that the limited opportunities for education and training may affect the performance of the women entrepreneur and can also be lesser effective for the GDP growth of the country Indonesia. The study of Orser, Riding and Li (2019) highlighted that the women in Indonesia have been playing a major role in terms of developing better entrepreneurial activities and showing positive response towards the economy of the country. Therefore, the following study has been aimed to assess the impact of education and training on their performance that can be effective in terms of improving their performance and also polishing their characteristics for better activities in the future (Jha et al., 2018). The rationale behind this study is to assess the issue of lesser education and training policies for the women in Indonesia that have been affecting the performance of Indonesian women. On the other hand, the study has also assessed the impact of this education and training of women for better entrepreneurial activities in the country (Malarkodi and Ali, 2018). The following
research has been aimed to assess the impact of education and training for women that can be effective for better innovation and improving their skills for developing a significant platform for reducing the poverty in the country. The launching of entrepreneurial activities and businesses requires effective training and education that can be effective for their long term productivity and learning the strategies for better productivity of the businesses (Ajuna, Ntale & Ngui, 2018). The following section has provided with the introduction of the study and has highlighted the major concepts of research that have been carried out. Moreover, the further sections of research have also carried out the discussion of literature and has also highlighted the independent and dependent variables of the study.

2. Literature Review

2.1 Concepts of education and training for entrepreneurship

To get success within the entrepreneurial activities, the people require effective education and training for dealing with different strategies and aspects of a business. Education in general is essential, let alone the entrepreneurial education and training that is considered a backbone for entrepreneurs (Alshebami, Al-jubari, Alyoussef, & Raza, 2020). According to the assessment of Hägg et al. (2016), the education required for the entrepreneurial provides with the support for better business and also creates opportunities for better performance and profitability in this regard. It has been observed in the study of Kyrö (2018) that the education and training for the business create better skills and increased opportunities for dealing with the issues for business in this regard. Hoppe, Westerberg and Leffler (2017) have added that the entrepreneurial activities require skills and abilities within the personnel that can support them in achieving their target. Additionally, as referred to the study of Fayolle (2018) the people are also trained for the entrepreneurial activities that enhance their skills for the self-esteem, knowledge and better skills for managing resources and gaining maximum outcomes of the business venture that has been developed.

2.2 Significance of women entrepreneurship in Indonesia

Indonesia is a country for which the economy is comprised of a huge share of entrepreneurial activities that includes several small and large businesses according to Anggadwita and Dhewanto (2016). It has been assessed that the people of Indonesia believe in having self-employment and showing better performance in businesses for gaining success within the economic growth and also having prosperity within the economy of the country. Therefore, as referred to the study of Effendi and Suryana (2019) the people have been motivated for showing up with new ideas of conducting the business activities and gaining maximum outcomes out of these businesses. Anggadwita et al. (2017) have added that among these entrepreneurs, Indonesia has a huge number of women entrepreneurs in the country who are operating many small and large businesses for the prosperity and growth of the country. According to the study of Setini et al. (2020) women in Indonesia account up to 45% of the businesses in Indonesia among the labour force. Although the women are having less education as compared to men, but they are presenting 49% of the labour force in the country as discussed in the study of Anggadwita and Dhewanto (2016). Moreover, the research conducted by Suyuthi et al. (2019) has provided with the fact that 90% of the women in Indonesia among the ones who are skulked and are having knowledge for some business are the part of some entrepreneurial activities that makes a huge share of women for dealing with the businesses. According to Anggadwita and Dhewanto (2016), the women in the country are provided with equal rights and means of entrepreneurship that have supported them and has created the means of businesses among them.

2.3 Impact of training on personal characteristics of women entrepreneurs

Based on the assessment of Van Ness and Seifert (2016) the entrepreneurial activities within the country have a huge impact on the country’s economy. Therefore, people must be trained and developed for better activities and showing higher response towards the entrepreneurs within the country. Xiao and Chen (2019) have added that the skills and abilities required for the entrepreneurship support the women and men for dealing with the constraints and having appropriate measures for better business. The study of Akyol (2016) has added that the personnel characteristics for entrepreneurship include different goals and activities that can be effective for dealing with the issues and challenges for the business in this regard. The employees need to have better skills and abilities for managing uncertainties and dealing with the challenges in the way of business. Therefore, based on the arguments of Banda (2018) the accurate education and training can be effective in terms of improving the employee skills and abilities for better means of business. The personal characteristic that is an important feature for the business and entrepreneurship is the risk-taking and managing uncertainties of the business. It has been observed in the study of Ajuna, Ntale and Ngui (2018) that the education and training of the entrepreneurs can be effective in having better risk-taking abilities and having the understanding of the strategies for managing uncertainties within the business. The above discussion suggests the personal characteristics of women entrepreneurs moderates the relationship between education and training on their success. Based on this, the following hypothesis will be tested:

H_1: Personal characteristics of women entrepreneurs significantly moderate the relationship between education and training and performance of women entrepreneurs.

2.4 Impact of education and training on performance of women entrepreneurs

Based on the assessment of Ajuna, Ntale and Ngui (2018) the means of entrepreneurship is comprised of several activities and skills that can be used for better means of business and have better opportunities for the future. According to the study of
Schneider (2017), the means of education and training have a huge role in the development and improvement of entrepreneurs. It has been further observed that the women entrepreneurs can be upgraded and can also meet the challenges effectively with the help of training and educational programs within the country. The professional training and development of the women for the means of entrepreneurship can be effective for them to gather the understanding of recent trends and aspects for professionalism and showing more effort towards the launch and operation of the business. The education and training required for the entrepreneurship includes several means of self-employment and also provides with the core aspects of financing and organising the businesses. Brixiová, Kangoye and Said (2020) have argued that the means of training and education can be effective in terms of dealing with the risks and uncertainties of the business in this regard. Based on the above discussion, following are the hypotheses which are tested in this research paper:

H2: Entrepreneurial training has a significant positive impact on performance of women entrepreneurs.

H3: Entrepreneurial education has a significant positive impact on performance of women entrepreneurs.

3. Theoretical Framework

According to the assessment of Marginson (2019), the human capital theory presents the individual competency and expertise of the human beings for running the business and showing higher performance within the business in this regard. It has been observed that the human capital theory provides with the assessment of human capital that can be effective for creating business opportunities for human beings within the country. It has been highlighted in the study of Schwab (2018) that the human capital theory provides with the assessment of opportunity recognition and also provides with the means of enhancing the human resource within the particular areas that can be effective for gaining higher profit and increased performance from the business. Adom and Asare-Yeboa (2016) have added that the employees who are skilled and are trained well for the means of business can be more effective and can be profitable for the organisations in terms of managing the challenges and solving the problems in real-time. The theory has further explained that the means of investment require effective knowledge and abilities of the human beings that is imperative for the businesses for being more innovative and successful in the current time. Moreover, it provides with the identification and exploration of human personnel that can be used for better means of business and conducting the entrepreneurial activities according to the study of Jin and Waldman (2020). Lastly, the human capital theory is highly applicable in the following case as it can find out the new ways of producing better and utilising the maximum resources that are available for the business.

The study of Merriam and Baumgartner (2020) has also highlighted the significance of learning and learning theory that is effective for the current study to be implemented. The theory represents the means of professional behaviour that can be used by the women for conducting the activities based on entrepreneurship. The theory has resented the means of better learning and enhanced opportunities for growth of the employees that can be used by the human personnel for better performance within the business. Illeris (2018) has added that the learning and learning theory has its application for the behavioural aspects and attributes of the human beings that can create the better opportunities for running the business. It has been argued that the means of learning does not only support the business, however, the behavioural attributes of the employees and the human personnel also counts very much for dealing with the business. Moreover, the cognitive values of the perspective also supports in growing the business venture and dealing with the involvement of innovation and showing better practices of learning and dealing with the human personnel. The cognitive learning highlighted within the learning and learning theory represents the means of internal processes for conducting the business that can be enhanced with the behavioural aspects and attributes of human beings.

4. Conceptual Model

The model has provided with the highlights for the independent and dependent variables that have been selected for the following research. The researcher has provided with the assessment for the independent and dependent variables that have been highlighted in the model provided as under. The independent variables in the study are Entrepreneurial Education and Entrepreneurial Training. Moreover, the dependent variable of the study is the Performance of Women Entrepreneurs. Personal Characteristics is selected to be the mediating variable of the following study. The researcher has presented the model and has highlighted the relationship between the variables in this regard.

![Conceptual Model](image_url)

**Fig. 1. Conceptual Model**

*Source: Author (2020)*
5. Method and Research Approach

A quantitative research method has been adopted in this research. The instrument used for collecting primary data was a Likert-scale based survey questionnaire which included close-ended questions. The population of this research was women entrepreneurs in Indonesia, considering that it was not possible to include each one of them in the research, a convenient sample of 376 women was drawn from the population. The statistical analysis has been carried out via Smart PLS where structural equation modelling has been used. There are different techniques used to effectively interpret the data and test the hypothesis of the research paper including confirmatory factor analysis, discriminant validity, and path analysis.

6. Results and Analysis

6.1 Confirmatory Factor Analysis

In order to know the structure of the data set for the model under consideration, confirmatory factor analysis is used in this research paper. The model fit can be determined with the help of CFA as it tells the consistency of the constructs relative to the understanding of researcher regarding the nature of the constructs. Firstly, the factor loadings for each variable and their sub-variables is given which explains about the variance that is explained by the variable on that particular factor. According to Gau and Lee (2003) any value of factor loading above 0.70 is considered to be acceptable. It means that the factor is able to extract sufficient loading from the variable. In the following table, different validity and reliability measures are given among which factor loadings is also given:

Table 1

<table>
<thead>
<tr>
<th>Confirmatory Factor Analysis</th>
<th>Factor Loadings</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE1</td>
<td>0.883</td>
<td>0.797</td>
<td>0.882</td>
<td>0.714</td>
</tr>
<tr>
<td>EE2</td>
<td>0.883</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE3</td>
<td>0.763</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ET1</td>
<td>0.805</td>
<td>0.729</td>
<td>0.849</td>
<td>0.655</td>
</tr>
<tr>
<td>ET2</td>
<td>0.920</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ET3</td>
<td>0.685</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC1</td>
<td>0.940</td>
<td>0.765</td>
<td>0.914</td>
<td>0.728</td>
</tr>
<tr>
<td>PC2</td>
<td>0.643</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC3</td>
<td>0.719</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWE1</td>
<td>0.781</td>
<td>0.874</td>
<td>0.817</td>
<td>0.605</td>
</tr>
<tr>
<td>PWE2</td>
<td>0.868</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWE3</td>
<td>0.906</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWE4</td>
<td>0.870</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author (2020)

Table 1 depicts that for all the factors except one factor in Entrepreneurial training and one variable in personal characteristics, the factor loadings are greater than 0.70 thus representing that the factor derives sufficient loading from the variables. The next reliability and validity measure given in Table 1 is Cronbach’s Alpha which is also widely names as coefficient of reliability as it assesses the internal consistency of the test items. The research paper presented by Buajing, Omar, and Baharum (2018) has considered values above 0.70 as highly reliable variables to be included in the model. Table 1 highlights that for all four variables (entrepreneurial education, entrepreneurial training, personal characteristics, and performance of women entrepreneurs) the value of Cronbach’s alpha is greater than 0.70 thus indicating validity of the scale used. The next measure included is the composite reliability which is more preferred in the SEM where moderation or mediation is involved in the model. Considering that this model includes the moderating role of personal characteristics hence composite reliability is a suitable measure to use for internal consistency. Similar to the Cronbach’s alpha, the acceptable value for this measure is also 0.70 or higher (Serafini et al., 2016). For each variable included in this model, the composite reliability is found to be sufficient. The last value in the table is of Average Variance Extracted for the variables which determines the variance of the variable compared with the variance caused due to error in measurement. The acceptable value for this measure is 0.50 however, it is considered to be good if it is greater than 0.70 (Ahmad, Zulkurnain, & Khairewashali, 2016; Henry et al., 2017). All the values are greater than 0.50 thus showing reliability and validity of the constructs. The results from the factor loadings can be visualized from Fig. 1. After the detailed assessment of the confirmatory factor analysis, further testing for determining the significance of impact can be carried out.

Table 2

<table>
<thead>
<tr>
<th>Discriminant Validity</th>
<th>Entrepreneurial Education</th>
<th>Entrepreneurial Training</th>
<th>Performance of Women Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Education</td>
<td>0.551</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial Training</td>
<td>0.693</td>
<td>0.421</td>
<td></td>
</tr>
<tr>
<td>Performance of Women Entrepreneurs</td>
<td>0.433</td>
<td>0.358</td>
<td>0.328</td>
</tr>
</tbody>
</table>

Source: Author (2020)
To assess the discriminant validity of this model, Heterotrait-Monotrait Ratio (HTMT) is computed via SmartPLS. This measure interprets that the variables that are supposed to be non-related to one another are actually uncorrelated. As per the study of Hamid, Sami, and Sidek (2017), the acceptable value of HTMT ratio should be lower than 0.90 in order to show discriminant validity. In accordance to table 2, for all the variables, the HTMT ratio is computed to be less than that of 0.90 thus signifying validity by showing that none of the variables supposed to uncorrelated is correlated.

6.2 Basic Model and Path Analysis

This research paper aims to find out the impact of entrepreneurial education and entrepreneurial training on the performance of women entrepreneurs in Indonesia by considering the moderating role of personal characteristics. The relationships between the variables can be determined with the help different values such as R-square adjusted R-square and path analysis. Moreover, the values of R-square in PLS-SEM shows the goodness of fit for the model. The following table shows the value of R-square and adjusted R-square which are significant to be determined for defining the relationship of variables:

<table>
<thead>
<tr>
<th>Performance of Women Entrepreneurs</th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.381</td>
<td>0.373</td>
</tr>
</tbody>
</table>

Coefficient of determination or otherwise known as R-square shows the variance that occurs in dependent variable that can be successfully explained by the predicting factor. Similarly, the value of adjusted R-square does the same after adjusting the model for any inaccuracies and inconsistencies in the model. For this research, 38.18% of the variance caused in the performance of women entrepreneurs in Indonesia can be explained by entrepreneurial education and training. However, after adjusting the model for inconsistencies, 37.34% of the variance caused in the performance of women entrepreneurs in Indonesia can be explained by entrepreneurial education and training.

The above table indicates the existence of relationship among the different kinds of variables that are included in this model. For a path of relationship to be statistically viable, the respective p-value needs to be below the acceptable value of 0.05. Firstly, the direct impact of entrepreneurial education is analysed on performance of women entrepreneurs which is found to be statistically significant as per the p-value which is 0.000. Next, the direct impact of entrepreneurial training is analysed on performance of women entrepreneurs which is found to be statistically insignificant as per the p-value which is 0.07. The moderating effect of personal characteristics on the impact of entrepreneurial education is found to be statistically insignificant as the p-value is 0.355. The moderating effect of personal characteristics on the impact of entrepreneurial training is found to be statistically insignificant as the p-value is 0.06. The last path to be studied is the impact of personal characteristics on the

| Performance of Women Entrepreneurs | Original Sample Mean (O) | Sample Mean (M) | Sample Standard Deviation (STDEV) | T Statistics (|O-STDEV|) | P Values |
|------------------------------------|--------------------------|----------------|-----------------------------------|-----------------|----------|
| Entrepreneurial Education → Performance of Women Entrepreneurs | 0.465 | 0.463 | 0.050 | 9.209 | 0.000 |
| Entrepreneurial Training → Performance of Women Entrepreneurs | 0.098 | 0.099 | 0.054 | 1.809 | 0.070 |
| PC×EE → Performance of Women Entrepreneurs | 0.047 | 0.049 | 0.051 | 0.924 | 0.355 |
| PC×ET → Performance of Women Entrepreneurs | 0.114 | 0.108 | 0.060 | 1.871 | 0.061 |
| Personal Characteristics → Performance of Women Entrepreneurs | 0.134 | 0.142 | 0.047 | 2.837 | 0.004 |

Source: Author (2020)
performance of women entrepreneurs which is found to be statistically significant. The path analysis can be understood from the image below:

7. Discussion

The current study has intended to determine the moderating effect of personal characteristics in the relation between entrepreneurial education and performance of women entrepreneurs. Apart from this, the study also focuses to determine whether there is any moderating effect of personal characteristics in the relation between entrepreneurial training and performance of women entrepreneurs. Drawing on the literature, it has been discussed that entrepreneurial education influences the performance of women entrepreneurs. For instance, the findings of Hägg et al. (2016) have suggested that education provided for the facilitation of entrepreneurial activities plays a significant role in supporting businesses and as well in creating opportunities for the purpose of improved and productive entrepreneurial activities. The findings of the current study also confirm that there is a significant and positive impact of entrepreneurial education on the performance of women entrepreneurs. Apart from this, the prime focus of the current study was to also determine the moderating effect of personal characteristics in the relation between the entrepreneurial education and performance of women entrepreneurs. It was also discussed, in the prior findings that the personal characteristics moderates this relation (Ajuna, Ntale and Ngui, 2018; Bujang et al., 2018). Nonetheless, the findings of the current study reveal that in the context of Indonesian women, there is no significant moderating effect of personal characteristics in the relation between the concerned independent and dependent variables. While referring to the findings of Kyrö (2018), it has been discussed that education along with entrepreneurial training is crucial while achieving the desired state entrepreneurial objectives. It has also been discussed by the aforementioned researcher that entrepreneurial training is also crucial for acquiring those opportunities that are generated in the entrepreneurial sector. However, in the present case of Indonesian women, no significant impact of entrepreneurial training has been observed on the women's performance of women Indonesian entrepreneurs. Apart from this, one of the other prime focus of the current study was towards the assessment of the moderating effect of personal characteristics in the relation between entrepreneurial training and performance. However, the present research neglects the prior findings by suggesting that personal characteristics do not moderate the relation between entrepreneurial training and performance.

8. Conclusion

The quantitative study conducted in the context of Indonesian mainly focused to determine the moderating effect of entrepreneurial education & performance and entrepreneurial training and performance of women entrepreneurs. Similar to the findings of the prior researches, the current study confirms that there is a significant and positive impact of entrepreneurial education on the performance of women entrepreneurs. However, the study contradicts the findings of the prior studies when it was determined that there is no significant impact of entrepreneurial training on the performance of women entrepreneurs in the context of the Indonesian entrepreneurial sector. Besides this, the main focus of the current study was to determine the moderating effect of personal characteristics in the relation between entrepreneurial education & performance and entrepreneurial training and performance. Though the prior findings had indicated that the influence of the moderating variables in the relationship these variables, however, the current study neglects the prior findings by confirming the insignificant effect of personal characteristics for both of the relations.

9. Recommendations

After conducting the analysis, it has been observed that the women play a major role in developing entrepreneurial businesses that contributes towards the economy of the country therefore it is recommended for the countries to provide proper training and education to the women for better opportunities and performance in the future.
10. Limitations and Future Studies

The researcher has faced limitations in terms of gaining valid and reliable data for the research to investigate the research problem. The future researchers can be carried out on the particular region or the countries where the investigation where there is a higher significance of entrepreneurship.

References


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