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Restructuring knowledge of organic customer profile within KM-CRM framework

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Abstract

This study describes the restructuring initiative to create knowledge about organic customer profile as well as to identify relevant knowledge in supporting company's need to target customers who accept organic products within knowledge management and customer relationship Management (KM-CRM) framework. Searching for cross-case pattern toward three organic products companies was conducted to get insight on the topic. Challenges come from the tendency of all cases for being 'product-centric' rather than 'customer-centric' company as such the implementation of CRM is low. During restructuring activity, significant individual factors that influence consumer acceptance toward organic products resulted from quantitative study is incorporated into existing customer data of cases. As a result, a KM-CRM model for organic products acceptance is established based on three steps of action: customer data mining and analysis, creating knowledge about customer, and identification of relevant customer knowledge.

Introduction

Nowadays, organic products have become part of green consumerism movement that "*focus on renewable resources and protecting soil and water to improve the quality of life for generations to come*" (USDA, 2002). Despite of consumers' growing support to preserve the environment, the consumption and market share of organic food still constitutes a low percentage compare to total food (Aryal 2008; Bonnini and Oppenheim, 2008). The gap between consumers' attitude and action toward organic products implies that the business is still lack of knowledge about the true potential of organic customers, i.e. those who accept organic products. It is conceivable that there are some influencing factors as such consumers' attitude cannot be translated into action. Therefore, it is suggested that the business should learn the features of customers those taking action, and in turn, use that knowledge to direct organic products' marketing activities in order to be more effective.

Customer relationship management (CRM) is a process designed to collect data related to customers, to grasp features of customers, and to apply those qualities in specific marketing activities (Swift, 2001). In the analytical CRM, these data are stored and analyzed through a range of analytical tools in order to generate customer profiles, identify behavior patterns, determine satisfaction level, and support customer segmentation; thus, customers are more effectively segmented and offered products and services are fitted to customer buying profiles (Xu and Walton, 2005). Nevertheless, even though a wide range of CRM systems are being developed and implemented in practice, application of analytical CRM has been low, due to lack of focus on gaining customer knowledge for strategic decision making from CRM systems, and lack of analytical CRM solutions (Xu and Walton, 2005).

Organizations can strategically use analytical CRM to support customer knowledge acquisition (Xu and Walton, 2005). However, effective use of customer knowledge, particularly in the context of marketing decisions, is still inchoate in many organizations (Bose and Sugumaran, 2003). Knowledge Management (KM), in particular, has been defined as the process of capturing the collective expertise and intelligence in an organization and using them to foster innovation through continued organizational learning (Nonaka, 1991). Then, a framework that link KM to CRM is suggested to effectively use customer knowledge. A significant amount of research has applied KM-CRM framework (Xu and Walton, 2005; Bueren *et al*., 2005). Nevertheless, this framework still needs to be developed and applied in other industry segments or other potential fields (Bueren *et al*., 2005).

This study applies a KM-analytical CRM framework to create knowledge about organic customer profile and to identify relevant knowledge that is needed to target the potential customers, i.e. the customers who accept organic products. Case study research was conducted to investigate background of companies that will provide detailed

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contextual data so as to better interpret the result of research data (Creswell, 2003). The purpose of this study is to develop a KM-CRM model for organic products acceptance based on: first, investigation toward customer data mining activities within CRM framework; second, restructuring existing customer data in the company to create knowledge about organic customer profile; third, identification of relevant customer knowledge that support company's need to target organic customers.

Materials and Methods

This study is part of a comprehensive research using mixed-methodology research design, which employs qualitative and quantitative methods. The mixed-method enables the author to conduct sequential triangulation of which the result of previous study is used to help inform the existing study. Prior to this study, a quantitative survey research has been conducted. Result of quantitative study is used as the basis in developing KM-CRM model.

Multiple case studies were conducted in order to provide additional data points, more generalisable results, and more convincing conclusions (Yin, 2003), not to mention that multiple-case studies design has been successfully used by a number of CRM researchers (Abbott *et al*., 2001; Goodhue *et al*., 2002). Multiple case studies were directed to three producers of organic vegetables in Bandung, Indonesia, which to honor their confidentiality are named Company A, Company B, and Company C.

During data interpretation process, all data both from primary source of information, i.e. interview; and secondary source of information, i.e. company's document, external report, and physical evidence are considered for data analysis. All data was analyzed through selection, summarizing, and abstracting data (Ryan and Bernard, 2000), and thus, many decisions were made concerning which data to include.

Adapting Eisenhardt' work (1989), this study conducted two steps of analysis: within case analysis and searching for cross-case patterns. Within case analysis allows the unique patterns of a case to emerge; and gives the author a rich familiarity with each case which, in turn, accelerates cross-case comparison. In searching for cross-case pattern, the author determines four categories, i.e. company's background, customer data mining and analysis, creating knowledge about customer, and identification of relevant knowledge for targeting organic customers; and then looks for similarities and differences across cases in these categories.

Results

Company's background

Company's background encompasses background of the interviewee, which represent the company; company's position in the organic market; and physical evidence of its organic farming. Cross-case pattern of company's background is presented in Table 1.

Customer data mining and analysis

Taking analytical CRM framework, which focuses on the intelligent mining of customer-related data (Buttle, 2009), customer data mining and analysis was conducted by integrating result of quantitative study with existing customer data across cases.

Quantitative study

Quantitative study is useful to predict individual factors that could significantly accept organic products. Prior to quantitative study, an exploratory in-depth interview toward 16 organic customers was conducted to gain their insight on some organic products issues, related to their psychographic background. A set of questionnaire instrument, as presented in Table 2, was developed based on coding, categorizing, and interpreting data process of interview result. Pre-test survey and exploratory factor analysis was conducted to assess the discriminate validity of the questionnaire items, which loaded into eight exogenous latent variables, i.e. consumer knowledge, personal values, involvement, trust, awareness, perceived usefulness, attitude of importance, and attitude of inconvenience; and one endogenous latent variable: intention behavior. Then, hypotheses are developed based on previous literature of those factors, and are supported by interview findings.

Quantitative survey research was conducted by directly administered questionnaire instrument to an area sampling of 595 respondents of organic customers those were shopping in supermarkets which sell organic vegetables produced by Company A, Company B, and Company C. Characteristic of sample represents a cross-section of sex, age, and education. The male to female distribution is 7.4 and 92.6 percent, respectively. Majority of respondents represent a mature age, i.e. between 35 and 54 years is 40.30 percent and between 25 and 34 years is 32.60 percent. Young generation of age between18 and 24 is represented by 21.70 percent. Senior generation of age 54 years or more is represented by 5.4 percent only. Almost half of respondents (45.7 percent) hold

Table 1. Cross-case patterns for company's background

No	Description	Company A	Company B	Company C
A	**General Information**			
1	Interviewee:	Operational Director	President Director	1.Commissary 2.Marketing Manager
2	Company is established in:	2008	2012	2006
3	Company's vision is directed:	To create an added value and and environmentally friendly business	To develop organic farming as an agro-tourism place	To develop organic farming using environmentally friendly-based technology
4	Awarded Certification:	Pesticide-free	Pesticide-free	1.Pesticide-free 2.Organik Indonesia
B	**Organic Farming**			
1	Location:	Lembang, Bandung Regency	Dago, Bandung Regency	Cikawung and Babakan Ciparay, Bandung Reg.
2	Area:	10,000 m^2	38,000 m^2	2,900 m2 (Cikawung)
3	Person in Charge (PIC):	Operational Director / Production	Operation	Commissary / Operation
4	Responsibility of PIC:	- To manage organic farming - To achieve production target	- To manage organic farming - To achieve production target	- To manage organic farming - To achieve production target
5	Farming system:	- Organic farming system - Apply green house technology	Organic farming system	- Certified Organic farming system - Apply green house technology
C	**Organic products sales and marketing**			
1	Business area:	Bandung	Bandung and Jakarta	Bandung and Jakarta
2	Supply Organic productss to:	Supermarket, Hotel, Restaurant, Sub-supplier	Supermarket	Supermarket
3	Person in Charge (PIC):	Operational Director / Trading	President Director / Marketing	Marketing Manager
4	Responsibility of PIC:	- To market product - To achieve sales - To develop distribution channel - To determine variance of product	- To oversee trend market & competitor - To monitor sales - To determine production target	- To market product - To maintain relationship with supermarket - To develop distribution channel
5	Amount of products supplied:	18,000 – 22,000 packages per month	1,000 packages per day	5,000 packages per day
6	Price Policy:	In the midle of competitor price	Within the range of competitor price	Single price policy
7	Price Range per Package:	Rp. 6,350 – Rp. 7,950	Rp. 6,250 – Rp. 8,750	Rp. 5,600
8	Top Selling Products:	Mix Salad, Kale, and Green Spinach	Siomak	Kale and Green Spinach

Table 2. Questionnaire instrument, factor loading, composite reliability (CR), and average variance extracted (AVE)

Latent Variable	Manifest Variable	Factor Loading	CR	AVE
Education		1.7	3.0	3.0
Age		1.0	1.0	1.0
Consumer Knowledge	Organic farming does not use chemical pesticides or chemical fertilizers	0.8	0.8	0.6
	Organic products is a natural product	0.8		
	There are no preservatives in organic products	0.6		
Involvement in Green Community	I participate in a seminar about organic products	0.8	0.8	0.6
	I participate in planting a million trees movement with my community	0.8		
	I do not mind giving a donation to support the pro-environment movement	0.8		
Trust	I trust this organic products is in line with my way of thinking	0.8	0.8	0.7
	I do not really trust the organic label contained on product packaging	0.8		
Awareness	I am aware of the benefit of organic products that I consume	0.9	0.9	0.7
	I am aware that organic products are available in the supermarket where I shop	0.8		
	I am aware that consuming organic products is part of back to nature life style	0.8		
Perceived Usefulness	By consuming organic products, I also contribute to reduce waste pollution	0.9	0.9	0.7
	Consumption of organic products for children is my contribution to the next generation	0.8		
	The benefits of organic products will be felt in the long term	0.9		
Attitude of Inconvenience	Organic vegetables in supermarkets are less varied, it's boring if you continually eat spinach, kale, or carrot	0.5	0.7	0.6
	My inconvenience of consuming organic products is their expensive price	0.9		
Attitude of Importance	Organic products are important to improve the quality of life	0.9	0.9	0.7
	Organic products are essential to maintain the balance of nature	0.8		
Personal Values	Maintaining health of ourselves, our family, and the people around us	0.7	0.9	0.5
	Sense of belonging and togetherness with family and friends	0.8		
	Happiness and joy in life	0.8		
	A life that is comfortable, quiet, safe, and avoiding all bad things that threaten	0.8		
	Protecting and preserving the environment	0.7		
	An active and varied life, can do a lot of things	0.7		
	Independence in thought and action	0.7		
Intention Behavior	I intend to use organic products regularly if the availability is assured	2.3	5.1	5.1

undergraduate degrees and 4.2 percent hold post-graduate degree. The rest of respondents have some college education (27.4 percent) and high school degree or less (22.7 percent).

A partial least square (PLS) analysis, which is a well-accepted approach for analyzing multivariate data in exploratory research contexts (Chin, 1998), was chosen to analyze data. As presented in Table 2, PLS analysis generates an adequate measurement model, shown by: first, strong level of internal consistency (composite reliability scores of indicators of all latent variables > 0.7 and average variance extracted or AVE scores of indicators of all latent variables > 0.5); second, sufficient discriminant validity (square root of AVE value of the respective latent variables exceeds its correlation value with other latent variables and all indicators loaded have higher loading value on their respective latent variables than on other latent variables). As presented in Table 4, PLS analysis also generates an adequate structural model, shown by R-square scores that explain the variance in the endogenous variables at moderate to strong level, except for trust variable (weak level). In addition, the structural model also generates prediction relevance or Q-square of 91 percent, which means a strong prediction capability to estimate its parameter. Last, as presented in Table 3, PLS analysis generates hypotheses resting result,

Table 3. Hypotheses testing result

	Relationships	Path Coefficient	t-statistic	Result
H1a	Consumer Knowledge → Attitude of Inconvenience	0.25	6.21	Positive and Significant Relationship
H1b	Consumer Knowledge → Attitude of Importance	0.14	3.83	Positive and Significant Relationship
H2	Involvement → Awareness	0.36	8.82	Positive and Significant Relationship
H3	Trust → Perceived usefulness	0.34	8.04	Positive and Significant Relationship
H4a	Awareness → Perceived usefulness	0.51	12.92	Positive and Significant Relationship
H4b	Awareness → Attitude of Inconvenience	0.30	5.47	Positive and Significant Relationship
H4c	Awareness → Attitude of Importance	0.28	5.36	Positive and Significant Relationship
H5a	Perceived usefulness → Attitude of Inconvenience)	0.10	1.87	Positive and Significant Relationship
H5b	Perceived usefulness → Attitude of Importance	0.31	5.40	Positive and Significant Relationship
H6a	Attitude (inconvenience) → Intention Behavior	0.13	3.50	Positive and Significant Relationship
H6b	Attitude (importance) → Intention Behavior	0.50	14.12	Positive and Significant Relationship
H7a	Personal values → Attitude of Inconvenience	0.10	2.46	Positive and Significant Relationship
H7b	Personal values → Attitude of Importance	0.25	5.44	Positive and Significant Relationship
H8a	Education → Trust	-0.18	-4.60	Negative and Significant Relationship
H8b	Education → Awareness	-0.28	-8.88	Negative and Significant Relationship
H9a	Age → Trust	0.10	2.65	Positive and Significant Relationship
H9b	Age → Awareness	0.07	2.10	Positive and Significant Relationship

Table 4. R-Square and Q-Square

Structural Model		R-square *)	Q-Square
Endogenous Variable	Exogenous Variable		= 1 - ∑ (1-R²i)
Trust	Education	0.04	
	Age		
Awareness	Education	0.28	
	Age		
Perceived Usefulness	Involvement	0.49	
	Trust		
	Awareness		
Attitude of Inconvenience	Perceived Usefulness	0.24	0.91
	Awareness		
	Consumer Knowledge		
	Personal Values		
Attitude of Importance	Perceived Usefulness	0.53	
	Awareness		
	Consumer Knowledge		
	Personal Values		
Intention Behavior	Attitude of Inconvenience	0.32	
	Attitude of Importance		

of which estimate path coefficients for all relationship among latent variables have significant correlation value (t-value more than 1.96).

Restructuring organic customer profile

Demographic profile

Quantitative study generates characteristics of female at the age 25 – 54 years old that represents well-educated people. Age is found to be a significant factor that could predict consumer acceptance toward organic products, while in contrary, level of education is not. These women mostly consume organic fruits and vegetables with level of consumption at least once a week.

Existing customer data generates similar information to quantitative study result. Based on similarities across cases, demographic profile of organic customers is married woman at the mature age (within range 25 – 50 years old). All cases emphasized that these women should come from middle to high economical level. Specifically, Company A mentioned that these women has exclusive life style and prefer to serve healthy meal for her family.

Consumer knowledge

Quantitative study shows significant relationships between consumer knowledge and attitude toward organic products. Consumer knowledge encompasses knowledge of organic as natural product; knowledge of organic as pesticide-free organic farming product; and knowledge of organic nutrient content.

All cases agree that organic customers should have organic knowledge. Differences across cases come from the view about which organic knowledge possessed by customers. For instance, Company A mentioned that since organic products is natural and pesticide-free product, consumer should possess knowledge that organic products is produced by organic farming which does not use pesticide or other chemical ingredient. In contrary, Company C views that, knowledge about organic certification differentiate consumer who has and who does not have organic knowledge.

Consumer involvement and awareness

Quantitative study shows significant relationships between involvement in green community with awareness; and awareness with perceived usefulness and attitude toward organic products. The result proves that awareness is a strong mediating factor for predicting consumer acceptance toward organic products.

Company A and Company B admitted that they take advantage of consumer involvement in green community. By participating in green planting community, they can raise consumer awareness toward organic products. According to them, consumer involvement in organic planting activity will lead to awareness about the benefit of organic products and its availability in the market place.

Personal values

Quantitative study shows significant relationships between personal values and attitude toward organic products. These personal values includes healthy value; sense of belonging with family and friend; happiness and joy; a life that is comfortable, quiet and safe; preserving the environment; active and varied life; and independent values.

All cases view that health value is the main reason for customers to accept organic products. Then,

Company A also mentioned that organic products is actually more 'environmentally friendly' product rather than 'healthy' products, thus preserving the environment value could also lead customers to accept organic products.

Trust

Quantitative study shows significant relationships between trust and perceived usefulness. Indicators of trust include trust toward organic label or certification, and organic product itself. All cases agreed that quality of organic products is the main reason for trusting organic products. As differences across cases, Company A and Company C agrees that trust to organic label or certification will lead customers to accept organic products. While in contrary, Company B does not see organic label as the factor to build customers trust. Instead, Company B emphasizes trust toward company reputation.

Challenges in customer data mining

Customer data mining and analysis is conducted within analytical CRM framework, which represent a 360 degree view of the customer (Kotorov, 2002). However in practice, as also stated by cases in this study, many companies have not seen the tangible benefits of company's transformation from being product-centric to being customer-centric (Crie and Micheaux, 2006). For instance, even though Company A has conducted customer data mining and analysis activities to determine its target market, it is still not sure about the effectiveness of this activity to increase sales volume; instead, it is still pointed out high product quality as the main reason of customers to buy organic products.

Based on research findings across cases, there are several possibilities why phenomenon of being product-centric is happened. First, background of companies' owner influence company's vision to focus being product-centric company, for instance Company C owner has strong interest in developing organic farming technology rather than being customer-centric. Second, dominant role of supermarket in controlling organic market as such Company A faces the difficulties in developing distribution channel to the new supermarket; while Company C relies on supermarket on handling organic customers. This situation could be a problem in developing organic market share because even though supermarket in general is customer-centric, supermarket is not a specialty store that focuses on organic customers. Thus, it is the task of organic producer companies to focus on organic customers in developing organic market share.

Several researchers agreed that CRM change organizations from a products-centric to customer-centric philosophy (Crie and Micheaux, 2006; Lehmann *et al*., 2012). However, Crie and Micheaux (2006) pointed out four weak links that could be a barrier in getting a more profitable CRM, i.e. obtaining the right data; data quality management; deriving information and knowledge from raw data; and using information and knowledge to generate profit. This study suggests several steps of data mining in order to adopt customer-centric business environment: first, company collect customers information and creates a customer profile; second, company discovers customers characteristics through data mining tools and analysis; and third, company integrates all relevant knowledge about customers in order to facilitate more effective marketing strategy.

Even though demographic profile of organic customers is existed across cases, apparently these data are insufficient for discriminating between organic and non-organic consumers. For instance, a large body of research generated the poor results concerning the usefulness of demographic variables for profiling due to the existence of multiple organic customer profiles (Holmbom *et al.*, 2013). Thus, in addition to demographic factors, this study proposes to incorporate individual factors because customers of organic food products seem to vary as their motives include both socioeconomics and psychographic sides (Cicia *et al*., 2009).

Restructuring existing customer data resulted profile of organic customers. According to this profile, organic customers possess organic knowledge, which encompasses knowledge of organic as natural product; knowledge of organic is generated from pesticide-free organic farming; and knowledge of organic nutrient content and its benefit. Organic customers tend to involve in green community to find relevant organic information such as organic nutrition content and free-pesticide organic farming. This involvement increases the awareness about the benefit of organic products and its availability in the market place. Organic customers hold certain values that lead them to accept organic products, such as healthy, sense of belonging with family and friend, happiness and joy, a comfortable life, quiet and safe, and preserving the environment values. Last, organic customers put his or her trust toward company reputation, organic label or certification, and product quality.

Creating knowledge about customer

Creating knowledge about organic customer profile was conducted based on investigation of CRM implementation; how the company codifies customer

data to become an established form of knowledge about customer; and knowledge sharing process within the organization.

Company A and Company B has implemented CRM at operational and analytical level. At operational level, Company A maintains customer relationship through social media such as Facebook and Twitter. In this media, Company A spreads out product information and receive input and complaint from customers. At analytical level, Company A mines customer data through observation, interview, and literature study research; and then analyzed these data to generate organic customer profile. At operational level, Company B maintains relationship with customers through direct engagement in the market place. Sales promotion boys are specially trained to closely engage with customers as such they can receive input and complaint directly from the first hand: their organic customers. At analytical level, Company B mines customer data through simple questionnaire and observation of customer behavior at the market place. In contrary, Company C does not conduct customer data mining activity and relies on supermarket to handle their customers.

Company A showed that customer data from the field is analyzed to become knowledge of organic customer profile, and then is established in company's document. In contrary, neither Company B nor Company C has the established form of knowledge of organic customer profile.

Company A and Company B show the effort of sharing information from customers from point of contacts, e.g. marketing staff or sales promotion boy to their management. This customer information sharing is delivered verbally and in writing. According to Company B, customer information sharing generates important feedback about what customers want. Then, a marketing promotion program is designed by management and is delivered to the staff verbally; either through training or meeting.

As also revealed in this research, managing knowledge about customer in many companies is very limited and is considered as difficult (Davenport *et al*., 2001). Bose and Sugumaran (2003) pointed out that one of the reasons for difficulty in managing knowledge about customer is the absence of an adequate framework for understanding customer knowledge management. Gebert *et al.* (2003) stated that KM is basically a supporting process to manage four knowledge aspects: first, content of which knowledge is re-constructed within an information object through 'codification'; second, competence in determining which knowledge is required in order to provide competitive accomplishment; third,

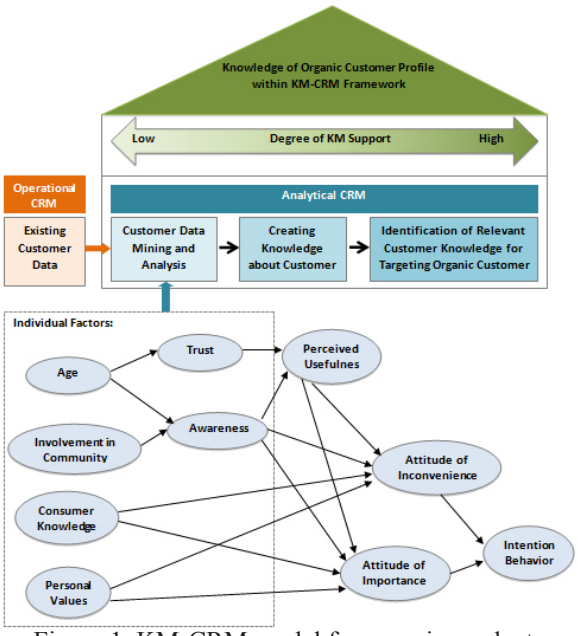

Figure 1. KM-CRM model for organic products acceptance

collaboration to share knowledge within groups; and four, composition to incorporate knowledge within the enterprise. This study suggests managing knowledge about customer through content and collaboration aspects as an adequate framework for creating knowledge about customer.

It is the role of KM to create value of knowledge about customer, i.e. the knowledge about customer has to be presented in adequate form as such enable the company to understand the requirements of customers (Bueren *et al.*, 2005). In this study, evidence of codification process of knowledge about customer in established form was existed only in Company A. Therefore, even though analytical CRM is already implemented in some cases; degree of KM support to create value of knowledge about customer through codification is still low.

Operational CRM activity in customer touch points generates knowledge from customers, i.e. customers possess knowledge about the products and services they use as well as about how they perceive the offerings they purchased (Bueren *et al.*, 2005). However, in practice, many companies are still at the data storing and exploratory stages (Crie and Micheaux, 2006). This is particularly true for this study, which revealed that even though information from customer is shared from customer touch point to the point of action (management); for some cases, this information sharing process is conducted verbally, thus the creation of knowledge about customer cannot be codified in an established form. Therefore, even though operational CRM is already implemented in some cases; degree of KM support to manage collaboration aspect of knowledge is still

low.

Identification of relevant knowledge for targeting organic customers

Identification of relevant knowledge about customer was conducted based on the utilization of knowledge about customer to target organic customers and investigation toward company's capability to identify relevant knowledge.

All cases use packaging as the media to target organic customers. Through packaging, they communicate message, which is considered as relevant to the targeted organic customers. For instance, middle to high class level is considered as relevant knowledge as such exclusive packaging is designed to target these customers. Then, Company A attaches nutrient content of organic products and picture of greenhouse facility to attract consumers who possess organic knowledge; while Company B attaches organic cooking recipe to gain consumers awareness about the benefit of organic products. Tag line "my biggest dream in life is making you healthier" belongs to Company B is directed to attract customers who considered healthy as the main criterion to accept organic products, while tag line "share the green of Indonesia" belongs to Company A is directed to customers who holds preserving the environment value. As an effort to gain customer trust toward the 'authentic' organic products, support evidence is given by Company A and Company C by putting pesticide free and organic certification number; while Company B attaches the address of organic farming location intended as guarantee to a high quality product.

Utilization of relevant customer knowledge in company's message could provide competitive accomplishment for the company to target customers who accept organic products. In this study, some cases use packaging and green community as the media to communicate company's message for its targeted customers. Previous research shows the importance of packaging in communicating company's message. For instance, Aryal *et al.* (2009) mentioned that knowledge of people is affected by type and quality of information made available to consumers, thus quality packaging, labeling and certification play pivotal role in knowledge enrichment. Then, previous research mentioned that some companies deliberately seek to take advantage of consumers communities by providing space and resources for this interaction to take place as such they can at least hear what is being said about them, and at the most hope to influence it positively (Lambe, 2001).

Despite of utilization of relevant customer knowledge to target organic customer, evidence of established document concerning process of identifying relevant knowledge that could support company's need in targeting organic customer is existed only in Company A. Referring to Gebert *et al.* (2003) work about KM support to manage four aspects of knowledge, i.e. content, competence, collaboration, and composition; the author suggests competence in determining which knowledge is required in order to provide competitive accomplishment as an adequate framework for identifying relevant customer knowledge to support company's need in targeting organic customers.

In accordance with the above result, a KM-CRM model for organic products acceptance is developed, as presented in Figure 1. Then, similar and conflicting theories from previous research are revisited to establish the model.

Discussion and Conclusion

As the conclusion, KM-CRM model for organic products acceptance is developed based on the three steps of actions: customer data mining and analysis, creating knowledge about customer, and identification of relevant customer knowledge for targeting organic customers. Individual factors resulted from quantitative study are used as the basis in developing the model. And then, KM is embedded into CRM to determine degree of KM support in each step of action. This model is line with the current concept of knowledge-based system which includes knowledge of consumers' behaviors from statistical analysis in CRM (Bensoussan *et al*., 2009); and includes the three antecedents success factors of knowledge-based system, i.e. knowledge codifiability, absorptive capacity, and inter-organizational relationship quality (Argote *et al*., 2003). Knowledge codifiability relate to how the consumer knowledge can be codified as thoroughly and as accurately as possible. Absorptive capacity is the ability of a firm to recognize the value of new external information, assimilate it, and apply it to commercial ends. Inter-organizational relationship relate to the effective knowledge sharing between knowledge sources and its recipients, which requires their direct and intimate interaction (Hippel, 1998).

As managerial implication, first, this study provides basis to the company in restructuring knowledge about organic customer profile within KM - analytical CRM framework, which is useful in targeting organic customers to be more effective; second, the research proposed different contextual applicability of KM-CRM integration in environmentally friendly products domain.

As its limitation, CRM implementation in the companies is still in the early stage; and majority of them only focusing at the operational level, e.g. customer transaction. Thus, the implementation of KM-CRM in the organizations is beyond the scope of this study.

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