Determinants of business performance of village-owned enterprises (V-OE) in Jembrana regency of Bali using SEM

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Abstract. One of the ideas offered is the establishment of economic institutions such as Village-Owned Enterprises (V-OE) which are supported by the role of the local government and are based on the wishes of the village community. The role of the government is needed in enhancing the culture of entrepreneurship in the managers and management of V-OE in addition to strengthening the capacity of social capital. SEM as a basis for multivariate analysis involving latent variables will be used to determine the factors affecting the business performance of V-OE. The survey through structured interviews was carried out on active V-OE involving 90 respondents from managers in Jembrana Regency of Bali. The results, are:

1. Introduction

The formation of Village-Owned Enterprises (V-OE) in Jembrana Regency has been regulated in the Jembrana Regency Regional Regulation Number 21 of 2006, the V-OE is established by the village government based on village deliberations and is stipulated in a village regulation. Each village can establish one V-OE whose organization consists of operational executors, supervisors and advisors. Recapitulation of the Community and Village Empowerment Agency Office in 2018, there are 37 V-OE that are active and 4 V-OE are developing through savings and loan business units. The development of each V-OE every year can be assessed through the level of health that has been achieved.

The role of the government and V-OE managers is very important in the progress of their business. through a reliable entrepreneurial orientation [1]. But, the social resources that exist are also seen as influencing the business performance [2],[3]. According to Putnam (1993) in [4], social resources (social capital) are characteristics that exist in social organizations such as beliefs, norms, and networks, all of which can be used by participants to work together more effectively to achieve common goals.

The basic premise of the object of this research is social capital, entrepreneurial orientation of V-OE managers and involvement of the role of government as factors that influence the performance of V-OE. The application of mathematics to the object of this research is a structural model or relationship using partial least squares structural equation modelling (PLS-SEM) [5]. The analysis of
determinant the business performance of V-OE in Jembrana of Bali will be seen from the structural model generated by PLS-SEM.

2. Method
Research data were taken at V-OE in all villages in Jembrana Regency of Bali, there were 37 active V-OE in 2019. The number of samples selected was 2 or 3 managers from each active V-OE (around 90 respondents). Using indicators for variables latent social capital, entrepreneurial orientation and business performance are almost the same as indicators in the research of Gandhiadi [2]. While the indicators for the role of government [5],[6]. Then the research model was designed using this indicators as in Figure 1.

![Figure 1. Research design](image)

Figure 1 describes the relationship between the four latent variables (constructs) according to the direction of the arrows using their indicators as in Table 1 and their structural relationships.

Testing of the research instrument on the initial 30 questionnaire data using the Product Moment correlation for validity test and the reliability test of the Cronbach Alpha (α) technique for test the feasibility of the questionnaire used [7]. Furthermore, data analysis uses analysis steps according to SEM-PLS [8], [9], [10] with the help of Smart PLS 3.0 software in the research model design.

| Second Order of LatenVariable | First Order of LatenVariable | Indicator (Item Question) |
|------------------------------|-----------------------------|---------------------------|
| Social Capital (X1), [2]     | Trust (X11)                 | X111: Most people care    |
|                              |                             | X112: Trust in religious leaders |
|                              |                             | X113: Mutual trust in other employees |
|                              |                             | X114: Trust in other business friends |
| Norm (X12)                   |                             | X121: Harmony according to Tri Hitta Karana |
|                              |                             | X122: Compliance with existing rules |
|                              |                             | X123: Ease of finding capital assistance |
|                              |                             | X124: Ease of assistance in management coaching |
| Networks (X13)               |                             | X131: Working network density |
|                              |                             | X132: Collaboration with employees (bonding) |
|                              |                             | X133: Collaboration with fellow entrepreneurs (bridging) |
|                              |                             | X134: Collaborate with other business friends (linking) |
| Role of Government (X2), [5] |                             | X21: Facilitator |
|                              |                             | X22: Catalyst |
|                              |                             | X23: Regulator |
| Entrepreneurship Orientation (Y1) | Innovative (Y11) | Y111: Capability |
|                              |                             | Y112: Persistence of new opportunities or models |
Proactive (Y12)  
Y121: Active looking for consumers and markets  
Y122: Proactively designing new products  
Y123: Proactive on market expansion  
Y124: Proactively raise support from other parties

Problem Solving (Y13)  
Y131: Assertiveness; decisiveness  
Y132: Confident  
Y133: Systematic planning  
Y134: Dare to take decisions and risks

Business Performance (Y2)  
Y21: Increased number of business turnover  
Y22: Increased type of business  
Y23: Increased business income  
Y24: Profitability

3. Result and Discussion
3.1 Testing of the research instrument
Testing the feasibility of research instruments or testing the validity and reliability in this study was conducted on 30 initial questionnaires. The data in the form of a questionnaire was tested for the validity of each item of the question by looking at the correlation value between items and the total. The validity test was conducted to determine the feasibility of the indicators used to explain a variable being studied. An item is declared valid if the correlation value with the total item is more than 0.40 [7]. Furthermore, the reliability test was carried out to determine the internal consistency of an observed variable. A variable is declared consistent if the cronbach alpha value ($\alpha$ ≥ 0.70) for exploratory research [7]. The results of calculations with SPSS $\alpha$ values for all latent variables are all above 0.70 and validity checks show that the correlation values with the total items are more than 0.40. This means that all indicators are valid and feasible, so that the research can be continued to collect questionnaire data for 90 samples.

3.2 Measurement model or outer model evaluation
Testing of the measurement model is carried out by taking into account the Composite Reliability (CR) and the validity of the construct, Average Variance Extracted (AVE), and outer loading. CR and validity is a measure of internal consistency between reflective indicators of the corresponding latent variables. To obtain internal consistency, it is expected that the Cronbach’s alpha, rho_A, and CR > 0.70, meanwhile the AVE value ≥ 0.5 or statistical significance ≤ 0.05. In addition, it is necessary to pay attention to the outer loading value of each reflective indicator which is stated to have a good contribution if the outer loading value is ≥ 0.708 and t-statistic > ± 1.96 or statistical significance ≤ 0.05 [9]. The results of data processing using Smart PLS 3.0 software with the Bootstrapping method are shown in Table 2.

| Construct | AVE & P-Val | CA($\alpha$)& P-Val | CR & P-Val | Item code | Outer Loading | t- Statistic |
|-----------|-------------|----------------------|-------------|-----------|--------------|-------------|
| Trust     | 0.544       | 0.716                | 0.825       | X111      | 0.792        | 22.177 (s) |
| R$^2$= 0.840 | p=0.00    | p=0.00              | p=0.00       | X112      | 0.719        | 13.190 (s) |
|           | p=0.00    | p=0.00              | p=0.00       | X113      | 0.589        | 8.883 (s)  |
|           | p=0.00    | p=0.00              | p=0.00       | X114      | 0.827        | 31.574 (s) |
| Norm      | 0.489       | 0.648                | 0.791       | X121      | 0.741        | 14.620 (s) |
| R$^2$= 0.855 | p=0.00    | p=0.00              | p=0.00       | X122      | 0.663        | 11.426 (s) |
|           | p=0.00    | p=0.00              | p=0.00       | X123      | 0.762        | 15.048 (s) |
|           | p=0.00    | p=0.00              | p=0.00       | X124      | 0.620        | 7.684 (s)  |
| Networks  | 0.608       | 0.783                | 0.861       | X131      | 0.748        | 15.004 (s) |
| R$^2$= 0.905 | p=0.00    | p=0.00              | p=0.00       | X132      | 0.703        | 13.075 (s) |
|           | p=0.00    | p=0.00              | p=0.00       | X133      | 0.843        | 29.165 (s) |
|           | p=0.00    | p=0.00              | p=0.00       | X134      | 0.818        | 23.618 (s) |
Table 2 shows the AVE values of each construct at the 5 percent statistical test level (P-Values value ≤ 0.05), this means that all constructs used in this study have sufficient validity [8]. Likewise, the Cronbach Alpha (CA) value of each construct was more than 0.6 and it was also significant at the 5% t-test level (T-Value > 1.96), so that each construct was reliable in test level α = 5 percent. While the Composite Reliability (CR) value of each construct, it turns out that all constructs with a value of more than 0.7 means that they have fulfilled the requirements of construct reliability [9]. Meanwhile, all of the indicators used in the study have an outer loading at the level 5 percent. Therefore testing the measurement model (outer model) all meet the requirements, meaning that all indicators and constructs in this study are valid and feasible to use for analysis, as shown in Figure 2 below.
3.3 Structural model or inner model evaluation
Testing the inner model is related to seeing the relationship between latent constructs by analyzing the results of the estimated path coefficient and the level of significance. The results of data processing using Smart PLS 3.0 software with the PLS Algorithm calculate are shown in Table 3.

| Construct                  | R Square | R Square Adjusted |
|----------------------------|----------|-------------------|
| Entrepreneurial Orientation| 0.754    | 0.748             |
| Business Performance       | 0.655    | 0.643             |

Source: Primary Data (2020)

The R square values as in Table 3 can be used to calculate the $Q^2$ or Stone Geiser Q-Square test, that is $Q^2 = 1 - [(1 - 0.754)(1 - 0.655)] = 1 - 0.085 = 0.915$. $Q^2$ calculation results of 0.915 are said to have a high predictive prevalence [9], so the resulting structural model is very feasible to use to predict. A value of 0.915 can be interpreted that the variation of the latent variable of business performance by 91.5 percent can be explained by the variation of the latent variable of social capital, the role of the government and the entrepreneurial orientation of the business performance of V-OE in Jembrana Regency of Bali, while the remaining 10.5 percent is explained by the variable others outside the structural model.

3.4 Discussions
Analysis of direct influence. indirect effect or total effect between constructs (latent variables) can explain the relationship between constructs on the research variables [9]. The research variables in question include social capital (SC), the role of government (RG), entrepreneurial orientation (EO) and business performance (BP). The direct effect or path coefficient (Table 4) is expressed by the coefficient of all arrows of the latent variable as Figure 2, with one end with a significance level through the T Statistic test or P Values at 5 percent, while the indirect effect is shown through the role of one or several intermediate variables (mediation).

| Relations                  | Original Sample | Standard Deviation | T Statistic | P Values | Results     |
|----------------------------|-----------------|--------------------|-------------|----------|-------------|
| X₁(SC) → Y₂(BP)            | 0.189           | 0.144              | 1.318       | 0.188    | Not Significant |
| X₂(RG) → Y₂(BP)            | 0.173           | 0.110              | 1.573       | 0.116    | Not Significant |
| Y₁(EO) → Y₂(BP)            | 0.501           | 0.106              | 4.732       | 0.000    | Significant   |
| X₁(SC) → Y₁(EO)            | 0.721           | 0.057              | 12.646      | 0.000    | Significant   |
| X₂(RG) → Y₁(EO)            | 0.185           | 0.064              | 2.892       | 0.004    | Significant   |

Source: Primary Data (2020)

Table 4 explains the direct effect of the social capital construct (SC) and the role of government construct has a positive and not significant effect on business performance (BP), but it is a positive and significant effect on entrepreneurial orientation (EO). Construct of entrepreneurial orientation (EO), has a positive and significant effect on business performance (BP) of V-OE in Jembrana Regency.

The results are calculated to examine the indirect and total effects in the construct using Smart PLS 3.0 software with the Bootstrapping method are shown in Table 5 and Table 6.

| Relations                  | Original Sample | Standard Deviation | T Statistic | P Values | Results     |
|----------------------------|-----------------|--------------------|-------------|----------|-------------|
| X₁(SC) → Y₂(BP) Via Y₁(EO)| 0.361           | 0.083              | 4.365       | 0.000    | Significant |
| X₂(RG) → Y₂(BP) Via Y₁(EO)| 0.093           | 0.038              | 2.468       | 0.014    | Significant |

Source: Primary Data (2020)
Table 6. Total effects

| Relations          | Original Sample | Standard Deviation | T Statistic | P Values | Results   |
|--------------------|-----------------|--------------------|-------------|----------|-----------|
| X1 (SC) → Y2 (BP)  | 0.550           | 0.129              | 4.262       | 0.000    | Significant |
| X2 (RG) → Y2 (BP)  | 0.266           | 0.111              | 2.399       | 0.017    | Significant |
| Y1 (EO) → Y2 (BP)  | 0.501           | 0.106              | 4.732       | 0.000    | Significant |

Source: Primary Data (2020)

Table 5 and 6 shows the total influence in the structural model of business performance of V-OE are all significant at the 5 percent test level. In general, the exogenous construct of social capital and the role of government have positive and significant effects on the endogenous construct of business performance. Because the direct effect of the social capital and the role of government are not significant but the significant indirect effect on business performance, there is full mediation by the construct of entrepreneurial orientation.

4. Conclusion

- Model of measurement obtained is valid and feasible, while the structural model is good with Q² (Stone Geiser Q-Square) that is 0.915 are said to have a high predictive prevalence, so the resulting structural model is very feasible to use to predict.
- Directly social capital and government roles have a positive and significant influence on entrepreneurial orientation of V-OE business actors. Meanwhile, entrepreneurial orientation of business actors have a positive and significant effect directly on business performance in V-OE in Jembrana Regency.
- In totally social capital and the role of government has a positive and significant impact on business performance that is fully mediated by entrepreneurial orientation of the business actors of V-OE in Jembrana Regency of Bali.

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References

[1] Fukuyama 2000 Social Capital and Civil Society (Institute of Public Policy: George Mason University), (DOI:https://doi.org/10.5089/9781451849585.001).
[2] Gandhiadi G K, Sudibia K, Suyana Utama M, Saskara I A N 2017 The Influence of Social Capital on Subjective Wellbeing: A Structural Model for The Weaving Industry in Bali Province of Indonesia International Journal of Economics. Commerce &Management (IJECM). 5(6), 216-230. United Kingdom ISSN 2348-0386.
[3] Manning, P C 2015 The human factor in social capital management: The owner-manager perspective, United Kingdom: Emerald, (DOI:http://dx.doi/10.1108/JHOM-01-2012-0005).
[4] Amanda Schultz & Monica Cuneo 2015 Networks, Resources, and Trust: What Does Social Capital Mean to Public Health?. Institute for Sustainable Solutions. Portland State University.
[5] Gandhiadi. G K 2019 Structural model for the role of government and social capital on business performance of weaving industry in Jembrana Regency of Bali Journal of Physics:Conference Series. 1321. Issue 2 Published under licence by IOP Publishing Ltd.
[6] Monica-Violeta Achim, Sorin-Nicolae Borlea & Codruţa Mare 2016 Corporate Governance and Business Performance: Evidence for the Romanian Economy, Journal of Business Economics and Management, 17(3), 458-474, (DOI:https://doi.org/10.3846/16111699.2013.834841).
[7] Hamed Taherdoos 2016 Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionare/Survey in a Research International Journal of Academic Research in Management (IJARM). 5(3), 28-36. ISSN: 2296-1747, (DOI: 10.2139/ssrn.3205040)

[8] Hair. J F. Hult. G. Ringle. C M & Sarstedt. M 2017 A primer on partial least squares structural equation modeling (PLS-SEM) Second edition (Los Angeles : SAGE Publications Inc) ISBN 9781483377445, (http://lccn.loc.gov/2016005380)

[9] Manley. S C. Hair. J F. Williams. R I & McDowell. W C 2020 Essential new PLS-SEM analysis methods for your entrepreneurship analytical toolbox International Entrepreneurship and Management Journal Spinger Science+Business Media LLC, (DOI:https://doi.org/10.1007/s11365-200-00687-6)

[10] Christian Nitzi 2016 The use of partial least squares structural equation modeling (PLS-SEM) in management accounting research: Directions for future theory development. Journal of Accounting Literature; 37, 19-35