THE INFLUENCE OF GREEN ENTREPRENEURSHIP ORIENTATION, GREEN INNOVATION CAPABILITY, GREEN PRODUCT DEVELOPMENT ON SME FINANCIAL PERFORMANCE

Desak Nyoman Sri Werastuti

Economics Faculty, Universitas Pendidikan Ganesha, Indonesia (sri.werastuti@undiksha.ac.id)

I Made Pradana Adiputra

Economics Faculty, Universitas Pendidikan Ganesha, Indonesia

Anantawikrama Tungga Atmadja

Economics Faculty, Universitas Pendidikan Ganesha, Indonesia

ABSTRACT

The main objective of this study is to explore green entrepreneurship orientation and green product development with the support of green innovation capability triggered by the activeness of growing green knowledge creation can improve marketing performance in small and medium enterprises (SMEs) in Indonesia. The results of this study indicate that the growth of green entrepreneurship orientation as a challenge and opportunity for SMEs so as to produce green product development capabilities; creative green product development that is in accordance with consumer desires needs to be supported by good green innovation capability; The growth of green innovation capability cannot be separated from green knowledge creation efforts in SMEs; The resulting green product development directly affects marketing performance, but not so with green innovation capability cannot directly improve marketing performance but must go through green product development. SMEs as the driving force of the economy are still in their basic format as a form of innovative, proactive, and risk-taking business, must always produce innovative products and services to achieve sustainable performance. Green product development has proven to be quite effective in improving marketing performance, but it must be based on a strong green entrepreneurship orientation and good green innovation capability so that the ability of SMEs in developing green products is truly good and in accordance with consumer concerns about environmental issues. In the context of this study, the ability to innovate green products must be supported by the ability of SMEs in strong green knowledge creation in their business environment.

Keywords: green entrepreneurship orientation model, green innovation capability, green product development, financial performance, SMEs

INTRODUCTION

Small and Medium Enterprises (SMEs) are the backbone of the Indonesian economy. This was proven when the global crisis hit countries in the world including Indonesia some time ago, SMEs were present as a solution to a healthy economic system that could survive the global crisis that hit the world. Climate change is a fairly serious global issue and poses one of the biggest challenges faced by humans today, so this environmental issue is a new opportunity as well as a challenge for SMEs in innovating products to meet the needs of consumers who are increasingly concerned about the environment.

It is undeniable that competition between companies is currently increasingly competitive, not only in large-scale businesses but also in small and medium enterprises (SMEs). Creating new products and bringing them into the market is a very important step in today's highly competitive business environment as a market leader, healthy market share, and sustainable growth, all of which are carried out through the process of developing and successfully launching new products and services (Barczak and Kahn, 2012). Business entities can no longer maintain their market position simply by reducing product prices but will be more effective if they constantly introduce new innovations at all levels and between functions in the company (Leber et al., 2014). SMEs are required to be more creative and more willing to take risks in innovating their products in order to survive the competition and are also required to be able to enter the global market.

Many researchers argue that entrepreneurial orientation has a positive or negative impact on improving marketing performance, depending on their perspective (Rauch et al., 2004). This study began with the controversy over previous research results stating that entrepreneurial orientation has a significant effect on marketing performance (Keh, et al, 2006; Hui Li, et al, 2008) and some others argued that it had no significant effect (Naldi, et al, 2007).

Most of the literature shows a significant influence of entrepreneurial orientation on marketing performance. The phenomenon faced by most SMEs is that they still have many limitations, such as limited quality of human resources, lack of business networks and market penetration capabilities, and lack of capital sources. While on the other hand, innovative SMEs will have a competitive advantage and can maintain their business growth.

The purpose of this study is to investigate the influence of green entrepreneurship orientation on SME marketing performance and to build a green entrepreneurship orientation development model mediated by green product development supported by green innovation capability and good green knowledge creation to improve financial performance.

The urgency (priority) of conducting this research is the urgent need for a green entrepreneurship orientation development strategy model towards green innovation capability and green product development to improve the marketing performance of SMEs in Bali. The basic reason why Indonesia must spur the SME sector is the fact that currently the important factor of international trade is not only giant corporations, but recently it has also spread to the SME sector. SMEs have begun to go global and penetrate the international market, marked by around 25% to 35% of international manufacturing exports contributed by SMEs. While 20% of manufacturing company profits are obtained from cross-border trade. From the background above, the problem can be formulated as follows:

What is the form of developing a green innovation capability and green product development model to improve the financial performance of SMEs in Bali Province?

LITERATURE REVIEW

Green Entrepreneurship Orientation and Green Product Development

The concept of green entrepreneurship is still relatively new but has been the focus of attention of both academics and practitioners since the 1990s (Harini, et al, 2013). The implementation of environmentally responsible business practices can be imagined to open up additional opportunities for entrepreneurs. Currently, green entrepreneurship provides new opportunities that must be responded to quickly by SMEs to identify and take opportunities in the market gap to improve their welfare but care about environmental sustainability. The term green entrepreneurship will be interpreted as entrepreneurship developed in the green sector, where green here is a solution to solve old problems in new ways. Osukoya (2007) argues that small companies have several advantages over large companies to adopt environmentally conscious practices. Consumers tend to see small companies as friendlier than large companies, and small companies are in a position to react actively to the increasing demand for green products and services in almost all market segments.

Green entrepreneurship is the tendency of an entrepreneur to innovate or create a green organization as an important element of a comprehensive green system (Ndubisi, et al., 2009). A green entrepreneur is someone who starts a business to create or offer products, services, or processes that support environmental sustainability. Green entrepreneurship is a form of concern for individuals and organizations involved in entrepreneurial activities by creating environmental benefits and offering environmentally friendly products or services (Rao, et al, 2013)

- H1: The higher the green entrepreneurship orientation, the higher the green product development.
- H2: The higher the green knowledge creation, the higher the green innovation capability.
- H3: The higher the green innovation capability, the higher the green product development.
- H4: The higher the green innovation capability, the higher the financial performance.
- H5: The higher the green product development, the higher the financial performance.

METHOD, DATA, AND ANALYSIS

Data Types and Sources

This study mostly uses primary data obtained in the field. Data collection was carried out using a prepared questionnaire. The questionnaire used in this study contains two main parts. The first part is about the social profile of respondents, containing respondent data related to the respondent's identity and social conditions such as: age, gender, last education, income and savings per month. While the second part concerns green knowledge creation, green innovation capability, green entrepreneurship orientation, green product development and Financial Performance of SMEs driving tourism in Bali.

Population and Sample

Population is a group or collection of individuals or research objects that have certain standards of previously determined characteristics. Based on these qualities and characteristics, population can be understood as a group of individuals or objects of observation that have at least one similar characteristic (Cooper and Emory, 1995). This study was conducted with a population of owners or managers of tourism-supporting SMEs on the island of Bali. The study was conducted using a survey method by distributing questionnaires to 150 respondents represented by direct owners or managers of SMEs.

The sampling method used is non-probability sampling with random sampling, namely the selection of samples based on assessments or opinions based on research objectives and objective studies. The sample was taken by involving 150 respondents and this number meets the minimum criteria for the

minimum sampling standard in studies using the Structural Equation Modeling analysis tool, namely between 100-200 (Hair et al., 2010).

Data Collection Methods

The primary data collection method in this study was carried out using a survey method, which aims to collect information from respondents using a questionnaire containing a list of statements delivered directly to respondents, namely direct owners or managers of SMEs. The reason for using this method is that respondents can pay attention and consider statements and answers clearly, interviewers can dig up more detailed information and can also control the questions given.

The questionnaire answers given are by giving a mark ($\sqrt{}$) on the attitude scale 1-7 which is felt to be the most correct by the respondents for the questions in the questionnaire. The measurement scale used is an ordinal measurement scale, used to measure the respondents' attitudes towards an answer. The measurement scale is divided into several scales, each of which has an assessment score between 1-7, where a score of 1 is for a very low respondent answer to a score of 7 for a very high respondent answer to avoid any hesitant answers (central tendency effect).

Analysis Method

Data analysis and interpretation for research aimed at answering research questions in order to uncover certain social phenomena. Data analysis is the process of simplifying data into a form that is easier to read and implement. The method chosen to analyze the data must be in accordance with the research pattern and the variables to be studied. To analyze the data, The Structural Equation Modeling (SEM) from the AMOS 20 statistical software package is used in the model and hypothesis assessment. Structural equation model, Structural Equation Model (SEM) is a set of statistical techniques that allow testing a series of relatively complex relationships simultaneously (Ferdinand, 2000).

Operational Definition of Research Variables and Instruments

The survey method in this study uses a questionnaire research instrument by listing open and closed questions consisting of items representing independent variables and dependent variables. The items in the questionnaire used in this study were adapted from previous studies and developed by the researcher. The list of statements contained in the questionnaire consists of 6 question items representing the respondent's identity, 16 statement items representing the dependent variable and 4 other items representing the independent variable. The questionnaire was distributed to respondents directly by asking for 15-20 minutes, so that respondents could provide values and short answers to the available open questions. The questionnaire has been designed using a ten-point Likert scale with a weighting of 1 = strongly disagree to 7 = strongly agree.

Validity and reliability tests conducted in this study were conducted with the aim of testing the research instrument. Validity shows how well the results obtained from the use of measuring instruments are in accordance with the theory used to define the construct. Validity tests in this study were conducted using construct validity with Confirmatory Factor Analysis (CFA) assisted by SPSS 16.0 software. Before the factor analysis test was conducted, 17 Kaiser Meyer Olkin (KMO) tests and Bartlett's tests were conducted which aimed to test whether there was a relationship or not between each variable. The higher the KMO value, the more valid the items on the questionnaire and the more homogeneous the variables being measured. The validity measurement limit is the KMO-MSA value which must be more than 0.5 with a significance level <0.05 so that the variable can be predicted and analyzed further (Hair et al., 2010). The results of the validity test in this study showed a KMO-MSA

value of 0.801 with a significance level of 0.000. Therefore, all variables used in this study can be analyzed further because they have met all the required criteria. In addition, the validity of this research instrument is also determined by the magnitude of the loading factor value. According to (Hair et al., 2010), the rule of thumb for accepting the loading factor is \geq 0.40. Based on the validity test conducted, it can be seen that all research instruments used in this study have a loading factor value above 0.40.

Reliability test is used to calculate the reliability and consistency of the research instrument. Reliability in this study was measured using the Cronbach Alpha coefficient of 0.60 to 0.80 indicating an acceptable level of reliability (Sekaran, 2003).

RESULT AND DISCUSSION

Respondent Characteristics

The respondents obtained in this study were 150, consisting of 137 male respondents (91.33%) and 13 (8.67%) female respondents. In terms of age, 7 respondents (4.67%) were aged 20-30 years; 47 respondents (31.33%) were aged between 31-40 years; 69 respondents (46%) were aged 41-50 years; and 27 (18%) respondents were over 50 years old. In relation to business ownership status, 143 respondents (95.33%) were owners and 7 respondents (4.67%) were represented by managers. We also recorded the length of time the business was running, 13 respondents (8.67%) had a business of 0-3 years; 79 respondents (52.67%) had a business of 3.1-5 years; and 58 respondents (38.67%) had a business over 5 years. Next is the category of respondents based on assets owned, 69 respondents (46%) have assets up to 100 million rupiah and 81 respondents (54%) have business assets of 101 million rupiah to 1 billion rupiah, while no respondents have assets above 1 billion rupiah. following a management study program; 103 respondents (49.3%) have taken an accounting study program, and 26 respondents (12.4%) have taken a development economics program.

Data Normality

The structural equation model is used in this study as a step in conducting data analysis. One of the requirements of the structural equation model is that the data must be normally distributed. Data normality is determined by the critical ratio (CR) value which ranges from -2.58 to 2.58 (Ferdinand, 2013). Based on the normality test carried out on the data used in this study, the results showed that they did not have a normal distribution. To overcome this problem, the formulas of New X = 1 / 1- ($X \times X$), New X = 1 / 1 ($X \times X$), New X = 1 / 1 ($X \times X$), New X = 1 / 1 ($X \times X$), New X = 1 / 1 ($X \times X$) and New X = 1 / 1 ($X \times X$) were used as an effort to normalize the data.

SEM AMOS Data Analysis Results

The data collected in this study were then analyzed using the Structural Equation Model (SEM) assisted by AMOS 21 software. The results of the full structural equation model analysis are presented in Figure 2.

This study uses several goodness of fit indices to evaluate the overall goodness of the model. The Goodness of fit of model analysis used is the GFI index (GFI) = 0.870; the adjusted GFI index (AGFI) = 0.834; Tucker-Lewis Index (TLI) = 0.939; and root mean square of approximation (RMSEA) = 0.055. The goodness of fit index of this model shows a good fit for the confirmatory measurement model which can then be concluded that this structural equation model is fit. The processing results show that each indicator or dimension measures each latent variable giving good results, namely the critical ratio (CR) value above 2.58. The results of the hypothesis test are presented in table 3, namely four hypotheses are accepted and one hypothesis is rejected.

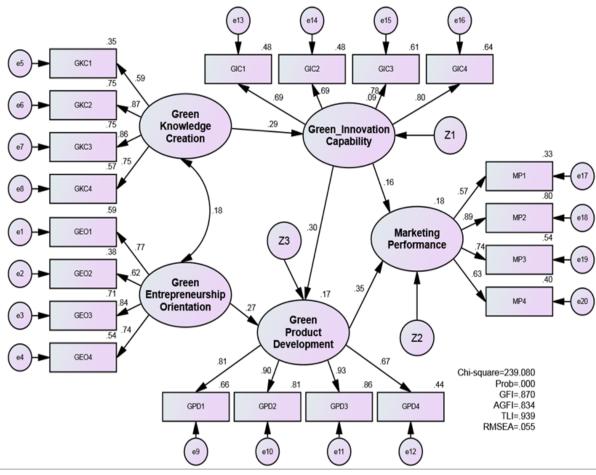


Figure 2. SEM Data Analysis Results

Table 3. Hypothesis Test Results

		Estimate	S.E.	C.R.	P value (≤0.05)	Results
Green_Innovatio < n_Capability	Green_Knowledg e_Creation	.223	.075	2.962	.003	Supported
Green_Product_ Development <	Green_Entreprene urship_Orientatio n	.250	.088	2.840	.005	Supported
Green_Product_ Development <	Green_Innovation _Capability	.348	.110	3.163	.002	Supported
Marketing_Perfo <	Green_Product_D evelopment	.243	.074	3.273	.001	Supported
Marketing_Perfo <	Green_Innovation _Capability	.129	.080	1.609	.108	Not Supported

Based on the data analysis conducted, this study produced some very interesting findings. Hypothesis 1 (H1) states that the higher degree of green entrepreneurship orientation, the more green product development, and the results are supported in this study. This study confirms that small and medium enterprises (SMEs) that have a good green entrepreneurship orientation will have the ability to create and develop green products. The results of this study are supported by previous studies that found that the growth of green entrepreneurship orientation is the tendency of an entrepreneur to innovate or create a green organization as an important element of a comprehensive green system (Ndubisi, et al., 2009), where small companies have several advantages over large companies to adopt environmentally conscious practices (Osukoya, 2007).

Hypothesis 2 (H2) states that the higher degree of green knowledge creation, the more green innovation capability, and the test results are supported in this study. This study confirms that SMEs that are able to create good green knowledge creation in their business environment will encourage green innovation capability. The implementation of a learning culture and knowledge management in SMEs will encourage the creation of new knowledge which will later be realized in the form of products so that it has an impact on company performance. The results of this study are supported by previous studies that emphasize that organizational knowledge creation is the key to the business innovation process and will subsequently have an impact on company performance Nonaka and Takeuchi (1995).

Hypothesis 3 (H3) proposes that the higher degree of green innovation capability, the greener product development, and the results of the hypothesis test are supported in this study. This study found that the green innovation capability possessed by SMEs will be a driving force in good green product development. The results of this study confirm previous studies which state that the ability to innovate in environmentally friendly products and processes is positively related to the success of green product development (Wong, 2014). Furthermore, Medeiros, et al., (2013) stated that product innovation is one way to create competitive advantage and the main trigger for product innovation due to limited natural resources, so that the development of environmentally friendly products has an important role for SMEs to develop their sustainable businesses.

Hypothesis 4 (H4) proposes the higher degree of green innovation capability, the more marketing performance, and the test results do not support this hypothesis. This study found that green innovation capability cannot directly affect the improvement of marketing performance. The results of this study are not in line with the opinions of previous researchers who stated that companies that carry out eco-innovation are very influential in determining company performance when compared to companies that do not carry out eco-innovation (Doran and Ryan, 2012), and have a strong influence on improving company performance (García-Morales et al., 2006), an alternative to the success of company performance financially (Polonsky et al., 1998).

Hypothesis 5 (H5) proposes the higher degree of green product development, the more marketing performance, and the test results support this hypothesis. This study confirms that the better the green product development carried out by SMEs, the better their marketing performance, where the green product development process can be carried out if it is in line with environmental issues and the performance to be achieved. Green product development can be a company's superior strength where environmental issues greatly influence the mindset and behavior of today's consumers who are increasingly concerned about environmental damage and are certainly willing to pay more for using environmentally friendly products (Chen and Chang, 2012).

CONCLUSION

The main objective of this study is to explore green entrepreneurship orientation and green product development with the support of green innovation capability triggered by the activeness of growing green knowledge creation can improve marketing performance in small and medium enterprises (SMEs) in Indonesia. The results of this study indicate that the growth of green entrepreneurship orientation as a challenge and opportunity for SMEs so as to produce green product development capabilities; creative green product development that is in accordance with consumer desires needs to be supported by good green innovation capability; The growth of green innovation capability cannot be separated from green knowledge creation efforts in SMEs; The resulting green product development directly affects marketing performance, but not so with green innovation capability cannot directly improve marketing performance but must go through green product development.

SMEs as the driving force of the economy are still in their basic format as a form of innovative, proactive, and risk-taking business, must always produce innovative products and services to achieve sustainable performance. Green product development has proven to be quite effective in improving marketing performance, but it must be based on a strong green entrepreneurship orientation and good green innovation capability so that the ability of SMEs in developing green products is truly good and in accordance with consumer concerns about environmental issues. In the context of this study, the ability to innovate green products must be supported by the ability of SMEs in strong green knowledge creation in their business environment.

IMPLICATION/LIMITATION AND SUGGESTIONS

Managerial Suggestions and Implications . The managerial implications of the findings of this study are as follows Today's consumer lifestyle and behavior show a change in lifestyle that is conscious and cares about the environment. The growth of environmental awareness is certainly an opportunity for SMEs to create environmentally friendly products to meet customer needs. A company that always produces new ideas and values will lead it to have a competitive advantage so that it can survive in the long term. SMEs are currently still a form of business that relies on the creativity of their owners or managers to have new ideas in developing their products, so that the growth of SME businesses in Indonesia is still slow and tends to be stagnant. Creativity will grow if an entrepreneur has a high entrepreneurial orientation, where creativity is basically a drive that will lead the company to innovate its business. This is in line with Knight's opinion (2000) that in the entrepreneurial process, entrepreneurial orientation is needed because entrepreneurial orientation determines the development goals of the business that has been pioneered. The changing environmental and competitive conditions must be the driving force for SMEs to develop green entrepreneurship orientation as a proactive effort and intensively scan changes in competition and the business environment. SMEs that capture green opportunities and take risks as challenges through eco-innovation capability must expand their market share with the growth of new market opportunities that are currently leading to green product trends. The existence of a green entrepreneurship orientation that grows in SMEs as a potential market opportunity will encourage the development of green products supported by green innovation capability as a form of green knowledge creation. Companies with a high learning orientation process allow for radical innovation (Baker and Sinkula, 2002), which can increase the level of change in the company. This is believed to be able to improve the marketing performance of SMEs. Fourth, SMEs with all the limitations of their resources must be able to foster the company's commitment to always learning, the

willingness to accept new ideas, and the exploration of external information is the basis for the intensity of learning, but learning will have an impact on company performance only when learning efforts are effectively related to organizational goals (Slater and Narver, 1995).

Limitations and future research agenda for this study is not free from several limitations that arise. First, this research model uses research variables that explore more the internal capabilities of SMEs. Future research should include the relationship between the form of government support to support the growth of green entrepreneurship and also standard green products. Second, this study explores more the ability of SMEs to develop green products in improving their marketing performance. Future research should be conducted dyadic by measuring perceptions from the consumer side so that the results of this study are integrated and clearly describe the opportunities for developing green products that do have promising consumers.

REFERENCES

- Baker, W.E., and J.M. Sinkula. 2002. Market Orientation, Learning Orientation and Product Innovation:

 Delving into the organization's Black Box. *Journal of Market Focused Management* 5 (1):5-23.
- Barczak, G., and KB Kahn. 2012. Identifying new product development best practices. Business Horizons 55 (3):293-305.
- Camelo-Ordaz, MC, M. Fernández-Alles, F. Martín-Alcázar, PM Romero-Fernández, and R. Valle-Cabrera. 2004. Internal diversification strategies and the processes of knowledge creation. *Journal of Knowledge Management* 8 (1):77 - 93.
- Chang, CH, and YS Chen. 2013. Green organizational identity and green innovation. Management Decision 51 (5):1056-1070.
- Chen, Y.-S. 2007. The Driver of Green Innovation and Green Image Green Core Competence. *Journal of Business Ethics* 81 (3):531-543.
- Chen, Y.-S., and C.-H. Chang. 2012. The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity. *Journal of Business Ethics* 116 (1):107-119.
- Covin, J.G., and DP Slevin. 1989. Strategic Management Of Small Firms In Hostile And Benign E. Strategic Management Journal 10 (1):75.
- Doran, J., and G. Ryan. 2012. Regulation and firm perception, eco-innovation and firm performance. European Journal of Innovation Management 15 (4):421-441.
- Duh, M. 2014. Family business succession as knowledge creation process. Kybernetes 43 (5):699 714.
- Ferdinand, AT 2013. Management Research Methods: Research Guidelines for Writing Management Science Theses, Dissertations, and Dissertations. 4th ed. Semarang: Diponegoro University Publishing Agency.

- García-Morales, VJ, FJ Llorens-Montes, and AJ Verdú-Jover. 2006. Antecedents and consequences of organizational innovation and organizational learning in entrepreneurship. Industrial Management & Data Systems 106 (1):21-42.
- Hair, JF, WC Black, BJ Babin, and RE Anderson. 2010. Multivariate Data Analysis. 7th ed: New Jersey Prentice Hall.
- Jasti, NVK, A. Sharma, and S. Karinka. 2015. Development of a framework for green product development. Benchmarking: An International Journal 22 (3):426-445.
- Kazadi, K., A. Lievens, and D. Mahr. 2016. Stakeholder co-creation during the innovation process: Identifying capabilities for knowledge creation among multiple stakeholders. *Journal of Business Research* 69:525–540.
- Leber, M., M. Bastič, M. Mavrič, and A. Ivanišević. 2014. Value Analysis as an Integral Part of New Product Development. Procedia Engineering 69:90-98.
- Little, TA, and AV Deokar. 2016. Understanding knowledge creation in the context of knowledge-intensive business processes. *Journal of Knowledge Management* 20 (5): 858 879.
- Lumpkin, GT, and GG Dess. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. Academy of Management Review 21 (1):135-172.
- Miller, D., and PH Friesen. 1982. Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum. *Strategic Management Journal* (pre-1986) 3 (1):1.
- Nonaka, I., G. v. Krogh, and S. Voelvel. 2006. Organizational Knowledge Creation Theory: Evolutionary Paths and Future Advances. Organization Studies 27 (8):1179-1208.
- Nonaka, I., and H. Takeuchi. 1995. The Knowledge-Creating Company. Harvard Business Review.
- Nonaka, I., R. Toyama, and N. Konno. 2000. SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. Long Range Planning 33:5-34.
- Polonsky, M.J., P.J. Rosenberger, and J. Ottman. 1998. Developing green products: learning from stakeholders. *Asia Pacific Journal of Marketing and Logistics* 10 (1):22-43.
- Slater, SF, and JC Narver. 1995. Market orientation and the learning organization. *Journal of Marketing* 59(3).
- Tee, MY, and SS Lee. 2013. Advancing understanding using Nonaka's model of knowledge creation and problem-based learning. Computer-Supported Collaborative Learning 8:313–331.
- Wong, SK-S. 2014. Impacts of environmental turbulence on entrepreneurial orientation and new product success. *European Journal of Innovation Management* 17 (2):229-249.

Wu, Y., D. Senoo, and R. Magnier-Watanabe. 2010. Diagnosis for organizational knowledge creation:
an ontological shift SECI model. Journal of Knowledge Management 14 (6):791 - 810.