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Intellectual Capital as A Basis of Service Performance on Village Credit Institution

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Entering the ASEAN Economic Community (AEC) has forced various business organizations to change the business paradigm from labor based business or traditional patterns lead to a modern business that is knowledge-based business. This study aims to analysis the role of Intellectual capital (human capital, relational capital and structural capital) in developing the service performance at Village Credit Institutions (VCI). This research was conducted at 35 VCI in the Municipalities over Denpasar, Indonesia. Here, the 35 VCI's was tested to obtain hypotheses using descriptive and inferential analysis Partial Least Square (PLS). The results of the study concluded that human capital and relational capital are significantly influence on services performance. In contrast, structural capital does not significantly influence on service performance.

Keywords: Human capital, Structural capital, Relational capital, and Service performance.

1. INTRODUCTION

The Establishment of Village Credit Institutions (VCI) based on the existence of cultural heritage in the form of a container societies as village level governance system that consists of family ties. Nowadays, from 1.444 village societies in Bali, VCI had reached 1.418 villages or about 96% from traditional villages. VCI development has been sufficiently proved capable of contributing to the development and prosperity of the local traditional village manners. Expansion of economic at regional, national level, and even global demand need the VCI increasingly competitiveness at the future. This condition only can be done by synergistic among VCI management with professional, regulatory, communities and governments committed to making VCI as business information centre strategically productivity of society. That conditions aimed to improving and empowering local economic potential which in turn to enhances competitiveness and social welfare societies in Denpasar, Bali, Indonesia.

Perspectives of knowledge business based on the concept of resource theoretical perspective that is essentially complementary perspective based on environment [1]. The perspective implies that the organization must be able to meet customer expectations through managing of intellectual capital to optimize the role of human capital, structural capital and relational capital as a whole entity to create superior performance. Human capital, structural capital and relational capital is the main component of intellectual capital. When the three capitals are managed appropriately capital and empowered by optimal, then the organization will be able to create value and competitive that places competitiveness. The human capital, structural capital and relational capital are significant positive effect on business performance in the manufacturing industry, but not significant in the services industry [2]. Human capital is a key component of intellectual capital to improve business performance [3].

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Human capital is an important component of intellectual capital because it is a source of innovation, creativity and renewal strategy [2]. In the services industries and non-services industry, the intellectual capital is significant effect on business performance [4, 5, 6, 7]. Thus, the findings of the research shows that there are consistency integration effect of human capital, structural capital and relational capital on business performance in near future.

2. METHODOLOGY

A. Intellectual Capital

Intellectual Capital Intellectual Capital (IC) in the literature is often defined in different ways. Intellectual capital (IC) as the integration of human capital, structural capital and relational capital, affect the improvement of business performance and human capital as a key component at the same time fresh blood intellectual capital [2]. Conceptualizing of intellectual capital (IC) as the intellectual resources that have been formulated, captured and leveraged to create high value of intellectual assets [8]. The importance of intellectual capital is reflected in the growing importance of the service industry or professional services based on knowledge management and information technology. The knowledge is not just another resource along factors of the traditional production employee, capital and land, but also it is the only resource that is useful because knowledge is spread among the members of the organization and associated with the experience and history of the organization [2, 9].

B. Human Capital

As the assets of the organization, empowerment of human capital must be optimized in such a way as to sensitize employees to the potential of each well individually or in groups, so that they can position themselves as a strategic asset in achieving organizational goals. A manager of overall assets in the organization and human capital should be able to plan, manage, and control all of the resources that exist within the organization while ensuring that the whole of other resources (structural capital) has functioned optimally [10]. The uniqueness of the assets of human capital shows the different management with other assets as human capital ratios (intellect, mind), flavor (feelings, wishes, encouragement), and intention (skill, power, works) where the potential of these resources greatly affect organizational efforts in achieving goals [11].

C. Structural Capital

The capital structural in the organization is a mechanism and structure of the organization so that employees can be optimally elaborate human individual to achieve the performance of the best work of employees in pursuit of performance best organization [3]. The conceptualization of structural capital enables intellectual capital is measured and developed in an organization. Consequently, without structural capital more than the intellectual capital (human capital and relational capital) will only become a human [12]. Therefore, linkages between the nodes become critical in the implementation of the existence of intellectual capital.

D. Relational Capital

Relational capital is a consumer relationship that is seen by most researchers is the most important component of relational capital. Relational capital more emphasis on market orientation functions that had grown through the customer and implemented through the availability of a data-based accurate and constantly updated, making it easier accessibility for the organization of economic transactions. The essence of relational capital is the organizational knowledge that comes from outside the organization and inherent knowledge in conjunction with an external organization (customers, government, and industry related community), while the scope is beyond the organization, especially customers [13].

E. Service performance

Performance is the result of work that can be achieved by a person or group of people within an organization or company in accordance with the authority and responsibilities of each in order to achieve organizational goals. Performance bank services is the ability of the employee gives the provision of services to customers in accordance with the needs and expectations of customers who believed [14, 15]. VCI service performance indicator variable is measured using the method of service performance based on service quality performance dimensional measurements, consist are: (1) tangible, (2) responsiveness, (3) assurance, (4) reliability and (5) empathy [15].

The five dimensions of service quality consists of: (1) Reliability, that can be relied upon to provide services promised accurately, (2) Responsiveness, is the willingness to help customers and provide prompt service, (3) Assurance, is the knowledge and courtesy of employees and their ability to convey trust and confidence, (4) Empathy, is to provide care and attention to the customer, and (5) Tangibles, is appearance physical facilities, equipment, employees and communications equipment [16]. The current study using measures the service quality is viewed from the employees' perception focuses on the employees as internal customers that important role in delivering services to its customers [17]. The indicators refer to current study using measures divides into a service quality dimensions: reliability, responsiveness, assurance, tangible, and empathy. To perform the measurement of the quality of service by using the dimensions of service quality with a questionnaire that has been modified [17].

F. Research Hypothesis

An intellectual capital as an important concept in the life and development organizations and the wider

economic life. Researchers and practitioners have recognized that the absolute ownership of intellectual capital to maintain the excellence of the company and was instrumental to the success of the company. Empirically on intellectual capital, and managed to find the concept of intellectual capital theory as the integration of human capital, structural capital and relational capital has a significant effect to company performance [5, 6, 18, 19, 20, 21, 22, 26]. The human capital is one of the main components of intellectual capital of the most important (life-blood) and affect the company performance. All the activities of the organization starting from human capital as a source of innovation and creativity that the better quality human capital of the company causes better performance. Interaction of human capital, structural capital and relational capital in a service industry describes a process that should not be separated. Services are part of the intangible assets of companies that have contributed significantly to the level of customer satisfaction. The structural capital positively but not significantly linked with business performance and structural capital positively and significantly linked with business performance [23]. Based on the current study, we have three positive effect on service performance for customer satisfaction such as:

Hypotheses 1: Human capital has a positively effect on service performance.
Hypotheses 2: Structural capital has a positive effect on service performance.
Hypotheses 3: Relational capital has a positively effect on service performance.

This study based on phenomenon at VCI and supported by the previous research models to analyzing intellectual capital as a basis of service performance on village credit institution (VCI). Based on the description, this study formulated research model as follows [23]:

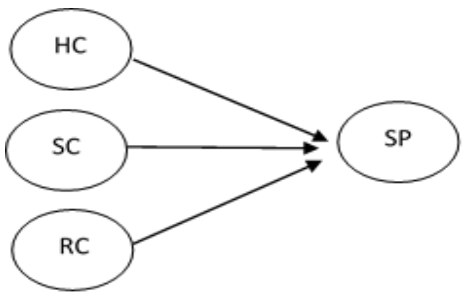

Figure 1. Conceptual Model

The population in this study are all Village Credit Institutions in the city of Denpasar. The reason for choosing this population because Denpasar Municipalities which was first felt a degree of competition entering the ASEAN Economic Community (AEC). Furthermore, the sample will be selected using a population by taking the entire VCI in Denpasar as many 35 VCI. The number of VCI spread in four Districts over Denpasar Municipalities area such as: west Denpasar 2 (two) VCI; North Denpasar 10 (ten) VCI; East Denpasar 12 (twelfth) VCI: and south Denpasar 11 (eleven) VCI.

The instrument of this research using questionnaire; intellectual capital developed by [25, 26], and service performance developed by [17]. In order to fill the questionnaire, structured questionnaire was distributed using 5 (five) Likert scales, where scale 1 was strongly disagree and scale 5 was strongly agree. This study was distributed 35 questionnaires to management in entirely VCI at Denpasar Municipalities. The result of demographic the respondent of VCI as follow, which was classified by gender (male = 32 persons and female =3 person), age (40-50 years = 10 person;, 51 - 60 years = 10 person;, 61-70 years = 13 person;, and > 70 years = 2 person) educational level (Senior High School = 12 persons;, diploma = 3;, Bachelor =18 persons;, and Master = 2 persons), and tenure (0 – 5 years = 9 person; 6 – 10 years = 5 person; 11 -15 years = 4 ; and > 16 years = 17 person). Besides using descriptive analysis, this study uses variance-based approach or component based using Partial Least Square (PLS) due to data structure. When the structural model will be analyzed satisfy the recursive and latent variable models have indicators that are formative, reflexive, or mixture, then the most appropriate approach used is PLS. In the PLS model of structural relationships between latent variables is called the inner models, while the measurement model (reflexive or formative) called outer or output target models.

3. RESULT AND DISCUSSION

Before analysis the data, the instrument was test using SPSS. 20. The result of validity and reliability instrument test show in Table I.

Table I.
Validity and reliability Instrument

Variables/ indicators	Product moment correlation	Remarks	Cronbach alpha	Remarks
Human capital (X)				
X11	0,745	Valid		
X12	0,778	Valid	0,640	Reliable
X13	0,649	Valid		
Structural capital (X2)				
X21	0,780	Valid	0,632	Reliable
X22	0,746	Valid		
Relational capital (X3)				
X31	0,784	Valid	0,788	Reliable
X32	0,925	Valid		
Service performance (Y)				
Y1	0,596	Valid		
Y2	0,474	Valid		
Y3	0,512	Valid	0,734	Reliable
Y4	0,762	Valid		
Y5	0,851	Valid		

As can be seen in Table I, the human capital variables using three indicators such as capability of personnel, continuity of personnel, and employee satisfaction. Here, the structural capital using two indicators such as internal structure and external structure. Here, relational capital using two indicators (customer and partner systems) or network service performance using five indicator such as responsiveness, tangibles, assurances, reliability, empathy.

By using Partial Least Square analysis, the measurement data should be assessed the validity and reliability construct for outer models and goodness of fit for inner models (Gof). Composite reliability indicates that consistency and accuracy measuring the instrument to take the measurement. Reliability aims to test the reliability values between blocks of indicators of the constructs. Composite reliability is quite good if the value is higher than 0.70. Table II, shows that the composite reliability higher than 0.70, this model has met the reliability test.

Table II
Composite Reliability

Variable	Composite reliability
Human capital	0.817
Structural capital	0.743
Relational capital	0.896
Service performance	0.862

Convergent validity measured by the value of the loading factor indicator construct. Convergent validity testing results in Table III, shows that the outer loading indicator construct higher than 0.5. So that these measurements fulfil the convergent validity.

Table III
Convergent Validity (Loading factor)

Variable	Indicator	Loading factor	*t*-Statistical	Remark
Human capital (HC).	HC.1	0,724	3,602	Valid
	HC.2	0,810	6,063	Valid
	HC.3	0,784	8,884	Valid
Structural capital (SC).	SC.1	0,860	6,512	Valid
	SC.2	0,671	2,916	Valid
Relational capital (RC).	RC.1	0,839	5,126	Valid
	RC.2	0,960	35, 779	Valid
Service performance (SP)	SP.2	0,709	8,861	Valid
	SP.3	0,814	18, 401	Valid
	SP.4	0,799	12, 058	Valid
	SP.5	0,798	9,252	Valid

Table II, shows that HC.2 (human capital), RC.2 (relational capital) and SP.3 (service performance) are the greatest loading factor that represent for each variable. It indicates that these indicators are the best contribution in reflection on each variable.

Table IV
Discriminant Validity

Variable	Average variance extracted (AVE)	Description
Human Capital	0.599	Valid
Structural capital	0.595	Valid
Relational capital	0.813	Valid
Service performance	0.610	Valid

Discriminant validity was performed to compare the value of the square root of average variance extracted (AVE) any correlation between the construct with other constructs in the model. Table IV, shows that AVE on the variables has higher than 0.5, and these measurements fulfil the discriminant validity.

Goodness of Fit (GoF) inner models is structural model to predict the causal relationship between latent variables. Gof inner model testing by using the value of Q^2 predictive-relevance to test variables that are used in every model.

Table V.
Values of R^2 Endogenous variables

dependent variables	R-square
Service performance	0.518

The $Q^{2\ is}$ used for measuring how the good of observation values that resulted from the model. The value of Q^2 predictive relevance obtained by the formula [17]:

$Q^2 = 1 - (1 - R1^2)$,

$Q^2 = 1 - (1 - 0.518)$, $Q^2 = 0.518$

The data analysis using PLS through two step, while on the first step one indicator of service performance variables is outer from the model (indicator Y1) is not valid with the loading factor less than 0,50. Then, the finals analysis result shows in figure 2, below.

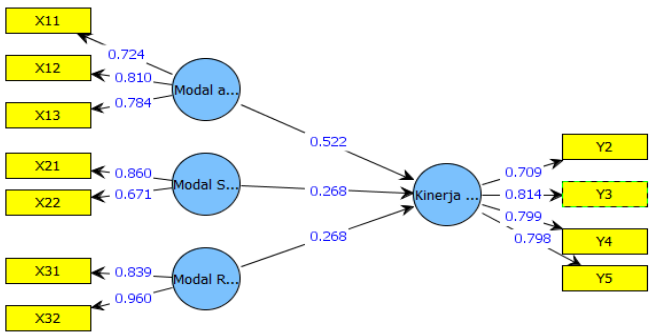

Figure. 2. The result of PLS analysis

Furthermore, the hypotheses testing results are shown in Table VI, below.

Table VI
Hypothesis Test Result

Variable	Original sample estimate	Mean of subsamples	t-Statistic	Description
Human capital -> services performance	0522	0.550	5.284	Significant
Structural capital -> services performance	0268	0.248	1.590	Not Significant
Relational capital -> services performance	0.268	0.273	1.973	Significant

Table VI, shows that t-statistic the significant relationship between variables should be higher than 1,96 (>1,96). It indicates that from three hypotheses proposed in this research, two hypotheses are supported and one hypotheses is rejected. The analysis using PLS shows in

figure 2, and table V with a level of significance (α 0.05), shows that the effects of human capital on services performance (β = 0.522 and t-statistics = 5,284, higher than 1,96) is positive significant and the hypotheses 1 is accepted. The effects of structural capital on the services performance (β = 0.268 and t-statistics = 1.590, lower than 1,96) is not significant and the hypotheses 2 is rejected. Relational capital effects on the services performance (β = 0.268 and t-statistics = 1.973, higher than 1,96) is positive significant and the hypotheses 3 is accepted. In the overall this study concluded that two hypotheses are accepted and one hypotheses is rejected.

4. CONCLUSION

This study reveals a number of issues regarding the effect of intellectual capital on service performance. Human capital is significant positive effect on the service performance. This means that the better optimize human resources in the VCI will have impact on improving the service performance. Structural capital is positive not significant effect on the service performance, this means that the internal and external influences that exist within the organization has not been able to VCI in services significantly improve the performance. As well as, relational capital is significant positive effect on the service performance. This mean that better relationship with the customer can improving the service performance provided. Two dimensions of intellectual capital (human and relational capital) are significant effect on business performance but structural capital has positive not significant effect on business performance. The intellectual capital in general has a direct and significant relationship with performance and among components of intellectual capital, but only human capital is directly related to the performance.

Managers, investors, financial institutions and governments are interested in particular topics such as intellectual capital, innovation and value creation. The concept of intellectual capital is a newly emerging concept, and until now, it is not fully understood by most organizations. The merits of goal and corroborates the results of the majority of work on the effects different components of intellectual capital on organizational performance. Human capital is considered the most important capital, which somehow reflects the slogan of people to care for people.

The implication of the study shows that management of VCI should allow time for employees to further develop themselves to attend trainings or seminars, whether the implementation is done inside or outside VCI. Structural capital is expected to perform some of the activities that involve all employees to create familiarity among employees. Finally, VCI should be able to further improve network systems with clients to harmoniously connection between employees with customers over Denpasar, Bali, Indonesia.

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