

### THE ROLE OF HUMAN CAPITAL IN KNOWLEDGE MANAGEMENT DEVELOPMENT AND ITS IMPACT TO ORGANIZATION PERFORMANCE

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#### Abstract

The purpose of this study is to examine the effect of human capital on knowledge management, Test the influence of human capital on organizational performance, And examine the effect of knowledge management on organizational performance. Until now it is difficult to find find research that provides empirical evidence of human capital and relationships knowledge management to improve organizational performance. Therefore it is necessary to develop a model that connects human capital management and effective knowledge management so that the that the organization's performance will be improved by testing the research research hypothesis as follows: H1: Human capital has positive effect on on knowledge management, H2: Human capital positively affects organizational performance, H3: Knowledge management positively affects affects organizational performance. The population of this study are all small small and medium enterprises (SMEs) export oriented in Badung Regency as Regency as much as 200 with purposive sampling motive. This research uses uses subject data type (self report data) with data source is primary data. data. Primary data was collected using survey method with questionnaires questionnaires data collection technique, that is by sending questionnaire questionnaire through mail survey and contact person to the respondent. respondent. Hypothesis test is done by using structural equation modeling modeling (SEM) with the help of AMOS 7.0 and SPSS 17.0 software. The results The results of this study revealed that human capital positively insignificant insignificant effect on knowledge management. Based on this, individual individual knowledge of tacit employees and more concrete organizational organizational knowledge, as well as external knowledge of the organization organization has not been able to significantly facilitate the acquisition, creation, transfer, and use of knowledge. Human capital found to have negative effect is not significant to organizational performance. This shows shows that human capital requires media to be creative so that organizational



organizational performance can be improved significantly. Knowledge management positively insignificant effect on organizational performance. performance. Thus, knowledge management as a process of creating, acquiring, understanding, sharing, and using knowledge, wherever the knowledge is located can not improve learning and organizational performance. The result of this research is expected to give theoretical contribution to the development of intellectual capital model and concept of concept of knowledge management related to performance measurement of measurement of business organization.

**Keywords:** human capital, knowledge management, organizational performance.

# 1. Introduction

### 1.1 Introduce the Problem

Intellectual capital and knowledge management in the knowledgebased economy, be a primary source of competitive advantage and organisational performance (Nonaka, et al, 2000; Marr, et al, 2004; Curado, 2008; Shih, et al, 2010). The phenomenon has claimed organisation to apply knowledge management in accumulate intellectual capital especially human capital in increasingly environmental change (Shih et al, 2010). Conceptually, knowledge management has a relationship with human capital, because both covering the activity to create and movement of knowledge (Huang and Wu, 2010; Zhou and Fink, 2003; Nonaka et al, 2000). The relation between human capital and knowledge management is the crucial for organisation effectiveness (Shih et al, 2010; Rastogi, 2000; Zhou and Fink, 2003). When activity knowledge management applied to develop and looks after human capital, hence knowledge management will become a resource for the attainment of competitive excellence (Seleim and Khalil, 2007). On the other side, when human capital applied and exploited carefully, hence human capital can increase organisation internalisation capacity which in the end able to facilitate knowledge management.

Intellectual capital defined as intellectual source (knowledge, information, intellectual property, experience) which applicable to create create properties, and it's a collective strength or a set utilizable knowledge. knowledge. There is 3 (three) element in intellectual capital, that is (1) human human capital, (2) customer capital, and (3) structural capital. Human capital



capital is organization collective ability as a filter solution for the best of of individual knowledge. Customer capital refers to organization end user user satisfaction and loyalty, while structural capital can be considered to the to the organization ability to fulfil the requirement of the market.

Knowledge management is processing creates, obtains, understands, shares, and applies knowledge, it doesn't matter the knowledge stays to increase organization learning and performance (Scarborough, et al, 1999). Marr, et al, (2003) arises that knowledge management is fundamental activity to grow and maintain organization human capital. Knowledge management has dynamic meaning from learning organization, innovation, competency, expertise, and capability increasing organization human capital development (Rastogi, 2000).

The relation of human capital and knowledge management in increasing organization performance explainable by using two viewpoints of the human capital theory. Roos, et al (1997) arises that theoretically there are two viewpoints to explain human capital, that is 1) strategic stream, what focussed at creation and knowledge usage, as does relation between knowledge and value creation, and 2) measurement stream, what focussed knowledge management at tactical implementation and knowledge operational relates to acquirement facility activity, creation, transfer, and knowledge usage and affects at human capital accumulation (Zhou and Fink, 2003; Wiig, 1997).

Human capital accumulateed from daily decision and experience of work process, instruction, and note with the different knowledge management mechanism (Huss, 2004). For example organization must develop relationship with partner, like consumer, supplier, competitor, which is the source of knowledge acquisition and knowledge creation. Besides, that organization creates value carefully, organization must manage knowledge through knowledge creation and knowledge transfer.

The existing finite, difficult to find research giving empirical evidence evidence about the relation of human capital and knowledge management to management to increase organization performance. This causes, many organizations has not understand how actually is organizational creates and and collect human capital actually and manages knowledge dynamically (Marr (Marr et al, 2003; Nonaka et al, 2000). For the reason need to develop a model



model that connecting antecedent condition for human capital management management effectively (Issac, et al, 2009). The need to be develop theoretical relationship between human capital and knowledge management, management, because the knowledge management process can facilitate and facilitate and accumulation of human capital, so that will increase the organization performance.

#### 1.2 Research Question

To be able to contribute in development concept and human capital model, this research tests the role of human capital in knowledge management development and its impact to organization performance. The research issue formulated in research question: (1) Does human capital positive influential to knowledge management?, (2) Does human capital positive influential to organization performance?, (3) Does knowledge management positive influential to organization performance?

## 2. Literature Review and Conceptual Framework

2.1 Theories Underlying Human Capital and Knowledge Management Thought

The contribution theory to the human capital and knowledge management importance for organization is source based theory or resource based theory and knowledge based theory, which applicable to answer question that often emerges in organization " does organizational have enough competency to reach what targeted?". Competitiveness concept based on competency developed by Penrose (1959) what assumed gives contribution to modern theory that based on resources. The supporter sees that organization is gathering of unique individual resource (Nelson and Winter, 1982; Barney, 1991) which then increases knowledge (Roos et al, 2000; Lev, 2001; Sveiby, 2001; Marr and Schiuma, 2001). Organization knowledge is built the organization strategy fundamentally. Knowldege should become important resouce for organization profitability (Grant, 1991). Organization should identify and develops its knowledge to strengthen or maintains competitive advantage and improve its effectively (Peteraf. 1993: Prahalad and Hamel, 1990; Teece, et al, 1997). This is interpreted that knowledge should understand as fundamental resource of income (Grant, 1991; Spender and Grant, 1996; Spender, 1994).

2.2 Definition of Core Concept



## 2.2.1 Human Capital

Human capital is term given to combine intangible asset from market, intellectual property, infrastructure and center man who is making an organization can function (Brooking, 1996). Human capital is intellectual material (knowledge, information, intellectual property, experience) which applicable to create properties (Stewart, 1997) and is pursuit the effective usage of knowledge (product) as opposition to information (raw material) (Bontis, 1998) and considered to be an element of organizational market value and market premium (Olve, et al, 1999).

Human capital defined as knowledge, skill, and experience which employee brings when leaving organization (Starovic and Marr, 2004). Further, Starovic and Marr (2004) said that some of the knowledges haves a unique character for every individual, and some other had the general character. For example, innovation capacities, creativity, know-how and experience, cooperation capacities, employee flexibility, ambiguisity tolerance, motivation, satisfaction, learning capacities, loyalty, formal education. People produce human capital through competency, attitude and intellectual intellegence (Roos, et al, 1997).

## 2.2.2 Knowledge Management

Knowledge is combine from experience, value, contextual information, expert opinion and basic intuition giving environment and framework to evaluate and unites new experience and information (Davenport and Laurence, 1997). Knowledge obtained from knowing individual or knowers group and often in regular organizational activity and submitted through structural media like document book, personal contact from discussion until apprenticeship. Two types knowledge, that is: a). tacit knowledge, knowledge which is not easy to seen and expressed, personnaly characteristic, difficult to formulated and codification, and save in individual thinking, so that difficult to communicated and divided to others, for example subjective opinionf, intuition, prejudice, estimation, hunch, and body language. b) Explicit knowledge, a systematic and formal, can expressed in word and also number, and easy to be communicated in so many form, has been codification in document, database, e-mail, photograph, painting.

There is 4 level of knowledge, that is: 1) Know what, illustrates cognitive knowledge. Knowledge is very importance, but insufficient to win



win competition, obtained through training, learning, and formal qualification. qualification. 2). Know how, illustrates the ability to translate knowledge from knowledge from theoretical to the real world, so called as practical application application level. 3). Know why, illustrates the deepest knowledge of causality causality which underlies the range of employee responsibilities. This level level called as system understanding level that enabling every individual individual moving from work to greater and more complex problem solving solving and creating solutions to new problems. 4). Care why, illustrates the illustrates the self-creativity that exists within the organization, allowing allowing radical innovations to occur through imaginative leaps and lateral lateral thinking.

Knowledge management is defined as the process or practice of creating, acquiring, capturing, sharing, and using knowledge, wherever the knowledge is to enhance learning and organizational performance (Scarborough, et al, 1999), including identification, creation, acquisition, transfer, sharing and knowledge exploitation (Chyntia et al, 2005). Knowledge management is vital to work on projects efficiently and to improve organizational competitiveness (Egbu, 2000, 2001). Knowledge management introduces innovation and entrepreneurship, helps manage change, and gives employees the freedom and authority (Nonaka and Takeuchi, 1995). Tiwana (1999) defines knowledge management as the process of managing the organization's knowledge to create business value and support competitive advantage through the creation, communications and application of knowledge gained from consumer interaction to maximize growth and business value. Knowledge management can be seen as the basis for integrating the four pillars that affect an organization, namely leadership, organization, technology, and learning to improve overall organizational performance.

There are five knowledge management processes, namely 1). Knowledge acquisition, 2). Knowledge creation, 3). Knowledge documentation, 4). Transfer of knowledge (knowledge transfer), and 5). Knowledge application. Knowledge acquisition can be defined as the activity activity of selecting and obtaining knowledge from external sources (Seleim (Seleim and Khalil, 2007) for internal use. Knowledge acquisition can also be also be defined as the process of creating, moving, developing, building and and composing knowledge internally (David and Joseph, 2008). In this definition, knowledge acquisition is a process for generating useful new



insights and ideas. Knowledge creation is an activity that develops and creates creates understanding, skills, and relationships within the organization as well as well as generating internal knowledge. Knowledge documentation is an an activity documenting knowledge in the form of an organizational record so record so that knowledge can be transferred and reused in the future. Knowledge transfer is an activity that enables the exchange of knowledge knowledge among individuals, groups, and organizational units at different different levels of the organization, while the knowledge application is defined defined as an activity using the knowledge available to improve processes, processes, products and services, and organizational performance.

### 2.2.3 Organization Performance

In formal control systems performance measures include financial and non-financial measures (Fisher, 1998). The financial size actually shows the various actions that occur outside the financial field. Increased financial return is the result of various operational performance which include increasing consumer confidence in the products produced by the organization, the increasing cost effectiveness of internal business processes used by the organization to produce products and increase productivity and employee commitment (Mulyadi and Setyawan, 2001). Thus, if an organization aims to obtain financial performance, then the organization should be able to motivate employees in a non-financial perspective, because in perspective there is the real drivers long-term financial performance.

## $2.3\,\mathrm{Research}\,\mathrm{Hypothesis}$

H1: Human capital has a positive effect on knowledge management

H2: Human capital positively affects organizational performance

H3: Knowledge management positively affects organizational performance

The research design is shown in a theoretical framework that describes the formulation of the research hypothesis and is illustrated in Figure 1.



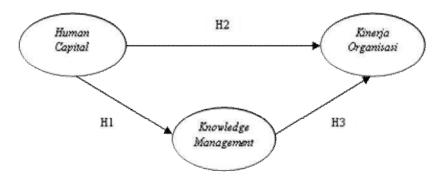


Figure 1 Theoretical Thinking Framework

#### 3. Method

The population of this study are all small and medium enterprises (SMEs) export orientation that registered in the Department of Industry and Trade of Badung Regency as a sampling framework. Sampling pattern by purposive sampling, with sample number 200. This research use self-report data with data source is primary data. Primary data was collected by survey method with questionnaire data collection technique, that is by sending questionnaire through mail survey and contact person to respondent.

#### 3.1 Research Instruments

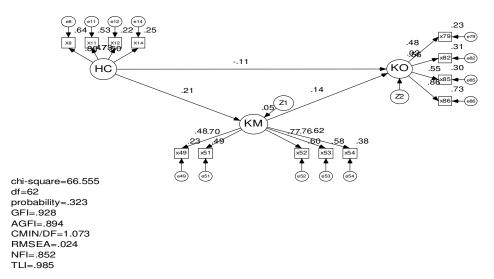
The human capital variables were measured using instruments adopted from Bontis (1997), Youndt (1998), Reed (2000), and Bueno, et al, (2004). Knowledge management variables were measured using modified instruments developed by Filius, et al, (2000). Organizational performance variables were measured using instruments developed by Bontis (1997). Hypothesis test is done by using structural equation modeling (SEM) with the help of AMOS 7.0 and SPSS 17.0 software.

## 4. Results

## 4.1 Analysis of Full Structural Equation Modeling (SEM)

All assumptions of structural equation modeling (SEM), ie assumption of normality, outlier, multicollinearity and singularity have been fulfilled. Full latent variable model estimation results are shown in Figure 2.





### Figure 2 Structural Equation Modeling The Role of Human Capital in Developing Knowledge Management and Its Impact On Organizational Performance

In accordance with the AMOS 7.0 output, the evaluation of the goodness-of-fit model is presented in Table 1.

# Table 1 Overall Evaluation Model Fit Human Capital Role InDevelopment

Knowledge Management And Its Impact On Organizational Performance

Fit Measure	Defaul	Saturate	Indepe	Cut off	Macro	Keterangan
	t	d	ndence			
	Model					
Discrepancy	66,555	0,000	451,025		CMIN	(62;0,05)= 81,3
						81*
Degrees of	62	0	78		DF	Good
freedom						
Р	0,323		0,000		Р	Good
Discrepancy/d	1,073		5,782	< 2,00	CMIND	Good
f					F	
GFI	0,928	1,000	0,595	> 0,90	GFI	Good
Adjusted GFI	0,894		0,527	> 0,90	AGFI	Good
RMSEA	0,024		0,193	< 0,08	RMSEA	Good
Tucker-Lewis	0,985		0,000	> 0,95	TLI	Good
index						
Normed fit	0,852	1,000	0,000	> 0,90	NFI	Good
index						

\* Chi-Square tabel at  $\alpha = 0,05$  with df = 62



Source: Primary Data Processed, 2012

4.2 Hypothesis Testing

The results of hypothesis testing are shown in Table 2 below.

# Table 2 Results of Analysis and Interpretation of EstimationParameters for SEM Model

			Estimate	S.E.	C.R.	Р	Information	Conclusion
KM	<	HC	.215	.105	1.814	.070	Not significant	H1 rejected
ко	<	HC	106	.078	907	.364	Not significant	H2 rejected
ко	<	KM	.137	.087	1.172	.241	Not significant	H3 rejected

Source: Primary Data Processed, 2012

# 5. Discussion

5.1 Discussion of Hypothesis Testing Results 1: Human Capital positive effect on Knowledge Management

The results of hypothesis 1 testing indicate and give an idea that the human capital of SMEs in Badung Regency can improve knowledge management is not significant. SME employees in Badung Regency are smart, creative, have leadership, work integrated in a team, and develop and maintain relationships with other employees, not able to improve the process of knowledge management, especially knowledge transfer, for example in distributing knowledge formally and informally as well can inform a positive experience about the method of doing work among employees. This finding is understandable, because in SMEs, the beliefs and cultural values of employees can be affected by the owner. This will be a problem when the owner does not trust his employees or does not encourage the emergence of sharing culture and knowledge transfer (Partiwi and Kusumawijaya, 2012). The results of this study contradict Seleim and Khalil (2007) who found a significant positive relationship between human capital and knowledge management, particularly in knowledge transfer.



5.2 Discussion of Hypothesis Testing Results 2: Human Capital positive effect on Organization Performance

Management of human capital SMEs in Badung Regency is able to create value (value creation) is not significant. The results of hypothesis 2 testing of this study indicate and provide a picture that human capital without any support from other intellectual capital elements has not been able to improve organizational performance significantly, especially in industry leadership, profit growth, return on sales after tax, and overall response to competition. Although the employees of SMEs in Badung Regency are creative, intelligent, and have leadership spirit, but without the existence of structural capital as creative medium, for example the availability of software to store knowledge, adequate database, the existence of knowledge sharing mechanism and mechanism, then organizational performance can not be formed with well anyway. The results of this study in accordance with Bontis (1998) which with simplistic specification model found a positive relationship not significant human capital to organizational performance.

5.3 Discussion of Hypothesis Testing Results 3: Knowledge Management positive effect on Organization Performance

The results of this hypothesis 3 test indicate and give an illustration that although SMEs in Badung Regency have been distributing organizational knowledge in formal and informal manner, employee mutual inform positive experience and success of method in carrying out work, organization also has expressed organizational experience and inform other employee, It has not been able to improve the industry leadership, profit growth, return on sales after tax and the response of the competition to the competition. Although not significant, but obtaining positive coefficients in this hypothesis test can confirm Alawneh et al (2009) which suggests that knowledge management can be viewed as a strategy that creates, obtains, transfers, leads to the use of knowledge in order to improve organizational performance. This positive coefficient also confirmed Davenport and Prusak (1998) which suggests that one of the benefits of implementing knowledge management for SMEs is the building of sustainable competitive advantage.

## 6. Conclusion



Human capital was found to have no significant positive effect on knowledge management. Based on this, the tacit knowledge of individual employees and concrete organizational knowledge, as well as external knowledge of the organization has not been able to significantly facilitate the acquisition, creation, transfer, and use of knowledge. Human capital is also found to have an insignificant negative effect on organizational performance, which shows that human capital requires media or means to be creative so that organizational performance can increase significantly. Knowledge management is found to have an insignificant positive effect on organizational performance. Thus, knowledge management as a process of creating, acquiring, understanding, sharing, and using knowledge, wherever the knowledge is located can not improve learning and organizational performance.

The results of this study provide theoretical implications for academics and researchers to conduct a deeper exploration of human capital and knowledge management relationships, so that theories about human capital can be obtained and provide a role in the creation of scientifically sound, defendable, And can invite scientific discussion in the context of pros and cons (opposability) and find the concept of logical relations relations or empirical consequence. The next theoretical implication of future research agenda is that academics and researchers can conduct similar research by taking a wider object. The need to develop the theoretical relationship between human capital and knowledge management, because the knowledge management process can facilitate the development and accumulation of human capital, so that organizational performance will increase.

This study uses the object of research located in Badung Regency, so it has the possibility of reducing the ability generalization of the findings of this study. Other limitations in this study, because there are some indicators used to measure the constructs of the study is subjective or based on the perception of respondents, so it can cause problems if the perception of respondents is different from the actual situation.

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