Proactive Market Orientation, Radical Service Innovation, and Performance: Moderating Effects of Size and Competitive Intensity

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Abstract

This study provides new insights by examining effects of proactive market orientation on radical service innovation and performance. This study also evaluates how the moderating effect of competitive intensity and firm size on these relationships. The data collection was done using a survey. The sample of this study was manager or director of rural credit bank in Central Java, Indonesia. 128 questionnaires were distributed with 85.93% response rate. The data were analyzed using Generalized Structured Component Analysis (GSCA). The results reveal that: a) proactive customer orientation and proactive competitor orientation have a positive effect on radical service innovation. b) The moderating effect analysis shows that competitive intensity can strengthen only on the relationship between proactive customer orientations on radical service innovation, in the other hand the firm size can weaken only the relationship between proactive competitor orientation and radical service innovation. The findings offer insight for rural credit bank to increase proactive market orientation as radical service innovation determinant.

Keyword: proactive customer orientation, proactive competitor orientation, radical service innovation, competitive intensity, firm size, performance.

1. Introduction

Since the seminal works by Kohli and Jaworski (1990) and Narver and Slater (1990), marketing researchers have devoted much attention to the concept of market orientation and how it affects a firm’s performance. Although the definition of market orientation in the early 1990s refers to the importance of understanding the current and future customer’s needs (Narver and Slater, 1990) and the collection of information about the current and future customer’s needs (Kohli and Jaworski, 1990), market orientation Market orientation consists of two essential sets of behaviors. The first is “responsive” market orientation and “customer compelled” in which a business attempts to discover, to understand, and to satisfy the expressed needs of customers. The second set of behaviors is “proactive” market orientation in which a business attempts to discover, to understand, and to satisfy the latent needs of customers (Narver et al, 2004).

Although Narver et al., (2004) specify proactive and responsive market orientations as two forms of market orientation, however, their measures of constructs deal merely with identifying and satisfying customers' needs and do not encompass others traditional dimensions of a market orientation (Blocker et.al., 2011). Therefore, in recent years many researchers (i.e. Narver et al, 2004; Atuahene-Gima..et al, 2005; Tsai et al, 2008; Li, et al, 2008; DeFoggi and Buck, 2009; Bodlaj, 2011; Voola and O'Cass 2010; Blocker, et al, 2011; Lin and Chang, 2011), have offered empirical insight about the nature and the effects of understanding customers' latent and future needs proactively. They only offer empirical insights about the nature and effect of understanding the customer’s latent and future needs proactively, but proactive competitors orientation is not. The key factor of market orientation seems to be classified by subjects (i.e. customers or competitors) and its purposes (i.e. responsive or proactive) (Nishikawa, 2010). Thus, to have
precise measurements of proactive market orientation, proactive competitor orientation dimensions should be added. The proactive market orientation in this study is divided into two dimensions. They are proactive customer orientations and proactive competitor orientations.

Extensive literature has examined how market orientation affects organizational success. However, the impact of proactive market orientation on innovation has obtained attention from scholars (Han et al., 1998; Kirca et al., 2005). In this study proactive market orientation measured from a corporate perspective. Proactive customer orientation refers to a firm’s ability to continuously probe customer’ latent needs and uncover future needs. As well as proactive competitor orientation refers to the ability to anticipate the competitive threats and analyse the competitor actions to be done.

Services have received relatively little coverage in research on innovation management than product. This is because there are assumptions made about the transferability of lessons originally learned in a manufacturing context, a justifiable position which neglects some important differences around service innovation (Meyer and DeTore, 1999; Bessant and Meyer, 2009). The future of innovative culture on corporate level is based on provision of conducive environment, contribution of individuals in the growth of innovative ideas, and self-development, which delivers to a set of innovations which are radical, incremental and learnt from the competitors through proper manner recognized in the corporate world (Qureshi et al., 2008). Innovation has pivotal role in gaining competitiveness for organizations through unmatchable link with the economic activities which reflect the financial as well as non-financial performance of the organization (Denton, 1999; Qureshi et al., 2008). The impact of proactive market orientation on radical service innovation and firm performance is not independent from external factors (competitive intensity) and internal factors namely firm size (Kohli and Jaworski, 1990; Ngatno et al., 2014).

The purpose of this study is to measure proactive market orientation and to analyze their effect on radical service innovation and performance. This study provides new insights by dismantling proactive market orientation and service innovation to deeply understand the effects of two proactive market orientation components on radical service innovation. This study also evaluate the moderating effect of competitive intensity and firm size on these relationships.

2. Literature Review, Hypotheses and Research Model

- **Proactive Customer Orientation and Proactive Competitor Orientation**

Since the publication of Narver and Slater (2004) study, the dominant research stream that has addressed issues of customer latent and future needs is found in the market/customer orientation literature. Specifically, customer requires giving voice to customers' expressed needs that customers are aware of and actively solicit from providers. Notably, however, they do not address customers' latent needs. Those needs are potentially important but are difficult for customers to articulate (Slater and Narver 1998). Managers need are "forward-looking metrics" that capture indications of the way customers see the firm anticipating their "alternative futures" (Zeithaml et al., 2006). Lately, a lot of studies discuss the latent needs. This is the domain where a proactive customer orientation appears to play an influential role as shown through quantitative studies exploring new product success (e.g., Atuahene Gima et al., 2005; Narver et al., 2004; Tsai et al., 2008; Li, et al., 2008; DeFoggi, 2009; Bodlaj, 2011; Voola and O’Cass, 2010; Blocker, et al., 2011; Lin and Chang 2011). Drucker proposes creating a customer as the primary objective of business, not just serving the customer. This distinction is critical because the concept of market orientation has been criticized as being reactive and narrowly focused on existing customers (Atuahene-Gima et al., 2005; Narver et al., 2004).

Narver et al., (2004) specify proactive and responsive market orientations as two forms of market orientation. However, the constructs they measured deal only with identifying and satisfying customers’ needs and do not identifying and anticipating competitor threats. Therefore market orientation seems to be classified based on its subject of learning (customers or competitors) and its purpose of learning.
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(responsive or proactive) (Nishikawa, 2010). Thus to be more precise, measurements of proactive market orientation should be added with dimensions of proactive competitor orientations.

Proactive market oriented business are characterized intelligence generation about latent needs and the capabilities and strategies of their competitors. Intelligence can be viewed along a continuum from current to anticipate (Slater and Narver. 1998; Narver et al., 2004). In this study proactive customer orientation refers to discovering, understanding, and satisfying latent customer needs. Latent needs are defined as needs of which the customer is unaware. Latent needs are no less "real" than expressed needs, but they are not in the consciousness of the customer (Narver et al., 2004). Hence a proactive customer orientation is defined as the "capability to continuously probe into customers' latent needs and uncover future needs" (Blocker et al., 2011; Herhausen 2011). While Proactive competitor orientation is related to the analysis of competitor actions to be done. Companies with "proactive competitor orientation" is not just trying to analyze the strengths and weaknesses of current competitors, but trying to anticipate the current competitors and potential competitor’s action to be done.

- **Radical Service Innovation**

  The construction of a general description of innovation is essential for an understanding of what the notion of innovation might encompass, in both services and manufacturing industry, and the basic forms it might take. The future of culture of innovation on corporate level is based on the provision of conducive environment, contribution of the individuals in the growth of innovative ideas and self development which gives birth to a set of innovations which are radical, incremental and learnt from the competitors through proper manner recognized in the corporate world (Qureshi et al., 2008).

  One type of service innovation is radical service innovation. Radical service innovation is defined as a fundamental change in the services that represent a revolutionary change in the benefits of the service (Berry et al, 2006; Hertog, 2000; Nijsen et al., 2005; Cheng and Krumwiede, 2012). Radical service innovation is defined as fundamental changes in new services that represent revolutionary changes in service benefits (Berry et al., 2006; Hertog, 2000; Nijsen et al., 2005; Cheng and Krumwiede 2012). Radical service innovation creates brand new values through innovative concepts. Radical service innovations (exploratory service innovations) are designed to meet the needs of emerging customers and markets, and offer new designs, create new markets, or develop new channels of distribution (Jansen et al., 2006). In other words, radical service innovation may be described as the presence of search, variation, experimentation, and risk-taking.

- **Firm Performance**

  Firm performance measurement is currently receiving very active investigation from both practitioners and academics, to the extent that new reports and articles on the topic have been appearing at a rate of one every five hours of every working day since 1994 (Pont and Shaw, 2003). Firm performance is a relevant construct in strategic management research and frequently used as a dependent variable. Despite this relevancy, there is hardly a consensus about its definition, dimensionality and measurement, that limits advances in research and understanding of the concept.

  The concepts of firm performance are generally centered on either efficiency or effectiveness. Since business enterprises must eventually be profitable to survive, financial efficiency in some form (e.g., gross margins, net margins, ROI, relative profitability, etc. is typically used as an ultimate outcome when performance is included in research. It is one of the most commonly used definitions of firm performance in strategy research (Venkatraman and Ramanujam, 1986; Yau et al., 2007) in particular utilized self-reports on financial and non-financial measures. The financial measures focused on overall profit level, profit margin, and return on investment among the financial measures. The non-financial measures related to customer and employee satisfaction.

  Usually researchers distinguish subjective and objective measures (Brush & Vanderwerf, 1992). Objective measures usually are market-based indicators, accounting-based measures, revenues, ROI and profit as well as growth measures, considering employee and sales growth, and survival (Cooper, 1993).
Subjective measures can be described as perceptual in nature (Brush & Vanderwerf, 1992) and refer to subjective assessments of performance dependent upon expectations manager (Cooper 1993), thus the level of the assessment of performance in comparison with competitors. In this research, four concepts are employed to tap both efficiency and effectiveness aspects of rural credit bank performance.

- **The Relationship of Proactive Customer Orientation, Proactive Competitor Orientation and Radical Service Innovation**

  Market-oriented represents a long-term commitment to understanding customer’ expressed and latent needs and to developing innovative solutions that produce superior customer value (Slater and Narver, 1998). A key factor determining a firm’s ability to successfully develop and commercialize technological innovation is how it comes to understand customer needs (Slater and Mohr, 2006). Focusing on future customer needs may also alert the firm to new market and technology developments and increase its abilities to integrate developments into product innovation (Zhang and Duan, 2010).

  Firms that gather information and intelligence to anticipatory have a proactive market orientation. Anticipatory customer intelligence is concerned with customers' latent and future needs that enable the firm to proactively pursue market opportunities that are not evident to competitors. Anticipatory competitor intelligence is concerned with competitor' strategy and potential competitors. Latent needs are real needs that are not yet in the customers' awareness. If these needs are not satisfied by a provider, there is no customer demand or response.

  An extreme type of proactive market orientation is known as market driving in which a firm actively seeks to (i) redefine the structure of the market and/or (ii) introduce an innovative value proposition that enables the firth to reduce, or even avoid, competition (Jaworski et al., 2000). Market-driving activities may be focused on many different stakeholders including customers and competitors. Proactive market-oriented activities are characterized by discovery, variation, innovation, and risk-taking which reflect exploration (Tsai et al., 2008). A proactive market orientation is more likely to lead to radical innovation (Mohr et al., 2010). As some researchers argue, when markets are complicated, the expressed need of lead users can indeed provide useful information for the development of breakthrough R&D projects (Lettl et al. 2006), and subsequently, customer orientation would have the potential to increase the introduction of new-to-the-world products (Augusto and Coelho 2009; Lukas and Ferrell 2000).

  Proactive customer and competitor orientation is a long-term focus and emphasizes generative learning process. With a long-term orientation, proactive market orientation tend to discover the unexpressed needs of the customers and anticipate the competitor action. Generative learning or double loop learning is frame-breaking and more likely to lead to breakthrough innovation than adaptive learning (Slater and Narver 1995). Further-more, the empirical research has found a positive effect of market orientation on product innovations (Sandvik et. Al., 2000), especially on radical (but not on incremental) product innovation (Davis, 1993). Based on the support and discussion above for the roles of proactive customer and competitor orientation for creating innovation in market relationships, the following hypotheses are proposed:

  H1: Proactive customer orientation has a significant positive effect on radical innovation.

  H2: Proactive competitor orientation has a significant positive effect on radical innovation.

- **The Relationship of Proactive Customer Orientation, Proactive Competitor Orientation and Firm Performance**

  Market orientation provides a firm with market-sensing and customer-linking capabilities that lead to superior performance. Market orientation has positive related with firm performance (Jaworski et al., 1993). Market orientation is the organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers, and, thus, continuous superior performance for the firm (Narver and Slater, 1990; Baker and Sinkula, 1999).
The competitive advantage of the firm lies in the heterogeneous firm-specific capabilities held by firms (Montgomery and Wernerfelt, 1988). Capabilities are the most important source of an organization's success (Day, 1994). Proactive market orientation conceptualized as capabilities of the firm (Atuahene-Gima et al., 2005; Voola R and O'Cass R, 2010). Market orientation has been argued to be a source of competitive advantage that influences firm performance (e.g. Jaworski et al., 1993; Narver and Slater, 1990; Ruekert, 1992). Proactive market orientation is therefore important for understanding the role of market orientation in implementing competitive strategies and its impact on firm performance (Voola and O'Cass, 2010). While market orientation and its (positive) effect on companies' performance have been the subject of numerous empirical studies in various cultures (Kirca et al., 2005), there are hardly any research results explicitly dealing with the proactive market orientation is related to performance (DeFoggi and Buck, 2009; Frank, 2010). Based on the support and discussion above for the roles of proactive customer and competitor orientation on firm performance, the following hypotheses are proposed:

H 3: proactive customer orientation has a significant positive effect on firm performance.
H 4: proactive competitor orientation has a significant positive effect on firm performance.

• **Radical Service Innovation and Firm Performance**

Innovation is the source of potential competitiveness which safeguards service legacy and is utilized as a tool to go beyond the strength of the competitors (Hult et al., 2005). Innovation has pivotal role in gaining competitiveness for the organizations through unmatchable link with the economic activities which reflect the financial as well as non financial performance of the organization (Denton, 1999). Innovation is considered as the process of commercializing and extracting value from ideas and converting them in to benefits in the real market. The companies today compete on the basis of new and improved added value products and services, processes and business methods (Qureshi et al., 2008). A general relationship between innovation and profitability is reported in the literature (Han et al., 1998; Gatignon and Xuereb 1995; Baker and Sinkula, 2009; Kouropalatis and Morgan, 2009).

In this study radical service innovation is defined as a fundamental change in the new service represents a revolutionary change over the service (Berry et al., 2006; Hertog, 2000; Nijssen et al., 2005). Radical innovations significantly affect the market performance and company’s performance (Qureshi et al., 2008; Alpkam, 2012; Cromer et al., 2011; Al-Qudah, 2012). Based on the support and discussion above for the roles of radical service innovation on firm performance, the following hypotheses are proposed:

H5: radical service innovation has a significant positive effect on firm performance.
H6: proactive customer orientation has indirectly effect on firm performance through radical service innovation.
H7: proactive competitor orientation has indirectly effect on firm performance through radical service innovation.

• **Competitive Intensity**

The competitive intensity (CI) or the level of competition usually refers to a price war, the frequency of promotion, competitive activity level were introduced by the firm (Slater and Narver, 1994; Jaworski et al., 1993). In studying the competitive intensity, proposed There are three dimensions of competitive intensity: (1) predictability of the company's major competitors marketing activities, (2) the hostility of the company's main competitor; (3) the extent of activities of major competitors (Miller, 2002). One of three dimensions of environmental factors is competitive intensity (Jaworski et al., 1993). Competitive intensity is to measure the strength of the competitive behavior, resources and differentiation capabilities of competitors.

In empirical study, showed that the higher the rate of change in the competitive intensity, the more positive effect of market orientation on new product performance (Kumar et al., 1998). The competitive intensity is one of the moderating factors that may affect the relationship between market orientation and firm performance (Jaworski et al., 1993; Slater and Narver, 1994). Thus, according to the literature, a greater competitive intensity forced the firm to explore market orientation as a way to increase their
business success. Consequently, in an high competitive intensity, pursuing a strategy that involves the execution of the exploration and exploitation of market-based activities will lead to increase the business success. Based on support and discussion of the role of radical service innovation on firm performance, the following hypotheses are proposed:

H8a: competitive intensity has moderating effect in the effect of proactive customer orientation on radical service innovation.

H8b: competitive intensity has moderating effect in the effect of proactive competitor orientation on radical service innovation.

H8c: competitive intensity has moderating effect in the effect of proactive customer orientation on firm performance.

H8d: competitive intensity has moderating effect in the effect of proactive competitor orientation on firm performance.

• Firm Size

Dynamic capabilities theory asserts that the sustained performance can be achieved if the firm is able to seek a more strategic integration between multiple resources (Hung et al., 2010; Boso et al., 2011). Resource-based theory also states that the accumulation of resources is not sufficient to support a sustainable competitive advantage in an environment increasingly competitive global market (Makadok, 2001). Scholars argue that competitive advantage comes from the ability and flexibility to support, implement and maintain this capability (Cooper et al., 1994; Wiklund & Shepherd, 2005; Boso et al., 2011). Thus, in accordance with the dynamic capabilities and resource-based theory, a stronger financial resources will provide the financial capacity to implement the market-oriented strategy and maintain a better market orientation than a lack of financial resources. The firm with rich in resources (assets greater) do not need to choose a non optimal strategy, but it is cheaper to implement (Voss et al., 2008). In contrast, firms with less financial resources (assets less) demanding to be able to choose a more limited strategic options, but ultimately provide a greater chance of success (Lin & Chang, 2011; Voss et al., 2008; Boso et al. 2011). Thus, access to financial capital is limited, the firm can take a shortcut to execute and maintain the quality of their market-oriented strategy, resulting in lower chances of success (Wiklund & Shepherd, 2005; Boso et al., 2011). Others have concluded that large firms have an advantage in markets characterized by imperfect competition, while small firms have an advantage in markets characterized by pure competition (Acs and Audretsch, 1987). Finally, current research (Wagner and Hansen 2005) on low-tech industry found that firm size impacts on innovation type. Based on support and discussion of the role of radical service innovation on firm performance, the following hypotheses are proposed:

H9a: The size of the firm has moderating effect in the effect of proactive customer orientation on radical service innovation.

H9b: The size of the firm has moderating effect in the effect of proactive competitor orientation on radical service innovation.

H9c: The size of the firm has moderating effect in the effect of proactive competitor orientation on firm performance.

H9d: The size of the firm has moderating effect in the effect of proactive competitor orientation on firm performance.

3. Research Design

• Conceptualization Model

The conceptual model showing the relationship between variables. Proactive customer orientation (PROCUST), proactive competitor orientation (PROCOMP) are considered as independent variables,
whereas radical service innovation (RSI) is the mediating variables (intervening) and firm performance (PERFORM) is the dependent variable. Figure 1 shows the relationship between all the variables.

![Figure 1: Research Model](image)

- **Data Collection and Sampling**
  
The population of this study is rural credit bank in Central Java Province, Indonesia which are 188 unit. The targeted sample is 128 directors or managers of rural credit bank in Central Java Province, Indonesia. The data was collected using a survey which was carried out entirely in one stage (one short study) or in a cross-section study. A structured questionnaire was used for primary data collection. 128 questionnaires were distributed, there were only 110 returned. Thus, the response rate is 85.34%. In addition, of 110 returned questionnaires, only 106 were useable and 4 were uncomplete.

- **Measurement**
  
The constructs used in my research model were measured using five-point Likert scales. Proactive customer orientation is defined as an orientation that leading company to think, discover, understand, and meet the future needs of potential customers in order to let the customer understand the strategic orientation of marketing activities. Proactive customer orientation (PROCUST) measured with six items by asking respondents to indicate the customer’s latent needs. These measures were adapted from Rank, (2007). Proactive competitor orientation is defined as orientation of getting market intelligence to anticipate competitive threats. Proactive competitor orientation (PROCOMP) measured with seven items by asking respondents to indicate competitive threats. These measures were adapted from Sorensen (2009). Radical service innovation is defined as effort to assess new opportunities for services, create new services, also to distribute and commercialize new services. Radical service innovation (RSI) measured with seven items by asking respondents to indicate developing new products and services which were previously not provided by organizational units. These measures were adapted from Jansen et al., (2006), Li et al., (2008) and Mohr et al., (2010). Firm performance is defined as the end result of rural credit bank activities which include the number of customers, total outstanding loans, the amount of savings, capital adequacy, the ability to pay the debt, the ability to control operating costs, and the ability to make a profit. Firm performance was measured using subjective assessments of their firm performance using a synthesis of items from previous scales and their market effectiveness had been achieved (Morgan et al., 2003). Firm performance measured by eight items by asking respondents the degree of their firm performance. These measures were adapted from Rahut et al., (2010) and Iqbal M.J, (2012). While the competitive intensity were measured by the number of competitors where the firm is stated and classified into 3 classes. Likewise, the size of the firm measured by the magnitude of the firm's assets are classified into 5 categories.
Table 1: Measurement Model

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<tr>
<th>Variables</th>
<th>Loading Estimate</th>
<th>SE</th>
<th>CR</th>
<th>AVE</th>
<th>Alpha</th>
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*Significant at 5% (.05)
Construct Validity

Factor analyses were conducted to check the structure of the various scales. Due to the sample size, a separate analysis was conducted for the PROCUST, PROCOMP, RSI and PERFOR scales. The findings from these analyses are presented in Table 1. A cut-off value of 0.50 was used for the factor loadings based on Hair et al., (1998). Validity of proactive customer orientation, proactive competitor orientation, radical service innovation and performance was very satisfactory. All items of latent variables are significant at .05 or CR>1.96. These result indicate that all of item indicate a good convergence validity. The value of AVE (Average Variance Extracted) for all latent variables is greater than 0.50. (Hwang et al., 2010), therefore the latent variables have adequate discriminant validity.

Construct Reliability

The internal reliability of the items was verified by computing the Cronbach’s alpha. Nunnally (1978) suggested that a minimum alpha of 0.6 sufficed for early stage of research. The Cronbach alpha estimated for proactive customer orientation was 0.811, proactive competitor orientation customer was 0.832, radical service innovation was 0.868, and performance was 0.889. Therefore the constructs were deemed to have adequate reliability.

Data Analysis

The data was analyzed using Generalized Structured Component Analysis (GeSCA). GSCA is a component-based SEM method which can be used for calculating scores and which is allowed for small samples (Hwang and Takane, 2004; Hwang et al., 2010). This method is chosen for the following considerations: (1) the model in a conceptual framework consists of hierarchical causal relations, (2) GeSCA is a powerful method of analysis that does not require many assumptions and can be performed on a series of latent variables simultaneously, hence an efficient statistical tool; (3) Based on Monte Carlo simulation that SEM model with GeSCA have very good performance to small size sample, especially to 50≤N≤200 or all sample size N≥50.

4. Results and Discussion

Hypothesis Testing

This procedure involves the use of four multiple regression analyses: (i) the mediator (i.e., RSI) is regressed on the independent variable (i.e., PROCUST and PROCOMP), (ii) the dependent variable (i.e., firm performance) is regressed on the independent variable (i.e. PROCUST, PROCOMP and RSI), (iii) the mediator (RSI) is regressed on the independent variable (i.e., PROCUST and PROCOMP), the moderator (i.e. CI and Size) and their product-term (i.e. PROCUSTxCI, PROCUSTxSize, PROCOMPxCI and PROCOMPxSize); and (iv) the dependent variable (i.e., PERFORM) is regressed on the independent variable (i.e. PROCUST and PROCOMP), the moderator (i.e., CI and Size), their product-term (i.e. PROCUSTxCI, PROCUSTxSize, PROCOMPxCI and PROCOMPxSize) and the mediator). The findings from these analyses are presented in Table 2.

Direct Effects of Proactive Customer Orientation and Proactive Competitor Orientation.

The runned GeSCA before controlled moderating variable are shown on equation 1 in Table 2: (1) proactive customer orientation (PROCUST) has a significant positive effect on radical service innovation (RSI) – Hypothesis 1 is thus supported; (2) proactive competitor orientation (PROCOMP) has a positive effect on radical service innovation (RSI) – Hypothesis 2 is thus supported. On equation 2 shows: (1) proactive customer orientation (PROCUST) has a nonsignificant positive effect on performance (PERFORM)–Hypothesis 3 is thus not supported, (2) Proactive competitor orientation (PROCOMP) has a nonsignificant positive effect on performance (PERFORM)–Hypothesis 4 is thus not supported; (3) radical service innovation (RSI) has a positive effect on performance (PERFORM)–Hypothesis 5 is thus supported.
Table 2: Structural Model

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Equation 1 (RSI)</th>
<th>Equation 2 (PERFORM)</th>
<th>Equation 3 (RSI)</th>
<th>Equation 4 (PERFORM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
<td>CR</td>
<td>Estimate</td>
</tr>
<tr>
<td>PROCUST</td>
<td>0.300</td>
<td>0.099</td>
<td>3.01</td>
<td>0.024</td>
</tr>
<tr>
<td>PROCOMP</td>
<td>0.480</td>
<td>0.086</td>
<td>5.56</td>
<td>0.207</td>
</tr>
<tr>
<td>RSI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.501</td>
</tr>
<tr>
<td>CI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Size</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PROCUST*CI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PROCUST*Size</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PROCOMP*CI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PROCOMP*Size</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Significant at 5% (.05)

Mediating Effects of Radical Service Innovation

Hypothesis 6 and 7 were tested using the mediation procedure outlined by Sobel test (1982). The test statistic (TS) is computed by dividing the indirect effect coefficient by its standard error. This test statistic is usually evaluated by comparing it to the standard normal distribution. H6 stated that proactive customer orientation has indirectly effect on firm performance through radical service innovation. The result shows that TS of this testing is 2.3612 > 1.98 (n = 106, 5%, two-tail). Based on this result concluded that proactive customer orientation has indirectly effect on performance through radical service innovation–Hypothesis 6 is thus supported. H7 stated that proactive competitor orientation has indirectly effect on firm performance through radical service innovation. The result shows that TS of this testing is 3.1772 > 1.98. Based on this result concluded that proactive competitor orientation has indirectly effect on performance through radical service innovation–Hypothesis 7 is thus supported. Besides on equation 3 shows that: proactive customer orientation (PROCUST) has a nonsignificant effect on performance (PERFORM); proactive competitor orientation (PROCOMP) has a nonsignificant effect on performance (PERFORM); and radical service innovation (RSI) has a significant effect on performance (PERFORM). These findings indicate that RSI full mediates the effect of PROCUST and PROCOMP on firm performance.

Moderating Effect of Competitive Intensity and Size on the Proactive Customer and Competitor Orientation on Radical Service Innovation

Hypothesis 8a, 8b, 9a and 9b were tested using equation 3 (in table 2). The mediator (i.e., RSI) is regressed on the independent variable (i.e., PROCUST and PROCOMP), the moderator (i.e., CI and Size) and their product-term (i.e., PROCUSTxCI, PROCUSTxSize, PROCOMPxCI and PROCOMPxSize). The following findings are shown on equation 3 in Table 2. For the third equation: a significant positive interaction between PROCUST and CI on RSI; a significant negative interaction between PROCOMP and Size on RSI; while non-significant interaction between PROCUST and Size on RSI; and non-significant interaction between PROCOMP and CI on RSI. Therefore H8a and H9b are supported, while H8b and H9a are not supported. For the fourth equation shows that all variables interaction are not significant on PERFORM-Hypothesis 8c, 8d, 9c, and 9d are not supported.

Discussions

Overall, this study makes significant contributions in the following two aspects. Firstly, my study contributes to the existing theory by bringing institutional perspective into technology strategy of rural credit bank. Secondly, this study enriches my understanding of the relationship of proactive market
orientation, radical service innovation and performance, so that this study presents significant insights for managers of rural credit bank.

- **Theoretical Implication**

  Contributing to the extend literature, my empirical analyses of rural credit bank in Central Java Indonesia provide interesting discoveries about the proactive customer orientation, proactive competitor orientation, radical service innovation and firm performance relationship. My findings suggest that both proactive customer and competitor orientation do lead to radical service innovations, thus supporting the study findings (i.e. Sandvik et al., 2000; Baker and Sinkula, 2007; Atuahene-Gima et al., 2005; and Mohr et al., 2010). This finding confirms the assumption, which states that a proactive market orientation impact on radical innovation (Li et al., 2008). These findings also indicate that the proactive competitor orientation has a greater impact on radical innovation of proactive customer orientation. While my findings suggest that both proactive customer and competitor orientation do not directly lead to firm performance. These result support the previous study findings (i.e. Zhang and Duan, 2010; Bodlaj, 2010; Cheng and Krumwiede, 2012), which indicates that the radical service innovation is the mediator between proactive customer and competitor orientation on firm performance.

  The moderating effect of competitive intensity on the relation between proactive customer orientation and radical service innovation is significant positive, but not the firm performance. This result indicates that competitive intensity as a quasi moderating variable. Competitive intensity has not only direct effect on radical service innovation but also moderating effect of the relation between proactive customer orientation and radical service innovation. These results are consistent with previous study (Kumar et al., 1998) which shows that the higher the rate of competitive intensity, market orientation and new product performance has a more positive relationship significantly. The competitive intensity is one of the moderating factors that may affect the relationship between market orientation and corporate performance (Jaworski et al., 1993 and Slater and Narver, 1994). On the other hand competitive intensity is not moderate to the relation between competitor orientation and radical service innovation. This result is appropriate with previous study (Lin and Chang, 2011), which shows that competitive intensity is not significant moderate the relation between proactive market orientation and emotional marketing strategy.

  The moderating effect of size on the relation between proactive customer orientation and radical service innovation is not significant, while the moderating effect of size on the effect of proactive competitor orientation on radical service innovation is significant negative, but not on firm performance. This result indicates that although large companies have sufficient resources for investing in innovation they suffer from a variety of issues that may make them less innovative. For example, larger firms tend to create a bureaucracy that is un-favourable to an atmosphere encouraging creativity (Kamien and Schwartz, 1975), and tend to be less flexible than smaller firms (Cohen and Klepper, 1996). Further examined shows that firm size and innovation across several industries and rejected the idea that innovation is related to size (Rothwell and Zegveld, 1986).

- **Managerial Implication**

  There are three major implications of the findings for practitioners. First, the findings highlight the importance of an emphasis on the proactive customer orientation and proactive competitor orientation which supports and encourages the radical innovation. Specifically, firms intending to increase radical innovation need to develop proactive customer and competitor orientation beforehand because this firm innovation drive firm performance. Capabilities to develop proactive market orientation are the reflection of the evolutionary process of deliberate firm-specific investments, including investments of financial and managerial resources (Ethiraj et al., 2005). The development and maintenance of firm capabilities, such as PROCUST and PROCOMP, requires considerable investments by the firm (Teece et al., 1997) but is worth-while because these capabilities improve firm performance indirectly through RSI. Furthermore, firms should invest in capabilities, such as PROCUST and PROCOMP, which involve tacit knowledge and complex inter-relationships among requisite knowledge and skills because these facilitate causal ambiguity, and thus also facilitate sustainable competitive advantage (Reed and DeFillippi, 1990).
Second, managers need to carefully consider the type of capability-mix (PROCUST and PROCOMP) in order to increase the effects of the capabilities for the firm. PROCUST has higher effect on RSI than PROCUST. The moderating effect of competitive intensity (CI) shows that high levels of PROCUST when combined with low levels of competitive intensity (CI) can prevent firms from realizing the full benefits of PROCUST. In contrast the findings show that high levels of PROCOMP when combined with low levels of competitive intensity (CI) cannot prevent firms from realizing the full benefits of PROCOMP. The moderating effect of SIZE shows that high levels of PROCOMP when combined with big SIZE can prevent firms from realizing the full benefits of PROCOMP. In contrast the findings show that high levels of PROCUST when combined with big SIZE cannot prevent firms from realizing the full benefits of PROCUST. The complementary nature of the PROCUST, PROCOMP, CI and SIZE relationship suggests that managers should not only invest in multiple capabilities for the firm but should also carefully consider the level of investment for each capability, the level of competitive intensity and the level of SIZE.

Third, the manner in which proactive market orientation and radical service innovation are conceptualized has implications for practice. Whilst proactive market orientation has been viewed as being proactive (i.e., understanding customer latent needs and anticipating competitor threats), Market orientation highlights not only understanding the proactive market orientation, but also understanding the responsive market orientation. This approach encourages organizations to adopt a holistic view of market orientation that includes resposively understanding the latent needs of customers and the understanding the current competitor threats. Additionally, rural credit bank was conceptualised as micro finance banks. Micro finance bank should attempt to segment their market to match expressed and latent customer needs and firm capabilities by managing the type of capability-mix (PROCUST and PROCOMP) as well as conducting churn diagnostic monitoring of declining/defecting customers.

➢ **Conclusion, Limitations and Further Research**

This research is an experimental study on the performance of rural banks. Proactive market orientation as an important variable for successful implementation of radical service innovation and performance. The results of the analysis can be concluded that: (a) there is a positive effect of proactive customer orientation and proactive competitor orientation on radical service innovation; (b) there is a positive effect of radical service innovation on the performance; (c) radical service innovation as a full mediating variable of the relationship between proactive customer and proactive competitor orientation and performance; (d) intensity of competition can strengthen the effect of proactive customer orientation to radical service innovation; (e) the size of the company can weaken the effect of proactive competitor orientation to radical service innovation. Perusahaan akan lebih baik baik jika mampu meningkatkan derajat orientasi pelanggan proaktif maupun orientasi pesaing proaktif karena kedua orientasi ini dapat meningkatkan inovasi jasa radikal dan pada akhirnya dapat meningkatkan kinerja perusahaan. Jika lingkungan persaingan sangat ketat, maka perusahaan lebih baik untuk meningkatkan derajat orientasi pelanggan proaktif. Sebaliknya jika ukuran perusahaan semakin besar maka akan lebih baik untuk mengurangi derajat orientasi pesaing proaktif.

Some limitations of this study need to be mentioned. This study presents an analysis has limitations in relation to the cross-sectional data, while changes in the business environment must be identified. Therefore, further studies with more detailed design needed to reassess whether the relationship between the variables analyzed in this study have been changed. In addition, the accuracy of the model is equal to 0.499, this means that 49.90% of the variance in the variable variable proactive customer orientation, proactive competitor orientation, radical service innovation, and performance can be explained by the model by 49.90%, and the remaining 50.10% is explained by other variables. Therefore, further research in the future to develop a research model by adding variable s such as antecedent variables of market orientation (i.e. organizational system, the dynamics between departments and top management), the other moderator variables (ie, market turbulence and technological turbulence).
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