Techno-Resonance Innovation Capability And Reactive Innovation To Competitive Advantage: Business Strategy

Roymon Panjaitanα, Echan Adamβ, & Dian Indriyaniγ

Abstract

This research study discussion seeks to fill the research gap from the findings of inconsistencies in the ability of SME businesses to reactive innovation, marketing architecture capabilities, and techno resonance innovation capabilities as factors that provide stimulus through reactive innovation in competitive strategies and contribute directly to competitive advantage, where working capital moderates direct relationships to competitive advantage as well as to competitive business strategies. Nine hypotheses were tested with a sample of 156 SMEs in Central Java, Indonesia. The findings of this study yield three conceptual models. First, techno-resonance innovation capabilities are proven to enhance reactive innovation and competitive business strategies; both working capital strengthens competitive business strategies and provide complementary advantages, the three reactive innovations have the potential to mediate techno resonance innovations on business strategies and competitive advantages. But other marketing architecture capabilities need to be optimized, such as aggressive marketing deployments and information design forms.

Keywords:
Reactive innovation; Competitive business strategy; Techno-resonance innovation capability; Competitive advantage; Working capital; Marketing architectural capability

JEL Classification: M31; L10; O32
1. INTRODUCTION

MSME’s business competitiveness growth strategy in the new normal period becomes an important target of economic growth. One way of effort to be able to rise, aside from the internal resources owned according to the theory of resource excellence by Grant (1991) is certainly the strategic flexibility capability of reactive innovation in the business. Fan et al. (2013) explaining reactive innovation has a positive effect on innovation performance. The success of businesses to be able to have competitiveness by building strategic competency flexibility in human resources, manufacturing industry, finance, and information technology (Carneiro, 2000; Hitt et al., 1998; Singh et al., 2008). The problem that arises in creating a competitive advantage in this new normal era is the effort to improve the reactive innovation capabilities of SMEs. Innovation resonance in the market segment provides the ability to excel in competing by moderating the ability to design marketing strategies with the support of working capital. Therefore, businesses that continue to invest in resources and efforts that will be preserved will maintain a competitive advantage position.

Previous research has discussed the competitive advantages of businesses supported by the use of e-commerce information technology, e-commerce, human resource credibility, and market orientation influence (Breznik, 2012; Krishna et al., 2017; Minbaeva, 2018; Pilkinci etc. 2013; Pouli et al., 2013; and Udriyah et al., 2019). Other research discussing technor resonance innovation capabilities focuses on improving marketing performance (Hiong et al., 2020). According to Arnett et al. (2003), reactive innovation is carried out to surpass the excellence of other companies by learning through competition that provides a reaction to the implementation of comparative economics that signifies fair locus relations, then signals relative resources (Hunt & Morgan, 1995, 1996, 1997; Malhotra & Hunt, 2018, R. M. Morgan, 1991). Techno-resonance innovation capabilities can stimulate and mediate reactive innovations in competitive business strategies as business competition arises from competition to dominate certain market segments. However, competition for business strategies of the same type of business can make a difference in determining market prices. It is therefore necessary to moderate the marketing capabilities of reactive innovation relationships on competing business strategies.

In Resource Advantage Theory rests on innovation capabilities (Karjaluoto & Vaccaro, 2009; Kozlenkova et al., 2014) both proactive and reactive (Hunt, 1997, 1999; Hunt & Arnett, 2003; Nguyen et al., 2015) and the key to developing dynamic capabilities (“Resource-Based Theory, Dynamic Capabilities, and Real Options,” 2012). Reactive innovation supports the beneficial effects of market orientation on innovation strategies and promotes market needs satisfaction with a higher level of excellence than competitors (Fan et al., 2013; Tait & Levidow, 1992). This action is a good thing done by companies engaged in reactive innovation resulting in flexible strategic reactive to address environmental diversity and open innovation variability in business strategy competition. But different things are expressed (“Innovation and Competitive Advantage in Small Businesses: Effects of Environments and Business Strategy,” 2015); the success of reactive innovation can risk succeeding; the success of innovation depends on the company’s commercial approach and the ecosystem in which it runs. Brzozowski & Cucculelli (2016) suggests reactive innovation investments prove unproductive, the biggest direction for community policy in competing for business strategies in times of disaster is those that allow access to peripheral funding. Therefore, the ability to design marketing becomes the most important measuring tool in determining competitive business strategies in re-innovating.

The ability of marketing architecture, positive mediating of competitive strategies of product reactive innovation market and realization of strategies that can advance resource-based views (Vorhies et al., 2009), the same is said according to Hamdani et al. (2018) the marketing capabilities of this architecture can improve business performance when developed through a comprehensive marketing plan based on the analysis of the competitive environment and marketing information. Some researchers are more dominated on the ability of marketing
strategies to achieve a competitive advantage, but from that have limitations that have never been discussed to the ability of working capital as a financial resource that is able to improve competitive business strategy and competitive advantage. Therefore, this study intensely discussed with the techno-resonance innovation capability can increase the company’s competitiveness from financial resources in the form of capital that serves as a practical alternative to maintaining financial stability against business economic shocks.

This research is expected to contribute conceptually to different models from previous researchers. The novelty of this study’s results is the success of reactive innovations that mediate techno-resonance on competitive business strategies and competitive advantages. Successful mediation of reactive innovations integrated into the network and innovation systems if they have their innovation partnerships mainly concentrated on business partners. Therefore, the successful mediation of reactive innovations from technological resonance relationships to competing business strategies and competitive advantage is a finding this research’s conceptual discussion.

From the problems that have been conveyed, the purpose of this research aims to bridge the literature with the development of model concepts consisting of techno-resonance innovation capabilities, reactive innovation, competitive business strategy, marketing architecture capabilities, working capital, and competitive advantage. On a practical level, the businesses’ ability to compete in the market has barriers in capturing information opportunities to be processed into attractive marketing information designs supported by working capital needs and determining reactive innovation strategies to excel in mastering the market.

2. LITERATURE REVIEW

Reactive Innovation

As well as building a corporate strategy, the development of an important innovation strategy is clear and in detail to support the company’s success (Pisano, 2015). Different companies take different approaches to innovation strategies in an effort to improve their companies’ performance (Strecker, 2009). Gilbert (1994) explained two approaches to innovation strategy, namely proactive innovation and reactive innovation. Proactive innovation strategies are described as the organization’s ability to develop various structures risk levels to pre-emptive its competitors based on competitive surprises, seize initiatives, remain versatile (Evans, 1991). This typically refers to designing programs and developing business strategies before market shifts, which are essential to the company’s long-term growth. However, reactive innovation is the capacity of the organization to adapt to environmental changes. Companies with reactive innovations rely on defensive and cautious movements conducted after careful testing (Golden & Powell, 2000).

Techno Resonance Innovation Capability

The ability to innovate is important that every company continues to survive in a state of uncertainty. The research results by Etkin (2016) on the company’s innovation capabilities impact its strengths to improve product uniqueness, attract customers and consumers, and increase the value of excitement. Innovation capabilities can improve business performance has been researched by Samson et al. (2017). Foroudi et. al. (2016) also found that innovation capabilities can attract and maintain consumer loyalty. A company seeks to master the market by improving its innovation capabilities, internalized innovation capabilities into the company’s culture internally and externally to the consumer’s minds. The value of innovating must be voiced to the consumers’ minds, who are widely interpreted with resonant abilities and resonant values (Suarez & Belk, 2017). The company’s innovation capabilities are represented through the services or products produced. The product’s superior value is the level of competitive advantage produced better than the competitor’s product. Product innovation from technological exploration

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capabilities impacts consumer value and influences the emergence of reactive innovation. Technology-based innovation is superior creativity to develop ideas, learn from alternative processes and problem-solving that provide value advantages for consumers, based on technological excellence namely resource diversification (Hiong et al., 2020).

Marketing Architectural Capability

The term architectural competence refers to capacity (C. Prahalad et al., 2014), integrated capacities (Kogut & Zander, 2009), organizational capital (Tyler, 2001), and management structure (Leonard-Barton, 1992). Various models were developed to evaluate the hierarchical competency theory architecture. For example, Mills et al. (2003) model, particularly controlled resources, creates a broad range of services (resource use), organized services develop a variety of skills, and organized skills develop higher-level competencies. Each resource at the highest analysis level results from a lower-level resource used by a specific coordinating operation. Wang & Ahmed (2007) suggested a hierarchical structure in which resources are considered ‘zero-order’ and skills as ‘first-order’ hierarchical components. The rationale of uniting the two components is that the resources used by ability form a set of units of resources or capacity.

Working Capital

Working capital management plays an essential role in short-term financial management and equal job capital. Working capital is a fund used for the company’s day-to-day activities. This fund contributes to being invested in all existing assets, or the gap between new assets and total long-term capital-output liabilities. Afrifa & Padachi’s (2016) development phase of working capital management and its role in the business strategy, while Singh & Pandey (2008) found the supply scale directly affected working capital management. Efficient working capital management is a significant part of the company’s survival and growth for of company. Working capital management affects corporate profitability, risk, and value.

Effective working capital management is an essential component of the company’s objective of increasing market value. Mihir Dash and Rani Hanuman suggested a programming model for analyzing working capital to achieve a balance between profitability and liquidity (Den & Oruc, 2009). Working capital management primarily involves capital and liquidity turnover capabilities, i.e. liquid asset turnover capability, inventory turnover capability, receivables turnover capability, cash turnover capability, liquidity ratio, and swift ratio (Raheman et al., 2010). Working capital is characterized as current assets minus current liabilities. Working capital is the business’ investment in cash, shares, receivables, and inventories, minus current liabilities used to fund current assets. It is called net working capital (Copeland, Weston, & Shastri, 2005).

Competitive Strategy Business

The strategy is the company’s long-term approach and potential for profit by configuring capital in an unconventional manner, handling customer needs and understanding stakeholder expectations. Thompson et al. (2018) define strategy as a management action plan to run the business and conduct its operations. The company’s economic strategy consists of strategic steps and business methods that managers use to grow the business, obtain and attract customers, compete successfully, perform operations and achieve targeted organization performance (Ogutu & Samuel, 2012). Thompson et al. (2018) further suggest that the company’s most reliable ticket to above-average profit is a typical creative strategy that distinguishes the company from rivals and generates a competitive advantage. The business achieves a sustainable competitive advantage if many affluent people prefer their products/services to competitors’ offers and if the basis for certain preferences is sustainable. Competitive strategies relate to how a company can gain a
competitive edge through a typical way to compete. Thompson et al. (2018) define the competition as an act of fighting against other forces for the goal of achieving dominance or achieving prizes or goals. Competition primarily indicates the presence of companies that sell identical or replacement products to the same group of customers.

Competitive Advantage

Diversified businesses have two types of strategy, namely Business Unit Strategy (or Competitive Strategy) and Business Strategy (or Business Group Company Strategy), than control surfaces related to how to build a competitive advantage in each corporate sector. Understanding its ongoing competitive advantage sources has become an area of strategic management research (Rumelt, 1997). The business achieved a continuous competitive advantage by adopting strategies that exploited its internal strengths by reacting to environmental opportunities, mitigating external challenges, and avoiding internal weaknesses. Most focus on sustainable core competencies based on either isolating commercial opportunities and risks (M. E. Porter & Millar, 1985), explains strengths and weaknesses (Hofer & Schendel, 1978), or analyzes how to select a strategy. Competitive advantage may also be described as the substantial advantage of having an organization over its competitors, enhancing customer experience to add more value in the same market than competitors (Thompson et al., 2018). Hill & Jones (2007) notes that a corporation has a higher-than-average profit for the industry and a strategic advantage in sustaining a high profit for many years. According to Hill & Jones (2007), an organization with high employee productivity would have a better cost-based competitive advantage than a company whose employee productivity is low.

3. HYPOTHESIS DEVELOPMENT

Reactive Innovation and Competitive Business Strategy

The plan for innovation moves the company towards innovation strategy in three ways: maintaining its consumers, outperforming opponents, and designing a new product offering (Bowonder et al., 2010). Direct, reactive innovation results from the company’s learning process through the competition to master a particular market segment (Berkowitz, 1987). Research conducted by Mol & Birkinshaw (2009) states that innovation management is the first step to improving performance. When companies competing for market segments gain inferior financial performance, the desire to achieve superior financial performance motivates them to seek to neutralize and/or surpass other companies’ advantages by acquiring resources and/or innovating reactively. Such reactive innovations can be: imitating those resources, finding (creating) other equivalent resources, or finding (creating) other, superior resources (Hunt & Arnett, 2004). The company’s loneliness in acquiring other superior resources is the main capital of the competitive strategy. Utilizing a company’s superior resources will attract consumers to buy and leave other products/services (Madhani, 2010).

H_1: Reactive innovation has a significant influence on Competitive Strategy Business

Techno Resonance Innovation Capability and Competitive Advantage

Technology-based innovation is superior creativity to develop ideas, learn from alternative processes and problem-solving that provide value advantages for consumers, based on technological excellence, namely resource diversification (Hiong et al., 2020). Variable techno-resonance innovation capability is the ability to create products that have better consumer value than competitors. Therefore, this techno-resonance innovation capability triggers the company’s competitive advantage in mastering the market. This policy has been done by many large electronics sector companies such as Apple and Samsung. Excellence in utilizing Techno-Resonance Innovation Capability creates good value in consumer perception, even products
that have not been marketed, being targeted by customers because it has superior value in consumers' minds. The power of using technology in a unique and un-replicable company can create perceptions inherent in consumers' minds. The market will be easy to seize by creating these advantages because it already has a competitive advantage.

H_2: Techno-resonance innovation capability has a significant influence on competitive advantage.

Techno Resonance Innovation Capability and Competitive Strategy Business

In addition, the market has an imbalance in which economic dynamics become uncertainties that need to be addressed with certain strategy businesses. Variable techno-resonance innovation capability becomes one of the capitals to conduct competitive business strategies. With technology-based innovation, a company can quickly grow compared to non-technology-based innovation companies (Peters et al., 2013). The utilization of technology is the key to successfully improving its marketing performance in terms of improving the efficiency and effectiveness of production (Ilg, 2019). Techno Resonance Innovation Capability encourages companies to utilize technology to predict future market conditions so that companies can find a quick, and appropriate anticipation strategy to compete. Accurately predicting early economic conditions can be an opportunity to decide on a profit strategy faster than other competitors.

H_3: Techno-resonance innovation capability has a significant influence on competitive strategy business.

Reactive Innovation and Competitive Advantage

With innovation capabilities, the company can make cost efficiencies, produce different new products or differentiation products, and conduct acceleration in continuing its strategy (Afuah, 2009; Jena & Philipson, 2008; and Nylen & Holmström, 2015). The reliability of reactive innovation is the right supporting factor in winning the market. Also, reactive innovation capabilities can encourage companies to find competitive advantages by utilizing superior resources compared to other companies (Bowonder et al., 2010). These innovatively leveraged superior resources encourage companies to find superior products, determine the right market segmentation, and excel at entering the market. If the company can make a product that excels from superior resources, it can attract a wide market share and win the competition.

H_4: Reactive Innovation has a significant influence on Competitive Advantage

Reactive Innovation, Working Capital and Competitive Advantage

Allocation and working capital capability are the drivers in improving the company’s business innovation. According to Hellmann & Puri (2000), venture capital financing is related to product-market strategy and start-up results. The company’s innovation is not optimally run without capital support (De Bernardi & Azucar, 2020; Hall & Lerner, 2010). There is a special allocation for research and development in large companies, while small and medium-sized companies, generally rely on variable working capital as an innovation development. Working capital can support the creation of reactive innovation because superior resource utilization requires strong working capital through exploration or exploitation. Without working capital support, superior resource utilization will be hampered by not even running for the purpose of competing in the market. One important way to gain a competitive edge is to achieve efficient, flexible, and scalable working capital solutions is a reactive innovation approach and technological resonance innovation.

H_5: Working Capital moderates reactive innovation relationship to competitive advantage
Because working capital is significant for the company, it is crucial to keep working capital to support the organization. Capital helps companies stay sustained (Anbarasi & Praveen Kumar, 2019; Kerinab Beenu & Peter, 2014; and Loganathan & Praveen Kumar, 2014). In the process of establishing excellence through reactive innovation, the intervention of working capital is required. Without the intervention of working capital, the competitive advantage formed is less maximal. Along with this, in establishing a competitive business strategy through the role of technological resonance innovation, the working capital of the company needs to be involved.

H_6: Working Capital moderates reactive innovation relationship to competitive strategy business.

Competitive Strategy Business and Competitive Advantage

Excellence in strategic planning and tactical decision-making is crucial to success and three mechanisms: 1. A strategy process that breaks organizational boundaries and promotes strategic customer groups and capital decision-making; 2. A preparation mechanism that promotes entrepreneurship; 3. Business value structure enhancing the manager’s contribution to organizational strategy (Gluck et al., 1980). These three mechanisms encourage the establishment of the competitive advantage of the company. The essence of the company’s strategy is to select a specific and desirable role resulting from the company’s operation method, making it harder to reproduce by discovering a competitive advantage economy to a certain level of activity the company has implemented (Harvard Business Review, 2008). Companies with the right business unit strategy encourage companies to find superior products, determine the right market segmentation and excel at entering the market.

H_7: Competitive strategy business has a significant influence on competitive advantage.

Techno Resonance Innovation Capability and Reactive Innovation

The view of resource-based companies is used to explore how information system (IS) competencies affect process innovation in an organization (Tarafdar & Gordon, 2007). In addition techno-resonance innovation capability can also project alternative resources that can be used to anticipate the limitations of other resources. The utilization of technology in assessing current conditions, future conditions as well as analysis of resources that can be utilized to gain profit becomes a force in making reactive innovations. In other words, the advantages of technology in predicting resources are then processed by the company in creating innovations that utilize those superior resources.

H_8: Techno-resonance innovation capability has a significant influence on reactive innovation.

Reactive Innovation, Marketing Architectural Capability and Competitive Business Strategy

Marketing architectural capabilities are identified in the literature as a process in which companies prepare the right combination of availability and sustainable and other resources to deploy to their markets and deploy these planned resources turning them into real value propositions for the customer base (Morgan et al., 2003). In other words, this potential concerns the process whereby enterprises learn about their businesses and use these insights to build the right strategy through processes related to identifying strategic marketing strategies, formulating plans to ensure them, and processes related to their deployment (Morgan, 2012). The research conducted by Dalvi & Seifi (2014) mentioned that marketing capabilities had been heavily influenced by marketing performance because it helps the company’s performance. Both marketing architectural capabilities, an effective way to gather
business information, and marketing architectural capabilities help businesses to rapidly and effectively enter overseas markets. The transparent design of marketing architectural capabilities affects the marketing efficiency unit. Innovation marketing efficiency boosts competitive tactics.

**H_9:** Marketing Architectural Capability moderates the influence of reactive innovation on competitive business strategy

**Techno-Resonance Innovation Capability, Reactive Innovation, Competitive Business Strategy, and Competitive Advantage**

Globalization causes information technology to evolve, organizations have new skills, continuous innovation, and continuous research that generates new technologies to maintain a competitive position in the global market. Therefore to become a company still growing and winning the market, the company needs to innovate as a competitive strategy (Sawhney et al., 2006). The unique utilization of a company’s resources will attract consumers to buy and leave other company products/services. The uniqueness and excellence that competitors find increasingly difficult to replicate are the key to competing strategies success. One of the efforts that can be made in finding resources that competitors can’t replicate is the isolating mechanism (Barney, 1991). The resources in question include competence, business processes, experience, corporate culture, invisible assets, valuable heuristic (Schoemaker, 1990), time compression diseconomies, response lags. Some explanations of the above empirical studies emphasize that it is important companies pay attention to other superior and unique resources as the main capital of competing strategies (Abu Bakar & Ahmad, 2010). By engaging reactive innovation then technology-based innovation, a company can quickly grow and win the market (Peters et al., 2013) Many companies allocate several resources to R&D activities to gain technological innovation. Some succeed to achieve success by gaining uniqueness and excellence of products/services in competition. But some technology research often fails and becomes a cost burden for companies. Instead, R&D is done to create technological innovation by paying attention to reactive innovations on the principle of careful and careful testing and defensive moving innovation (Evans, 1991; Golden & Powell, 2000) will increase the efficiency and effectiveness of such technological innovations so that it will be accepted by the market, as well as gain a competitive advantage (Sharif, 1997).

**H_10:** Reactive innovation mediates Techno-Resonance Innovation Capability relationship to Competitive Business Strategy

**H_11:** Reactive innovation mediates Techno-Resonance Innovation Capability relationship to Competitive Advantage

### 4. RESEARCH METHODS

Data is collected for two months from July-August 2020 from owners or managers of small and medium-sized micro enterprises (MSMEs) eligible to represent the population in Central Java Province, Indonesia. A total of 350 MSMEs were invited and voluntarily participated in the study, represented by manager-owners based on the specified population criteria. Selected MSMEs are engaged in services, trade, manufacturing, creative industries, and others that produce and market products in the form of food and beverages, clothing, household appliances, and daily necessities. A summary of respondents’ profiles is presented in Table 1. Researchers arranged informal meetings with owner-organizers and conducted interviews assisted with a set of questionnaires, asked questions, then filled out questionnaire items related to the research model. A total of 156 respondents responded with complete data to support the completion of this study.
### TABLE-1: Summary of Respondent’s Profile

<table>
<thead>
<tr>
<th>Profil Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Services</td>
<td>34</td>
<td>21.8</td>
</tr>
<tr>
<td>2. Trade</td>
<td>75</td>
<td>48.1</td>
</tr>
<tr>
<td>3. Manufacture</td>
<td>7</td>
<td>4.5</td>
</tr>
<tr>
<td>4. Creative industries</td>
<td>12</td>
<td>7.7</td>
</tr>
<tr>
<td>5. Others</td>
<td>28</td>
<td>17.9</td>
</tr>
<tr>
<td>Length of effort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. &lt; 1 Year</td>
<td>52</td>
<td>33.3</td>
</tr>
<tr>
<td>2. &gt; 1 – 5 Year</td>
<td>65</td>
<td>41.7</td>
</tr>
<tr>
<td>3. &gt; 5 – 10 Year</td>
<td>13</td>
<td>8.3</td>
</tr>
<tr>
<td>4. &gt; 10 Year</td>
<td>26</td>
<td>16.7</td>
</tr>
<tr>
<td>Average Income (Month)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. &lt; Rp. 5 million</td>
<td>107</td>
<td>68.6</td>
</tr>
<tr>
<td>2. &gt; Rp. 5 million – 25 million</td>
<td>34</td>
<td>21.8</td>
</tr>
<tr>
<td>3. &gt; Rp. 25 million – 50 million</td>
<td>8</td>
<td>5.1</td>
</tr>
<tr>
<td>4. &gt; Rp. 50 million</td>
<td>7</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Source: primary data processed, 2020

Measurement of Research Variables

The variable measurement indicators used in this report were adjusted after previous relevant research. The study used indicators mimicking resources, found other equivalent resources, and found other superior resources to measure Reactive Innovation adapted from research conducted by Hunt & Arnett (2003). Competitive Strategy Business measurements are adapted from previous studies by Pearce & Robinson (2015) with dimensions used in cost leadership, product differentiation, and strategy acceleration. Techno Resonance Innovation Capability was recently introduced by Hiong et al. (2020) wherein their research, that has the skills in designing products, has the skills in configuring element design, the value of products using technology, as well as having technology-based craft skills mentioned as indicators in measuring those variables. Working Capital variables and Marketing Architectural Capability as moderating variables, indicators used were adapted from Copeland et al. (2005) and Day (1994) and Morgan et al. (2003) research, respectively. Competitive Advantage is measured using indicators from Porter (1998) consisting of product differentiation advantages, market segmentation advantages, and market-entering advantages. All indicator items are presented in Table 2 as measured using a 5-point Likert scale.

5. ANALYSIS AND DISCUSSION RESULTS

SEM-PLS analysis results are evaluated on the model of structural equations obtained. The study used structural equation modeling with smart-PLS 3.0 software to test hypotheses based on several considerations. First, SEM-PLS was able to solve several equations simultaneously (Nachtigall, et al., 2003). Second, SEM-PLS can simultaneously test the effects of mediation or moderation (Tabachnick & Fidell, 2012). From the data of 156 respondents, the model was analyzed in its entirety to observe the validity and reliability of research instruments and measurements of the validity and reliability of the construct, as presented in Table 3 (Appendix 1), followed by hypothetical testing, as illustrated in Table 2. The validity test’s evaluation of measurement model refers to test criteria, namely: convergent validity and discriminant validity, while reliability testing uses composite reliability (Wong, 2013). Furthermore, to assess structural models, namely to evaluate the relationship between constructs, the value of significance, and predictive relevance model (Q2) of the research model.

Hypothesis Testing

To test this research hypotheses, structural equation models with SEM-PLS techniques are used to test models and all related hypotheses. The result is presented in Figure 1. Based on the results of the hypothesis testing procedure of smart-PLS 3.0 software with two steps, namely PLS Algorithm and Bootstrapping, obtained the following results.
## TABLE-2: Hypothesis testing

<table>
<thead>
<tr>
<th>Hypothesis Variable</th>
<th>Original sample</th>
<th>Std. Error</th>
<th>t-values (≥ 1.96)</th>
<th>p-values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$H_1$</td>
<td>Reactive Innovation (X1) $\rightarrow$ Competitive strategy business (X2)</td>
<td>0.266</td>
<td>0.073</td>
<td><strong>3.103</strong></td>
<td>0.002</td>
</tr>
<tr>
<td>$H_2$</td>
<td>Techno-Resonance Innovation Capability (X3) $\rightarrow$ Competitive advantage (Y)</td>
<td>0.138</td>
<td>0.113</td>
<td>1.220</td>
<td>0.223</td>
</tr>
<tr>
<td>$H_3$</td>
<td>Techno-Resonance Innovation Capability (X3) $\rightarrow$ Competitive strategy business (X2)</td>
<td>0.425</td>
<td>0.068</td>
<td><strong>6.292</strong></td>
<td>0.000</td>
</tr>
<tr>
<td>$H_4$</td>
<td>Reactive Innovation (X1) $\rightarrow$ Competitive advantage (Y)</td>
<td>0.229</td>
<td>0.082</td>
<td><strong>2.782</strong></td>
<td>0.006</td>
</tr>
<tr>
<td>$H_7$</td>
<td>Competitive strategy business (X2) $\rightarrow$ Competitive advantage (Y)</td>
<td>-0.118</td>
<td>0.123</td>
<td>0.963</td>
<td>0.336</td>
</tr>
<tr>
<td>$H_8$</td>
<td>Techno-Resonance Innovation Capability (X3) $\rightarrow$ Reactive Innovation (X1)</td>
<td>0.298</td>
<td>0.075</td>
<td><strong>3.943</strong></td>
<td>0.000</td>
</tr>
<tr>
<td><strong>Indirect Effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$H_{10}$</td>
<td>Techno-Resonance Innovation Capability (X3) $\rightarrow$ Reactive Innovation (X1) $\rightarrow$ Competitive strategy business (X2)</td>
<td>0.067</td>
<td>0.029</td>
<td><strong>2.335</strong></td>
<td>0.020</td>
</tr>
<tr>
<td>$H_{11}$</td>
<td>Techno Resonance Innovation Capability (X3) $\rightarrow$ Reactive Innovation (X1) $\rightarrow$ Competitive advantage (Y)</td>
<td>0.068</td>
<td>0.029</td>
<td><strong>2.365</strong></td>
<td>0.018</td>
</tr>
<tr>
<td>$H_5$</td>
<td>Reactive Innovation (X1) $\wedge$ Working Capital (Z1) $\rightarrow$ Competitive advantage (Y)</td>
<td>0.120</td>
<td>0.073</td>
<td>1.640</td>
<td>0.102</td>
</tr>
<tr>
<td>$H_6$</td>
<td>Techno Resonance Innovation Capability (X3) $\wedge$ Working Capital (Z1) $\rightarrow$ Competitive strategy business (X2)</td>
<td>0.050</td>
<td>0.056</td>
<td>0.881</td>
<td>0.379</td>
</tr>
<tr>
<td>$H_9$</td>
<td>Reactive Innovation (X1) $\wedge$ Marketing Architecture Capability (Z2) $\rightarrow$ Competitive strategy business (X2)</td>
<td>-0.019</td>
<td>0.077</td>
<td>0.253</td>
<td>0.800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goodness of fit test</th>
<th>Result</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictive relevance model ($Q^2$)</td>
<td>0.537</td>
<td>Fit</td>
</tr>
</tbody>
</table>

**sig. 1%; *sig. 5%**
First, structural models are evaluated by observing predictive relevance models (Q2) that measure how well models generate observational values. Q2 is based on the coefficient of determining all dependent variables. The size of Q2 has a value with a range of $0 < Q2 < 1$, the closer the value of 1 means the better the model. The result of the Q2 value is presented in Table 2. Table 2 shows a predictive relevance (Q2) value of 0.537. This result means that the accuracy of this research model can explain the diversity of exogenous variables Reactive Innovation (X1), Competitive Strategy Business (X2), Techno Resonance Innovation Capability (X3), and from working capital moderation (Z1) and Marketing Architectural Capability (Z2) to Endogenous Competitive Advantage (Y) variables of 53.7%. The remaining 46.3% is explained by other variables not yet contained in this research model. Therefore, from the Q2 test results of this research model can be said to be good, and indications are acceptable. Ultimately the model can be used for hypothetical testing.

Second, it tests the hypothesis of direct influence as well as the hypothesis of indirect influence (mediation and moderation) of the pathway’s coefficient, as discussed in the previous section of this article. As presented in Table 2, the t-value for all coefficient hypotheses of the direct influence path is above the limit value of 1.96 or a small p-value of 0.05; except Hypothesis 2 (H_2) and Hypothesis 7 (H_7). Therefore, the hypothesis is well received. Meanwhile, for testing the mediation hypothesis, the t-value for all its hypotheses is above the limit value of 1.96 or a large p-value of 0.05; thus, the hypothesis is accepted, while for the entire moderation hypothesis the results are not proven and rejected. Further research results are explained as follows.

The results show that businesses that implement reactive innovation can improve their competitive business strategy. Reactive innovation can trigger businesses always to seek out

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and acquire other superior resources that drive and create new capabilities for businesses to compete in the market. Reactive innovations that are always made towards products can attract consumers to buy and leave other business products or services the same. This finding is following Bowonder et al., (2010), and Madhani (2010) that the innovation strategy implemented can encourage businesses to assign their customers and build new product differentiation so that businesses are more consistent and enduring in implementing competitive business strategies.

Simultaneously, the study also found that reactive innovation can directly result in a competitive advantage. The research results of the research show that most MSMEs in Central Java, especially in trade businesses, manufacturing, and creative industries tend to choose and utilize superior resources to be processed into goods and have added value. Thus, businesses are focused on finding superior products, easily determining the right market segmentation, and excelling in entering the market. Bowonder et al. (2010) revealed that a business that can make superior products from superior resources can attract a wide market share and win the competition.

Also, variable techno resonance innovation capability has a positive and significant influence on competitive business strategy. Hiong et al. (2020) state that value resonance provides a way and positive consequences for companies that show value for each product or service offered to the market. The results show that MSME businesses with product innovation capabilities have the potential to improve business performance compared to competitors. This study supports the findings of Hiong et al. (2020); and Sok & O’Cass (2015), primarily in terms of support for the implementation of its competitive business strategy in improving profitability over sales. Furthermore, this research is similar to Sharma & Jasrotia (2016). The mentioned that products that have value with excellent technical content support will get high-value resonance leading to higher marketing performance so that the business will further enhance its competitive business strategy.

In terms of its support for businesses that implement reactive innovation, techno resonance innovation capability contributes very well to MSMEs in Central Java. Especially in MSMEs who have only started their business in about 1-5 years, more dominant in implementing their innovation strategy than businesses that have been running over 5-10 years. The utilization of technology for start-ups and businesses that are starting to develop in assessing current conditions and future conditions for resources that can be a force in reactive innovation. This study supports the findings of Tarafdar & Gordon (2007) that resource-based businesses explore information systems’ competencies to influence process innovation in a business. Businesses then process technological advantages in predicting resources in creating reactive innovations to take advantage of superior resources.

The overall analysis results show that reactive innovation is the primary key that must be owned and implemented by MSMEs, especially in Central Java. This study shows that reactive innovation strategies become variables that can directly influence and be able to mediate between techno-resonance innovation capability and competitive strategy business and also between techno-resonance innovation capability and competitive advantage, while answering gaps from previous research that are still limited. The influence of techno resonance innovation capability on competitive strategy business mediated by reactive innovation rated 0.067 lower than its direct effect (0.425) and significant, indicates the effect of mediation partly from reactive innovation to fill the gap between techno-resonance innovation capability and competitive strategy business. Similarly, the results of techno resonance innovation capability testing on competitive advantage mediated by reactive innovation scored 0.068 lower than its direct effect (0.138) and significantly proved the mediation effect of some of the variable reactive innovations. The results of this study support Peters et al., (2013) that by involving reactive innovation then technology-based innovation, a company can quickly grow and win the market. Furthermore, these findings are consistent with Evans (1991); Golden & Powell (2000); Sharif (1997); that the development is done to create innovation by paying
attention to reactive innovation on the principle of careful and careful testing and moving defensive innovation will increase the efficiency and effectiveness of innovation of such products so that it will be accepted by the market, as well as gain competitive advantage. This is also true for MSMEs in Indonesia, especially in Central Java.

6. CONCLUSIONS AND RECOMMENDATIONS

This research aims to provide a conceptual model on how to increase the competitive advantage of SMEs with the ability to resonance innovation in reactive innovation, the determination of competitive business strategies moderated by the support of working capital from indicators of financial and marketing architecture capabilities in the collection, design process, dissemination of all information and development of marketing business strategies. From the hypothetical results proposed, we provide some conclusions of techno-resonance innovation capability to increase competitive advantage. First, competitive advantage is gained from readiness to enter the market from technological development, differentiation and superior in market segmentation (New & Free, 2003; M. Porter, 1998; M. E. Porter, 1985; M. E. Porter & Millar, 1985). Second, the techno-resonance capability of innovation can project the limitations of alternative resources used to surpass the other companies’ advantages called reactive innovations. Third, the ability to techno-resonance innovation capabilities on business strategy can provide cost-efficiency leadership by providing competitive pricing, competitive excellence of product variation, and excelling in the demands of the latest trends and technologies. Thus, these three hypotheses have the potential to increase complementary advantages. However, the marketing architecture capabilities have not strengthened the relationship to the advantages of competitive strategies and working capital as the company’s operational financial resources.

Therefore, the next research recommendations can sharpen the results of this study by multiplying the number of larger samples and increasing the period of the study. Besides, the company’s competitive advantage is increasingly dynamic, creative, and aggressive in finding competition gaps. To strengthen the ability of marketing architecture for SME businesses, namely by actively gathering information participating in creative economy exhibitions, training of e-business media technology, e-commerce with the concept of business to business and business to costumer organized by the government and educational institutions in the form of community service from lecturers to the public. Marketing technology should be developed by conducting marketing intelligence, market penetration, government regulation participation in local brand empowerment, and disseminating concrete forms of augmented reality information technology applications as variables that can be added to subsequent research contributions.

7. ACKNOWLEDGEMENT

We would like to thank and give special appreciation to both business people and SME managers spread across Central Java, having given time voluntarily in discussion interviews as well as filling out questionnaires for the benefit of this research.

8. REFERENCES


http://dx.doi.org/10.31685/kek.V5i1.837
Appendix

TABLE-3: Measurement of Validity and Reliability

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Convergent validity testing of each indicator used for its latent variables used loading values to evaluate. Table 2 presented that the variable’s indicator loading value is greater than the acceptable threshold of 0.700, and some indicators are at an acceptable tolerance value of 0.900-0.600 (Hulland, 1999; Wong, 2013). From these results, convergent validity is confirmed. Furthermore, discriminant validity testing refers to the correlation of indicator items with other constructs in the research model. The loading value of the associated construct’s indicator item must be greater than other construct cross-loading (Hair et al., 2017). Meanwhile, the AVE value among latent variables must be above the value of 0.500, so that the AVE root value can be greater (Bagozzi & Yi, 1988). Table 2 shows the outcomes of the cross-loading and AVE values of each pointer and the latent variable used.

The Reactive Innovation variable indicator (XI)’s cross-loading value is above the cross-loading value of the other latent variables of 0.82; 0.91; 0.68. So does the cross-loading value of the Competitive Strategy Business variable indicator (X2) (0.80; 0.77; 0.73), Techno Resonance Innovation Capability (X3) (0.83; 0.78), Working Capital (Z1) (0.86; 0.85; 0.78; 0.83), Marketing Architectural Capability (Z2) (0.56; 0.89), and Competitive Advantage (Y) (0.52; 0.81), proven each value to be above other latent variable cross-loading values and proven to be at a better level value so that the indicators used in the study proved to be discriminatingly valid. As suggested by Bagozzi & Yi (1988), Hair et al. (2011) that the use of composite reliability is better at measuring the reliability of latent variables. From Table 2, the value of each variable is proven to be more than 0.600, so the high composite reliability has been demonstrated by all the variables used in this study.

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