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# Systemic Relationship Between TQM, Compatitive Advantage, Innovation and Managerial Performance

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# Systemic Relationship Between TQM, Competitive Advantage, Innovation and Managerial Performance \*

Ahmad Firman\*, Zainuddin Mustapa\*\*, ADITYA Halim Perdana Kusuma Putra\*\*\*

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## Abstract

**Purpose** – Total Quality Management (TQM) is the best solution to date in determining the direction of the pace and development of a company going forward. The role of TQM is to strive for the implementation of all company activities to be integrated, planned, effective, and efficient to produce excellent and sustainable performance. TQM is also a guideline for companies to guide a company to be brave in competing with its competitors. In detail, this research investigates the effect of TQM on market competition, innovation, and company performance.

**Research design, data, and methodology** – By examining companies engaged in the Property Industry in Indonesia with a sample approach of 105 respondents coming from middle to top level of management in the property sector in Indonesia. To empirically prove the results of this study using regression analysis as a test tool for analysis.

**Results and Findings** – The results of this study confirm that TQM has a positive effect on market competition, innovation, and company performance indirectly. However, it does not have a significant impact if it is directly related to TQM on company performance. In this case, TQM for property companies in Indonesia would not have been possible without the role of innovation and market competition. So that the managerial implications of this study also confirm that TQM is essential and feels obligatory to be implemented optimally.

**Keywords:** TQM, Innovation, Competitive Advantage, Market Competition

**JEL Classifications:** M0, M20, L11, L7

## 1. Introduction

Global competition is the trigger for many companies to talk about the concept of quality, especially those related to products or services produced as well as improving company performance. This phenomenon also applies to companies engaged in the property business. Global competition also has implications for infrastructure and business development in Indonesia. The rise of infrastructure development in Indonesia has a positive impact on the growth of the property sector. Besides, the passion for property is also supported by government policies that are pro-business and high expectations from the tax amnesty program. The economic growth target of above five percent is also considered to have helped stimulate the property sector.

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Indonesian Statistics Bureau in 2018 show an increasing trend of growth. Several macros and microeconomic factors are considered to sustain the growth of the property industry in 2018. These factors include the impact of the tax amnesty policy, the birth of regulations for reducing housing construction permits, and lowering the rates. The value of the capitalization of Indonesia property in 2018 is estimated to reach IDR 318 trillion, an increase of 15% compared to 2017 which reached IDR 277 trillion. The fact is that until now, there are at least 14 million back-log housing needs in Indonesia. It is an evidence that the property business will continue to grow along with the community's demand for decent residences. The growth of housing needs and the growth of the property business will encourage competition for property businesses to meet the availability of property desired by the community.

Exciting property growth in Indonesia is also in line with the high level of business competition, which is marked by an increasing number of developers and property brokers. For that reason, as business actors, they must continually strive to improve quality and innovate to win the competition. In marketing the property business, the ability to negotiate and choose ways to be able to convince consumers through a personal approach is one of the critical factors. Next, is an effort to understand all the needs and desires of consumers so that they feel comfortable with the services offered. The entrepreneurs of the property industry in Indonesia believe that the property industry is one area that will not die because occupancy is a primary human need. The residential property apartment market segment in Indonesia is still classified as very broad for the middle-class consumer segment. Whereas the upper-class property consumers, namely office buildings and shopping stalls, and elite residences such as real estate. The number of new developers in the Indonesian property world makes competition among developers increasingly fierce. However, in the course of several obstacles that are often faced by business actors in the property sector, it is difficult to convince potential consumers to buy, so that the level of transactions for the sale and purchase of property products cannot routinely occur every day.

Market competition will undoubtedly have an impact on company performance; in fact, this competition is what forges entrepreneurs and companies should ideally be better. Locus of control company becomes a determinant of whether entrepreneurs can overcome and resolve all the problems they are facing so that the company they lead becomes more developed and advanced or vice versa. In essence, the performance of the company The company's performance is essentially an achievement achieved by a business organization that can be seen from the results. The researchers agreed that measuring business performance is not just enough to use a single measure (Jaworski & Kohli, 1993). Jaworski & Kohli (1993) and (Iqbal, Huq, & Bhutta, 2018) states that company performance is measured by overall business performance compared to last year and overall performance compared to its main competitors, while in research Narver & Slater (1990). Kristianto & Tarigan (2019) States that business performance is measured by profitability compared to predetermined targets. One effort to achieve excellent performance must also be through improving the process of proper quality management. To realize an improved quality management process, TQM practices are a standard requirement in modern management. TQM has played an essential role in developing management practices in an organization, where a concept of quality is now considered a major strategic factor in business success. To improve competitive position and improve business performance, companies around the world, large or small manufacturing and services are applying the principles of TQM (Kanji, 1996). The role of TQM, which aims to improve product quality is marked by the improvement in terms of innovation, creativity, and consistent productivity to produce valuable products. Also, the role of TQM means to give a touch to better service

that aims to meet customer satisfaction. <sup>1</sup> This perspective is based on the argument that TQM practices in both the human and technological dimensions and help create an environment and culture that supports innovation (Thai Hoang, Igel, & Laosirihongthong, 2006). The core of implementing TQM is customer satisfaction. The realization of TQM is continuous and continuous innovation. Innovation can be seen with a structuralist approach and a process approach. The structuralist approach views change as a unit with fixed parameters such as technology and management practices, while the process approach views innovation as a complex process, which often involves various social groups in organizations (Swan et al., 1999). Some studies also identify a positive relationship between TQM and innovation in terms of market penetration. (Wiklund et al., 2003) as well as having an impact on management improvisation in organizations (Baldwin & Johnson, 1996). Other findings were also conveyed by Thai Hoang, Igel, & Laosirihongthong, (2006) which examines the effect of TQM and innovation on the manufacturing industry in developing countries. Thai Hoang, Igel, & Laosirihongthong Found that TQM was considered as a set of corporate tools that had a positive impact on corporate innovation. TQM, in addition to affecting innovation and company performance, also has an effect on market competition. The arguments for consideration of including market competition in this research model are based on the arguments presented by several previous studies. Chong dan Rundus (2004) indicates that the higher the level of market competition, the more positive the relationship between TQM practices with product design and organizational performance.

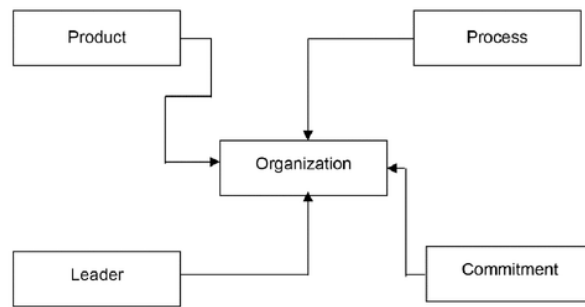
The Objectiveness of this study examines empirically and the complex interrelationships and relationships between TQM, competitive advantage, innovation, and performance through causality. Where the results of this study can provide development in terms of theoretical scientific management and management strategies as well as an impact on company managerial.

## 2. Literature Review

### 2.1. Total Quality Management

Initially, the idea of TQM first appeared in the US, but later it was organized and implemented in several Japanese companies. Particularly after WW-II, TQM was summarized and applied in the form of training programs in various industrial sectors, two experts who were *Shinshe* of TQM, both in Japan and in the US were *W. Edward Deming* and *Joseph M. Juran* (see. Kanji, 1990). TQM <sup>2</sup> is an approach in running a business that tries to maximize the competitiveness of an organization through continuous improvement of its products, services, people, processes, and environment. <sup>5</sup> The success or failure of TQM implementation is determined mainly by the competence of the company's HR to realize it. (Powell, 1995). Evans (2002) explained that TQM is a philosophy that emphasizes sustainably improving manufacturing processes by eliminating waste, improving quality, developing skills and reducing production costs. Hackman & Wageman (1995) designate this aspect as a supervisory process, an approach where product quality is determined by employees. Creech (1996) Stated that there are five main pillars in TQM to drive an organization, i.e., products produced, processes carried out in providing products, then the organization is driven by a leader, and there is a commitment among the leaders in an organization. The five pillars are explained in figure 1.





**Figure 1: Five Pillar of TQM** (Creech, 1996)

Products are the focal point for organizational goals and achievements; quality in commodities is not possible without merit in the process. Quality in the process is not possible without the right organization. The right organization is meaningless without adequate leadership. A strong commitment, from the bottom-up, is a supporting pillar for all others. Each pillar depends on the other four components, and if one is weak by itself, the other is also weak. The principles in the TQM system must be sourced from the top down and operate from the bottom up if the desired everything works excellently. The principle of TQM is to focus on the customer. Customer focus means placing the customer at the center of activity and no longer as a production-oriented company. Do it right (term number one) is necessary to continuously improve and make quality an attitude that all people must be responsible for the quality. Communicate and train (term number two). Communicating means telling employees what is happening. For this reason, it is necessary to improve communication channels and make it easier for employees to convey something (Arfah & Putra, 2019). Finally, Measure the results achieved and record (term number three). Measurements were taken to maintain standards and processes to be within agreed tolerance levels.

## 2.2. Innovation

Innovation can be defined as the process and / or results of developing the utilization / mobilization of knowledge, skills (including technology skills) as well as experience to make or make improvements to new products / services, processes or systems, which provide value which has meaning or significantly. Innovation has four characteristics i.e., having a particular / specific means that a change has features that are unique in the sense of ideas, programs, order, systems, including the possibility of expected results. Having the characteristics or elements of novelty, in the sense of innovation must have the attributes as work and thought that has a degree of originality and novelty. Innovation programs are implemented through planned programs, in the sense that innovation is carried out through a process that is not rushed, but the innovation activities are prepared carefully with a clear agenda and planned. The innovation that is rolled has a goal; the innovation program that is carried out must have the direction to be achieved, including the leadership and strategy for achieving that goal. Grover, Agrawal, & Khan (2004) High product quality will increase the company's competitive advantage, which will ultimately have an impact on company performance. Innovation is a technological, managerial and social process, where new ideas or concepts are first introduced to be put into practice in a culture and are a determining factor in industrial competition and a formidable weapon against competition.

### 2.3. Performance

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Performance is the result of work that can be achieved by a person or group of people in an organization, following their respective authorities and responsibilities, in the context of efforts to make the organization's objectives legally, not violating the law and per morals and ethics. There are several ways to measure company performance, namely: Assessment system, which is an evaluation that provides information about the state or position of the order. Evaluation using this model can produce information about the final position of all elements of the promotional program is completed. Program planning, which is an evaluation that helps assess activities in a particular program that might be successful in meeting their needs. Program improvement, which is an evaluation that provides information about how the program functions, how the program works, how to anticipate problems that might interfere with the implementation of activities. The certification program, which is an evaluation that provides information about the values or benefits of the program. In the example of the promotion program above, this model is intended to evaluate whether it has an impact on potential customers, that is, getting more interested in buying products or encouraging consumers to subscribe.

### 2.4. Resource Based View (RBV) as Grounded Theory

Resource-based view Theory (RBV) is a concept that was born from the research of economists around the world, where this theory is believed to provide answers in creating a competitive advantage for a company (Commer et al, 2016), (Kaufman, 2015), (Madhani, 2009). The creation of sustainable competitive advantage allows companies to use their resources through innovation to encourage better performance (Mansur et al., 2019). On the other hand, a good management process through the TQM mechanism to create innovation and improve performance is also related to market competition.

The management of an organization that relies on resources owned by the company encourages the company to maintain its competitive advantage, which causes a company to improve its performance. Competitive advantage itself arises from the resources owned by a company, and this is in line with a theory called RBV. Chong & Rundus (2004) found that the higher the level of market competition, have positive relationship between TQM. Besides, the results also confirm that the higher the level of market competition, the more positive the relationship resulting from TQM implementation. Agus & Hassan (2011) shows that manufacturing and retail companies must emphasize more considerable attention to aspects of measuring the quality of TQM and a higher level of management support for TQM initiatives to ensure a sustainable strategic competitive advantage. Apart from that, TQM content can produce cost-based leads or differentiation. The inherent complexity of the TQM process has the potential to provide superior products and is difficult to emulate by competitors suggesting that manufacturing and retail companies must emphasize more considerable attention to aspects of measuring TQM quality and higher levels of management support for TQM initiatives to ensure competitive advantage strategic sustainability. Apart from that, TQM content can produce cost-based advantages or differentiation. the inherent complexity of the TQM process has the potential to provide superior products and are difficult for competitors to emulate. (Reed, Lemak, & Mero, 2000). So the hypothesis is built: **H1 = TQM has a positive effect on market competition.**

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The extraordinary impact of process management and information and analysis of innovation systems can be demonstrated by improving the quality of integrated management (Wikund et al, 2003), (Kanji, 1996). Powell (1995) concluded that open culture, employee empowerment, can affect company performance, but not TQM tools and techniques, such as process improvement. Anderson & Sohal, (1999) also found only organic elements that

showed an impact on innovation. (Yusr, 2016) Argued that TQM had a positive impact on corporate innovation. So the hypothesis is built **H2: TQM has a positive effect on innovation.**

(Tang, 2006) states that the company's perception of a competitive environment is essential for realizing innovation and shows that the relationship between innovation and market competition can be positive or negative, depending on the understanding of specific game and specific innovation activities. (Dereli, 2015) states that Innovation will be a strategic tool in this prestigious competition for the improvement, creation, and improvement of businesses to create competitive advantages that are equal or better than those in foreign countries to realize sustainable development. (Distanont & Khongmalai, 2018). So the hypothesis is built **H3 = Innovation has a positive effect on market competition**

Corredor & Gozni, (2011) Designate this aspect as a supervisory process, an approach whereby product quality is determined by the employees who work. Whereas Performance can be interpreted as "a periodic determination of the operational effectiveness of a company, a part of the company and its employees based on predetermined targets, standards, and criteria. Raharja (2012) provide a statement that quality management is recognized as a strategic tool for achieving performance and highest competitive advantage; TQM practices are also found to be interrelated to help achieve organizational performance goals (Ramlawati & Putra, 2018). These arguments provide the basis for the following hypothesis. **H4: TQM has a positive effect on the Company's performance.**

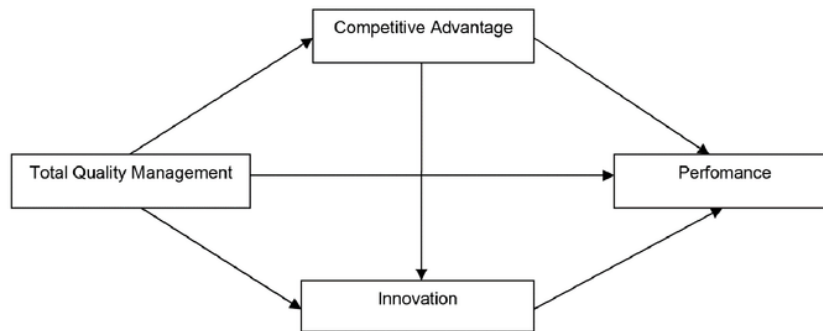
(Kaufman, 2015) Argues that the company's performance can be encouraged if faced with the situation of market competition, whether free or tight. But the results of the study (Gupta & Krishnamurti, 2016) Different from the results of Kaufman's research. Gupta believes that market competition has an indirect effect on company performance. So the hypothesis that is built is **H5 = Market competition affects the company's performance.**

Al-Naser & Mohamed (2017) In his research concluded that organizational performance increases with the quality management practices that are explored. In this case, the development of innovation becomes essential to improve performance. The ability of a company to innovate is critical when striving for a competitive advantage (Porter Michael 1985). Innovation and performance will differ between companies. So, the hypothesis put forward is. **H6: Innovation has a positive effect on Company Performance.**

TQM can have an impact on company performance while implementing a great system based on technology that continues to be developed in each of its activities (Brah, Tee, & Madhu Rao, 2002). The purpose of implementing the system provides the level of readiness of the company to be ready to compete (Corredor & Goni, 2011). The application of the system is also one of the innovations in terms of production. These arguments provide the basis for the following hypothesis. **H7 = TQM has a positive effect on company performance by making the market competition as intervening, and H8 = TQM has a positive impact on company performance by making innovation as intervening.**

Based on the arguments presented in the introduction, prior research, and literature review sections, the theoretical framework of this research can be formulated in the following diagrams:





**Figure 2: Research Framework**

### 3. Research Design and Methodology

#### 3.1. Samples

The number of samples in this study was 105 respondent from 43 property companies in Indonesia, with positions as project manager, General Manager, Head of Marketing, Supervision, Brand Manager, Project Director, Marketing Staff, Finance Staff, Sales Executive, and Project Coordinator. Sample of criteria who have held these positions for at least two years (see. Table 3). Based on demographic data, there were 73 male respondents (69.5%) and 32 female respondents (30.5%). Based on the level of education, respondents with the bachelor education level were the most dominant 73 person (69.5%), Masters = 21 person (20%), Diploma = 7 person (6.6%) and others = 4 people (3.8%). Based on the age distribution of respondents. The dominant age range of respondents was 31 - 40 years = 48 person (45.7%). Age 41-50 years = 33 person (31.4%), age <30 years = 17 person (16.1%), age > 50 years = 7 person (6.6%).

#### 3.2. Measurement

This study uses electronic surveys, filling out survey results using a Likert scale 1-5 (Strongly disagree - Strongly Agree), such as measurements used in research. The measurement of the results of the study was carried out in several stages before entering data analysis and hypothesis testing (table 1). First Section; Validity testing, reliability testing with Cronbach alpha criteria > 0.60, Testing for normality with Kolmogorov-Smirnov criteria. Sig > 0.05. The Glesjer Test with criteria > 0.05. Multicollinearity test with criteria VIF > 10. Hypothesis testing stage through two stages, namely a direct relationship using regression with the criterion  $P < 0.05$  and an indirect relationship with the Sobel test. Second Section, namely the test of influence and structural relationship models as well as hypothesis testing (see Table 2). While the operational measurements of the variables and dimensions are explained as in table 2.

**Table 1: Pengujian Hubungan Struktural**

Path	Structural Equation Model (SEM)	Role Effect
H1	TQM → Market Competition	Direct
H2	TQM → Innovation	Direct
H3	Innovation → Company's Performance	Direct
H4	TQM → Company's Performance	Direct
H5	Market Competition → Company's Performance	Direct
H6	Innovation → Company's Performance	Direct
H7	TQM → Market Competition → Company's Performance	Indirect
H8	TQM → Innovation → Company's Performance	Indirect

**Table 2: Measurement of Variabel**

Variable	Item	Major References
TQM	<ol style="list-style-type: none"> <li>1. The current trend in property is one of the essential bases for companies in designing products</li> <li>2. To reach markets in all consumer lines, product quality based on consumer needs is a critical reason for the company's strategy</li> <li>3. Development in the elements of planning (planning) is a precise strategic step to produce quality products</li> <li>4. Training will make employees skilled at work</li> <li>5. Excellent communication makes employees feel comfortable at work</li> <li>6. Standard Operational procedure is the policy direction and demands of work of all parties in the company.</li> <li>7. Companies with a sound system will make sustainable improvements</li> <li>8. The Quality improvement requires the full participation of all employees in the organization.</li> <li>9. Product quality can be achieved through good organizational leadership</li> <li>10. Product quality must be assessed from the beginning of product design</li> </ol>	(Grover et al., 2004), (Meiyani & Putra, 2019), (Ramlawati & Putra, 2018), (Chong & Rundus, 2004), (Kumar, Choisine, de Grosbois, & Kumar, 2009), (Yusr, 2016)
Innovation	<ol style="list-style-type: none"> <li>1. Products are made in several types as a classification so that consumers are free to choose according to the ability of consumers</li> <li>2. Training for salespeople is one of the right ways for them to be skilled at marketing products to potential customers</li> <li>3. Research in the development of new products is essential for companies to launch new products</li> <li>4. New product innovation means making a significant difference than competitors.</li> <li>5. Promotional strategy innovation in various media is the best way to carry out the marketing process of new products</li> <li>6. The company must establish cooperation with many parties.</li> <li>7. New product development always adapts to technological changes</li> <li>8. Development of new products is still an experience</li> </ol>	(Camisón et al, 2018), (Teece, Pisano, & Shuen, 1997), (Tang, 2006), (Reed et al., 2000), (Wiklund et al, 2003), (Anderson & Sohal, 1999), (Yusr, 2016)
Market Competition	<ol style="list-style-type: none"> <li>1. An excellent corporate marketing strategy is a corporate strategy in winning the competition</li> <li>2. To achieve the company's objectives, the marketing strategy must reflect the company's mission</li> <li>3. Evaluation of marketing aspects is directed in detail to assess predetermined targets</li> <li>4. In market competition. Product quality is one of the main reasons considered in product pricing</li> <li>5. Focus on customers is the key to success in winning the business competition.</li> <li>6. To win the competition, companies must improve the quality of service to customers.</li> </ol>	(Alam, Hamzah, Putra, Ginting, & Teng, 2019) (Amin et al, 2017), (Aquilani, Silvestri, Ruggieri, & Gatti, 2017), (Kotler, 2012), (Chong & Rundus, 2004)
Performance	<ol style="list-style-type: none"> <li>1. Measuring excellent company performance if all work activities are as planned</li> <li>2. Excellent company performance is reflected in excellent financial performance</li> <li>3. Company performance can be seen in the production of its employees</li> <li>4. The company's performance is getting better if its product sales exceed the target</li> <li>5. Excellent company performance can be regarded from the company's ability to pay its liability</li> <li>6. Excellent company performance can be seen from customer satisfaction through the products produced</li> <li>7. Excellent company performance can be seen in the growing number of users Good</li> <li>8. company performance can be seen from the loyalty of its employees</li> </ol>	(Powell, 1995), (Brah et al., 2002), (Bouranta, Psomas, & Pantouvakis, 2017), (Amin et al., 2017), (Terziovski & Samson, 1999), (Raja & Wei, 2014)

## 4. Results and Discussion

### 4.1. Demography of Respondent

**Table 3: Data Demography (N = 105)**

Attributes	Item	F	%
Gender	Men	73	69.5
	Women	32	30.5
Age (years)	< 30 year	17	16.1
	31 - 40 year	48	45.7
	41 - 50 year	33	31.4
	> 50 year	7	6.6
		7	6.6
Education Level	Diploma	7	6.6
	Bachelor	73	69.5
	Magister	21	20
	Others	4	3.8

### 4.2. Statistical Result

In the first stage of statistical testing, as shown in table 4. Where the validity test for all items of the variable states valid. The most dominant item forming the TQM variable is the TQM10 item (0.734), while for the Innovation variable

the most dominant item is IN5 (0.764), the dominant item forming the market competition variable is MC3 (0.768), and the dominant item creating the performance variable is P3 (P3 (0.771). Reliability test also shows that all items are declared reliable > 0.60. Testing for normality using the Kolmogorov-Smirnov > 0.05 method so that it can be concluded that all data are normally distributed. Likewise, in the heteroskedasticity test using the *glesjer* test method also showed that the glacier test value > 0.05 so that it can be stated that there is no heteroscedasticity in the statistical analysis of this study. The multicollinearity test showed that all the relationships of the VIF variable <10, so it was also concluded that the statistical tests in this study did not have multicollinearity.

**Table 4: Statistics Test**

Variable	Item	Pearson Correlation	Cronbach Alpha	Normality Test & Heterokedastitas Test	Multicollinierity Test
TQM	TQM 1	0.507	0.860	TQM → Market Competition = 0.100 per 0.398	2.672
	TQM 2	0.652	0.838		
	TQM 3	0.671	0.837		
	TQM 4	0.676	0.838		
	TQM 5	0.705	0.833		
	TQM 6	0.712	0.832		
	TQM 7	0.694	0.835		
	TQM 8	0.677	0.836		
	TQM 9	0.610	0.844		
	TQM10	0.734	0.830		
Innovation	IN 1	0.681	0.816	TQM → Innovation → Market Competititon = 0.271 per 0.700	2.796
	IN 2	0.660	0.819		
	IN 3	0.738	0.808		
	IN 4	0.702	0.819		
	IN 5	0.764	0.804		
	IN 6	0.654	0.819		
	IN 7	0.708	0.812		
	IN 8	0.598	0.836		
Market Competition	MC1	0.682	0.762	TQM → Market Competititon → Innovation → Performance = 0.159 per 0.087	2.742
	MC2	0.682	0.751		
	MC3	0.768	0.720		
	MC4	0.741	0.731		
	MC5	0.628	0.773		
	MC6	0.676	0.747		
Performance	P1	0.679	0.837		
	P2	0.611	0.847		
	P3	0.771	0.825		
	P4	0.706	0.838		
	P5	0.695	0.834		
	P6	0.687	0.835		
	P7	0.721	0.831		
	P8	0.753	0.827		

Hypothesis testing, as shown in table 5 states that of the eight hypotheses previously raised in the literature review and the objectivity of this study, most of them have a significant effect <0.01. Except for the H4 explanation on the direct relationship of the TQM variable to performance showing a significance value of 0.966 > 0.05 so it can be stated that H4 has no significant effect. Indirect effects such as H1 - H6, it is indicated that TQM is positive and has a very substantial impact on market competition (t = 11,156). while the Indirect effect relationship such as H7 and H8 states that TQM also has a positive effect on performance by making the market competition variable an intervening variable.

**Table 5: Hypothesis Test**

Hyph	Path Analysis	$\beta$	t	Std. Error	Sig. Level	Result
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H1	TQM → Market Competition	0.532	11.156	0.047	< 0.01	Support
H2	TQM → Innovation	0.390	4.396	0.089	< 0.01	Support
H3	Innovation → Company's Performance	0.655	5.213	0.126	< 0.01	Support
H4	TQM → Company's Performance	-0.005	-0.043	0.107	0.966	Not Support
H5	Market Competition → Company's Performance	0.609	3.900	0.156	< 0.01	Support
H6	Innovation → Company's Performance	0.515	4.713	0.109	< 0.01	Support
H7	TQM → Market Competition → Company's Performance	0.523 0.609	3.683	0.047 0.156	< 0.01	Support
H8	TQM → Innovation → Company's Performance	0.390 0.515	3.212	0.089 0.109	< 0.01	Support

### Discussion

Hypothesis (H4) shows that TQM does not have a direct influence on performance. The results of this empirical test reject a variety of previous research literacy that supports it as stated by (Chong & Rundus, 2004), (Reed et al., 2000) But besides that, the results of this study confirm the research results from (Raja & Wei, 2014) and (Terziovski & Samson, 1999) Also believes that TQM does not have a significant direct effect on performance. The implication of TQM on company performance does not always have a positive impact as in previous studies that took samples of the manufacturing industry. Several categories of companies will give different results, for example, as in the research in this study, namely companies engaged in the property industry. There are insignificant results besides being found in this study, and it also indicates that the application of TQM is not yet optimal in the property industry in Indonesia, thus requiring that the implementation of TQM be truly optimized so that the results of the TQM implications have a real impact directly on company performance. Whereas in the indirect relationship variable on hypothesis H7 and H8 states that TQM has a positive and significant effect on performance if it is moderated by market competition and innovation. The assumption that can be formed is that the property companies examined in this study still focus on innovation entities and how tight the competition space is. So it can be justified that without innovation, the company will not describe a good company performance appraisal.

To this day, based on the results of studies in the case of the Property Industry in Indonesia, the innovations that occur are still limited to product innovations, not yet optimal and entirely property companies that access the latest innovations through service innovation models. However, if we look closely at technological advancements and digital access, it becomes an opportunity for companies to be able to compete through the latest digital technology-based distribution and service channels. Property companies in Indonesia should also try this. In an environment of global competition, innovation is the key to success for companies. While technology and research and development (R&D) activities significantly influence the organizational structure and have an impact on the right competitive innovation giving a competitive advantage (Dereli, 2015). Innovation will be a strategic tool in this prestigious competition for the improvement, creation, and improvement of businesses to create a competitive advantage to realize sustainable development. (Distanont & Khongmalai, 2018).

Ideally, the application of TQM should build a company image and professional company performance without innovation. This opinion is also in line with the justification of what was said by Laitinen et al., (2016) That there are still many companies that still see product innovation as a method of competitive advantage instead of making TQM as a clear guideline as a tool to realize competitive advantage. In its journey, TQM produces effective and efficient ways and efforts through the experience that the company has gone through. Departing from this, of course, the



output from TQM itself can produce two superior innovations, namely product innovation and service innovation. This statement is in line with what has been stated previously by (Reed et al., 2000). Market competition can enter well as long as the products produced by property companies are based on consumer needs, consumer tastes, market segmentation, and the application of intricate management patterns. The role of TQM has a complex influence on the sustainability of a company's operations, especially property companies, but the implementation of TQM at the beginning, of course, has a high price in terms of costs because it demands improvements in all lines in which the role of capital and technology play that role. But the impact on cheap and controlled all cost effectively and efficiently and effectively in business activities in the future. TQM can be realized not only through products produced, initiated by commitments from all internal. Competency enhancement for HR, which is the party that implements TQM itself and the implementation of compliant SOPs. Because without improving the quality of human resources and a clear vision and mission, TQM can not run well. With the complex management elements that are passed through TQM, of course, the products produced should be based on market segments, consumer tastes and of course the trends that are rife among consumers primarily for property consumers in Indonesia. The application of TQM to the product will undoubtedly result in product innovation while other innovations produced by TQM activities that are integrated are increasing the company's HR competencies through training, and also developing other skills that aim to sharpen the company's actions further.

## **5. Conclusion**

Application of TQM for internal organizations will certainly produce innovation in terms of skills and work skills, whereas the implementation of TQM based on the marketing channels and the development of product distribution will result in distribution innovation. Innovation in product distribution for the property industry in Indonesia can be further maximized if property companies can reach all aspects of distribution channels and chains, including distribution channels based on digital technology. Of course, this must be more also strengthened through the fabric of competent and professional cooperation with various parties. In entering the market competition, the patterned corporate strategy can guarantee the company's future performance to the maximum. Of course, to achieve these objectives, the company's strategy must be able to reflect the company's vision and mission. TQM as a part that prioritizes continuous improvement and development in all aspects will lead the company to develop various strategies intended to face competition, for example: for the marketing department, evaluation of marketing aspects must be directed in detail to assess the targets set previously. For the production section in facing market competition requires product quality that is attempted zero defect and zero mistakes because it is one of the considerations in product pricing. Strategies for marketing and production should be combined and combined to create synergy because the products made by the production department and the products sold by customer-focused marketing are the key to success in winning the competition. Of course, this does not only apply to the field of production and marketing because TQM focuses on all the internal joints of the company. The company's performance can be said to be achieved if all work activities go as planned.

## **References**

Agus, A., & Hassan, Z. (2011). Enhancing Production Performance and Customer Performance Through Total Quality Management (TQM): Strategies For Competitive Advantage. *Procedia* -

- Social and Behavioral Sciences*, 24, 1650–1662.  
<https://doi.org/https://doi.org/10.1016/j.sbspro.2011.09.019>
- Al-Naser, K., & Mohamed, R. (2017). The Integration between Strategic Cost Management Techniques to Improve the Performance of Iraqi Manufacturing Companies. *Asian Journal of Finance & Accounting*, 9(1), 210–223.
- Alam, R., Hamzah, N., Putra, A. H. P. K., Ginting, W. A., & Teng, S. H. (2019). What Is More Important In Business? The Fallacy In IntelDRreting Innovation As a Strategy. *1st International Conference on Life, Innovation, Change and Knowledge (ICLICK 2018)*.  
<https://doi.org/https://doi.org/10.2991/iclick-18.2019.59>
- Amin, M., Aldakhil, A. M., Wu, C., Rezaei, S., & Cobanoglu, C. (2017). The structural relationship between TQM, employee satisfaction and hotel performance. *International Journal of Contemporary Hospitality Management*, 29(4), 1256–1278.
- Anderson, M., & Sohal, A. S. (1999). A study of the relationship between quality management practices and performance in small businesses. *International Journal of Quality & Reliability Management*, 16(9), 859–877.
- Aquilani, B., Silvestri, C., Ruggieri, A., & Gatti, C. (2017). A systematic literature review on total quality management critical success factors and the identification of new avenues of research. *The TQM Journal*, 29(1), 184–213.
- Arfah, A., & Putra, A. H. P. K. (2019). Analysis of Productivity and Distribution of Female Workers in FB's Industries. *Journal of Distribution Science*, 17(3), 31–39.
- Baldwin, J. R., & Johnson, J. (1996). Business strategies in more-and less-innovative firms in Canada. *Research Policy*, 25(5), 785–804.
- Bouranta, N., Psomas, E. L., & Pantouvakis, A. (2017). Identifying the critical determinants of TQM and their impact on company performance: Evidence from the hotel industry of Greece. *The TQM Journal*, 29(1), 147–166.
- Brah, S. A., Tee, S. S. L., & Madhu Rao, B. (2002). Relationship between TQM and performance of Singapore companies. *International Journal of Quality & Reliability Management*, 19(4), 356–379.
- Camisón-haba, S., Clemente-almendros, J. A., & Gonzalez-cruz, T. (2018). How technology-based firms become also highly innovative firms? The role of knowledge, technological and managerial capabilities, and entrepreneurs' background. *Suma de Negocios*.  
<https://doi.org/10.1016/j.jik.2018.12.001>
- Chong, V. K., & Rundus, M. J. (2004). Total quality management, market competition and organizational performance. *The British Accounting Review*, 36(2), 155–172.  
<https://doi.org/https://doi.org/10.1016/j.bar.2003.10.006>
- Commer Soc Sci, P. J., Hussain, J., Rahman, W., & Ali Shah, F. (2016). Market Orientation and Performance: The Interaction Effect of Entrepreneurial Orientation. *Pakistan Journal of Commerce and Social Sciences*.
- Corredor, P., & Goñi, S. (2011). TQM and performance: Is the relationship so obvious? *Journal of Business Research*, 64(8), 830–838. <https://doi.org/https://doi.org/10.1016/j.jbusres.2010.10.002>
- Creech, B. (1996). *Lima pilar (manajemen mutu telDRadu) TQM*. Binarupa Aksara.
- Dereeli, D. D. (2015). Innovation Management in Global Competition and Competitive Advantage. *Procedia - Social and Behavioral Sciences*, 195, 1365–1370.  
<https://doi.org/https://doi.org/10.1016/j.sbspro.2015.06.323>
- Distanont, A., & Khongmalai, O. (2018). The role of innovation in creating a competitive advantage. *Kasetsart Journal of Social Sciences*. <https://doi.org/https://doi.org/10.1016/j.kjss.2018.07.009>
- Evans, J. R. (2002). Total quality management. *INFOR*, 40(4), 364.
- Grover, S., Agrawal, V. P., & Khan. (2004). A digraph approach to TQM evaluation of an industry. *International Journal of Production Research*, 42(19), 4031–4053.  
<https://doi.org/10.1080/00207540410001704032>
- Gupta, K., & Krishnamurti, C. (2016). Chapter 19 - Product Market Competition and CoIDRorate Environmental Performance. In V. Ramiah & G. N. Gregoriou (Eds.), *Handbook of Environmental and Sustainable Finance* (pp. 385–404). <https://doi.org/https://doi.org/10.1016/B978-0-12-803615-0.00019-4>
- Hackman, J. R., & Wageman, R. (1995). Total quality management: Empirical, conceptual, and practical issues. *Administrative Science Quarterly*, 309–342.
- Iqbal, T., Huq, F., & Bhutta, M. K. S. (2018). Agile manufacturing relationship building with TQM, JIT, and firm performance: An exploratory study in apparel export industry of Pakistan. *International Journal of Production Economics*, 203, 24–37.  
<https://doi.org/https://doi.org/10.1016/j.ijpe.2018.05.033>

- Jaworski, B. J., & Kohli, A. K. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing*, 57(3), 53. <https://doi.org/10.2307/1251854>
- Kanji, G. K. (1996). Can total quality management help innovation? *Total Quality Management*, 7(1), 3–10.
- Kaufman, B. E. (2015). Market competition, HRM, and firm performance: The conventional paradigm critiqued and reformulated. *Human Resource Management Review*, 25(1), 107–125. <https://doi.org/https://doi.org/10.1016/j.hrmmr.2014.08.001>
- Kotler, P. (2012). Marketing management/Philip Kotler, Kevin Lane Keller. *Pearson Education Limited*, 817, 1.
- Kristianto, I., & Tarigan, Z. J. H. (2019). The impact TQM System on Supply Chain Performance through Supply Chain Integration and Employee Satisfaction. *Petra International Journal of Business Studies*, 2(1), 8–17.
- Kumar, V., Choisine, F., de Grosbois, D., & Kumar, U. (2009). Impact of TQM on company's performance. *International Journal of Quality & Reliability Management*, 26(1), 23–37.
- Laitinen, E. K., Lämsiluoto, A., & Salonen, S. (2016). Interactive budgeting, product innovation, and firm performance: empirical evidence from Finnish firms. *Journal of Management Control*, 27(4), 293–322.
- Madhani, P. M. (2009). *Resource Based View (RBV) of Competitive Advantages: Importance, Issues and Implications*.
- Mansur, D. M., Sule, E. T., Kartini, D., Oesman, Y. M., Putra, A. H. P. K., & Chamidah, N. (2019). Moderating of the role of technology theory to the existence of consumer behavior on e-commerce. *Journal of Distribution Science*, 17(7), 15–25.
- Meiyani, E., & Putra, A. H. P. K. (2019). The Relationship Between Islamic Leadership on Employee Engagement Distribution in FMCG Industry: Anthropology Business Review. ??????, 17, 19–28.
- Narver, J. C., & Slater, S. F. (1990). The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*, 54(4), 20–35. <https://doi.org/10.2307/1251757>
- Powell, T. C. (1995). Total quality management as competitive advantage: a review and empirical study. *Strategic Management Journal*, 16(1), 15–37.
- Raharja, E. a. (2012). *Perbaikan dan Evaluasi Penerapan Sistem Manajemen Mutu pada Industri Pengolahan Tahu (Studi Kasus di UD. Cinta Sari, DIY)*. 7(1), 28–36. Retrieved from <http://journal.ipb.ac.id/index.php/jurnalmpil>
- Raja, M. W., & Wei, S. (2014). TQM Practices and Innovation Performance : A Review of Current Literature. *British Journal of Economics, Management & Trade*, 4(7), 1018–1032.
- Ramlawati, R., & Putra, A. H. P. K. (2018). Total Quality Management as the Key of the Company to Gain the Competitiveness, Performance Achievement and Consumer Satisfaction. *International Review of Management and Marketing*, 8(5), 60–69.
- Reed, R., Lemak, D. J., & Mero, N. P. (2000). Total quality management and sustainable competitive advantage. *Journal of Quality Management*, 5(1), 5–26. [https://doi.org/https://doi.org/10.1016/S1084-8568\(00\)00010-9](https://doi.org/https://doi.org/10.1016/S1084-8568(00)00010-9)
- Tang, J. (2006). Competition and innovation behaviour. *Research Policy*. <https://doi.org/10.1016/j.respol.2005.08.004>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Terziovski, M., & Samson, D. (1999). The link between total quality management practice and organisational performance. *International Journal of Quality & Reliability Management*, 16(3), 226–237.
- Thai Hoang, D., Igel, B., & Laosirihongthong, T. (2006). The impact of total quality management on innovation: Findings from a developing country. *International Journal of Quality & Reliability Management*, 23(9), 1092–1117.
- Wiklund, H., Klefsjö, B., Sandvik Wiklund, P., & Edvardsson, B. (2003). Innovation and TQM in Swedish higher education institutions—possibilities and pitfalls. *The TQM Magazine*, 15(2), 99–107.
- Yusr, M. M. (2016). Innovation capability and its role in enhancing the relationship between TQM practices and innovation performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 2(1), 6.

# Systemic Relationship Between TQM, Competitive Advantage, Innovation and Managerial Performance

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## 논문심사결과

1. 논문번호: J4\_201900151

2. 논문제목: Systemic Relationship Between TQM, Compative Advantage, Innovation and Managerial Performance

3. 심사완료요청일: 2019. 10. 5

4. 심사완료회송일: 2019. 10. 3

1. 제목이 너무 포괄적이어서 좀 더 구체화가 필요합니다. 4개 변수들의 영향관계가 주제인데, 영향관계를 연구하고자 하는 대상이 주제 나타나 있지 않습니다.(누구를? 어떤산업을? 대상으로 하는것인지..)

– 제목의 오타자 : ~Compative Advantage~ ⇒ ~Competitive Advantage~

2. Abstract 내용을 보완해야할 것으로 보입니다. 현재 너무 간단하게 기술한 것으로 보이며, 연구방법과 연구결과 시사점 부분에 대해 좀더 내용을 기술하는 것이 바람직할 것으로 생각됩니다. 연구목적에 대한 부분도 본 연구의 차별성이 기술되어야 바람직할 것으로 생각됩니다.

3. 제조산업에 속한 기업의 생산관리 기능에서 주로 언급되어지는 TQM 개념을 개발도상국의 부동산 산업에 적용하는 것이 좀 무리가 있어 보입니다.

4. ‘서론’ 마지막 부분의 [아래] 연구목적 부분이 좀 더 구체화 기술되어야 할 것으로 보입니다.

본 연구는 인도네시아 부동산산업에 국한되어 이루어지는 연구로 생각되는데, 현재 상태는 연구목적을 과도하게 일반화를 지향하는 성격으로 기술되어진 것으로 생각됩니다.

[아래]

The Objectiveness of this study examines empirically and the complex interrelationships and relationships between TQM, competitive advantage, innovation, and performance through causality. Where the results of this study can provide development in terms of theoretical scientific management and management strategies as well as an impact on company managerial.

5. ‘2. Literature Review’에서 본 연구의 4개 연구변수들에 대한 개념과 주요 선행연구를 제시하고 있는데, ‘경쟁우위(Competitive Advantage)’ 변수는 Resource-based view Theory(RBV)로 대체하여 간략하게 기술하고 있는 것으로 보입니다.

‘경쟁우위(Competitive Advantage)’ 는 많은 학자들이 다양한 관점에서 주장을 펼치고 있습니다. Porter, Barney 등 경쟁이론 분야의 대가들의 이론을 좀 더 폭 넓게 검토하고 본 연구와 관련지어 정리하여 제시하고 관련 선행연구들을 정리하여 기술할 필요가 있어 보입니다.

그리고 ‘2. Literature Review’ 부분의 구성은 2.1. *Total Quality Management* ~ 2.4. *Resource Based View (RBV) as Grounded Theory* 로 이루어져 있고, 현재 가설 수립에 대한 부분을 2.4. *Resource Based View (RBV) as Grounded Theory*에 이어서 기술하고 있는 것으로 보입니다. 그러나 가설수립에 대한 부분은 별도의 Section으로 구분하는 것이 바람직할 것으로 보입니다. 따라서 ‘2.5. Hypothesis Development’를 추가하여 정리 기술하는 것이 논문의 구성에서 바람직할 것으로 생각됩니다.

6. ‘3. Research Design and Methodology’ ‘3.1. Samples’에서 샘플에 대한 인구통계학적 분석내용을 기술하고 있는데, 총 43개 부동산 업체에서 105명의 응답자로부터 자료를 수집한 것으로 나타나 있다. 샘플은 인도네시아의 부동산 업체로서 대표성을 가질 수 있어야 하므로 업체의 성격과 규모 등에 대해서 샘플로서의 대표성 부분과 연관지어 충분히 납득할 수 있도록 기술해 주어야 합니다.

7. Table 1은 불필요한 표입니다. 독자들이 Figure 2에서 충분히 본연구의 가설 경로를 인식할 수 있으므로 해당 Table은 삭제하여도 무방합니다. 그리고 Figure 2는 Research Framework 보다는 Research Model로 표현하는 것이 일반적일 것으로 보입니다. Table 2 Measurement of Variabel(오탈자)도 Measurement Items 또는 Measurement Variables로 표현하는 것이 일반적입니다.

★ 8. 본 연구의 가장 큰 문제점은 타당성에 대한 근거와 테스트 결과를 제시하고 있지 않다는 점에 있습니다. 즉, 현재 연구모형과 같은 변수간의 인과관계 연구는 KMO 구형성 검증결과를 바탕으로 탐색적 요인분석(EFA: Exploratory Factor Analysis) 결과가 정확하게 제시되어야 합니다. 본 연구에서는 인과관계 규명 연구에 있어서 가장 중요한 그러한 타당성 분석에 대한 결과를 제시하고 있지 않습니다. Table 4에서 표로 제시하고 있는 부분을 살펴보면, 일반적으로 타당성에 대한 근거로 w시하는 Factor Loading 값 대신에 Pearson Correlation 값을 제시하고 있습니다. 이해할 수 없는 Table 구성이라고 생각합니다. Table 4에는 Pearson Correlation 값 대신에 EFA결과 값인 Factor Loading 값이 제시되어야 하고, 동시에 KMO 값도 제시되어야 합니다. 그리고 현재 제시하고 있는 상관관계 (Pearson Correlation) 값은 별도의 Table로 제시하고 필요한 해석을 기술해야 합니다.

9. 연구결과의 시사점이 너무도 일반적이고 피상적입니다. 본 연구의 인과관계 분석결과를 바탕으로 인도네시아 부동산 산업에 실무적으로 어떤 시사점과 기여도가 있는 것인가에 대하여 깊이 성찰하고 고민하여 의미 있는 함의를 제시해 주어야 할 것으로 생각됩니다.

Editor Review Summary

Basic Info

Receipt Number	J4_201900151	Journal Title	The Journal of Distribution Science
Title(Original language)	Systematic Relationship of TQM on Managerial Performance: Evidence From Property Sector in Indonesia	Field	Logistics & SCM , Distribution Strategy & Competitiveness , Distribution Science & Innovation
Abstract(Original language)	Purpose – This study seeks to bridge between the research by Lawrence (1999) and Retegan (1992), where the focus of TQM on his studies rests on customer satisfaction. Whereas in this study trying to recompile TQM by involving the variables Innovation and competitive advantage to stimulate managerial performance improvement where performance measurements include various measurements such		
Keyword(Original language)	TQM, Innovation, Competitive Advantage, Market Competition		
Submission File	REV1_Systemic Relationship Between TQM, Compative Advantage, Innovation and Managerial Performance.docx		

Review Summary Info

Content	All non-journal articles (reports, working papers, and internet materials) should be removed from the reference.
File	

Comprehensive evaluation

Result	accepted after revision
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Explanation Statement

Basic Info

Receipt Number	J4_201900151	Journal Title	The Journal of Distribution Science
Title(Original language)	Systemic Relationship Between TQM, Compative Advantage, Innovation and Managerial Performance	Field	Logistics & SCM , Distribution Strategy & Competitiveness , Distribution Science & Innovation
Abstract(Original language)	However, it does not have a significant impact if it is directly related to TQM on company performance. In this case, TQM for property companies in Indonesia would not have been possible without the role of innovation and market competition. So that the managerial implications of this study also confirm that TQM is essential and feels obligatory to be implemented optimally.		
Keyword(Original language)	TQM, Innovation, Competitive Advantage, Market Competition	Submission File	<a href="#">다운로드</a>

Explanation Statement(1)

Comment

No	Page	Line	Comments	Note
1	2-9		약자를 사용하려면 전문을 먼저 언급하고 사용해 하겠습니다. - IDR(2 Page), HR(3 Page), VIF(9 Page), SOPs (11 Page)	
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Explanation Statement

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1			Hackman, J. R., & Wageman, R. (1995). Total quality management: Empirical, conceptual, and practical issues. Administrative Science Quarterly, 309–342. Iqbal, T., Huq, F., & Bhutta, M. K. S. (2018). Agile manufacturing relationship building with TQM, JIT, and firm performance: An exploratory study in apparel export industry of Pakistan. International Journal of Production Economics, 203, 24–37. The reference is APA style. In addition to the examples above, complete the information(Volume, Number, etc.) in the reference.	

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Editor Review Summary

Basic Info

Receipt Number	J4_201900151	Journal Title	The Journal of Distribution Science
Title(Original language)	Systematic Relationship of TQM on Managerial Performance: Evidence From Property Sector in Indonesia	Field	Logistics & SCM , Distribution Strategy & Competitiveness , Distribution Science & Innovation
Abstract(Original language)	Purpose – This study seeks to bridge between the research by Lawrence (1999) and Retegan (1992), where the focus of TQM on his studies rests on customer satisfaction. Whereas in this study trying to recompile TQM by involving the variables Innovation and competitive advantage to stimulate managerial performance improvement where performance measurements include various measurements such as		
Keyword(Original language)	TQM, Innovation, Competitive Advantage, Market Competition		
Submission File	REV1_Systemic Relationship Between TQM, Compative Advantage, Innovation and Managerial Performance.docx		

Review Summary Info

Content	All non-journal articles (reports, working papers, and internet materials) should be removed from the reference.
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Title(Original language)	Systematic Relationship of TQM on Managerial Performance: Evidence From Property Sector in Indonesia	Field	Logistics & SCM , Distribution Strategy & Competitiveness , Distribution Science & Innovation
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Keyword(Original language)	TQM, Innovation, Competitive Advantage, Market Competition		
Submission File	REV3_Systematic Relationship of TQM on Managerial Performance Evidence From Property Sector in Indonesia.docx		

Review Summary Info

Content	Documents requiring revision are below : Alphabetical order Hussein~ Hoang~
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Receipt Number	J4_201900151	Journal Title	The Journal of Distribution Science
Title(Original language)	Systematic Relationship of TQM on Managerial Performance: Evidence From Property Sector in Indonesia	Field	Logistics & SCM , Distribution Strategy & Competitiveness , Distribution Science & Innovation
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Keyword(Original language)	TQM, Innovation, Competitive Advantage, Market Competition		
Submission File	REV1_Systemic Relationship Between TQM, Compative Advantage, Innovation and Managerial Performance.docx		

Review Summary Info

Content	All non-journal articles (reports, working papers, and internet materials) should be removed from the reference.
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Receipt Number	J4_201900151	Journal Title	The Journal of Distribution Science
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Submission File	REV1_Systemic Relationship Between TQM, Compative Advantage, Innovation and Managerial Performance.docx		

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# Systematic Relationship of TQM on Managerial Performance: Evidence From Property Sector in Indonesia<sup>\*</sup>

Ahmad FIRMAN<sup>\*</sup>, ZAINUDDIN Mustapa<sup>\*\*</sup>, GUNAWAN Bata Ilyas<sup>\*\*\*</sup>, ADITYA Halim Perdana Kusuma Putra <sup>\*\*\*\*</sup>

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## Abstract

**Purpose** – This study seeks to bridge between the research by Lawrence (1999) and Retegan (1992), where the focus of TQM on his studies rests on customer satisfaction. Whereas in this study trying to recompile TQM by involving the variables Innovation and competitive advantage to stimulate managerial performance improvement where performance measurements include various measurements such as financial performance, marketing performance, and production performance in the property industry.

**Research design, data, and methodology** – Total sample are 105 respondents coming from middle to top level of management in the property sector in Indonesia. To empirically prove the results of this study using multiply regression analysis as a test tool for analysis.

**Results and Findings** – The results of this study confirm that TQM has a positive effect on market competition, innovation, and company performance indirectly. However, it does not have a significant impact if it is directly related to TQM on company performance. In this case, TQM for property companies in Indonesia would not have been possible without the role of innovation and market competition. So that the managerial implications of this study also confirm that TQM is essential and feels obligatory to be implemented optimally.

**Keywords:** TQM, Innovation, Competitive Advantage, Market Competition

**JEL Classifications:** M0, M20, L11, L7

## 1. Introduction

Global competition is the trigger for many companies to talk about the concept of quality, especially those related to products or services produced as well as improving company performance. This phenomenon also applies to companies engaged in the property business. Global competition also has implications for infrastructure and business development in Indonesia. The rise of infrastructure development in Indonesia has a positive impact on the growth of the property sector. Besides, the passion for property is also supported by government policies that are pro-business and high expectations from the tax amnesty program. The economic growth target of above five percent

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is also considered to have helped stimulate the property sector.

Indonesian Statistics Bureau in 2018 show an increasing trend of growth. Several macros and microeconomic factors are considered to sustain the growth of the property industry in 2018. These factors include the impact of the tax amnesty policy, the birth of regulations for reducing housing construction permits, and lowering the rates. The value of the capitalization of Indonesia property in 2018 is estimated to reach IDR (Indonesian Rupiah) 318 trillion, an increase of 15% compared to 2017 which reached IDR (Indonesian Rupiah) 277 trillion. The fact is that until now, there are at least 14 million back-log housing needs in Indonesia. It is an evidence that the property business will continue to grow along with the community's demand for decent residences. The growth of housing needs and the growth of the property business will encourage competition for property businesses to meet the availability of property desired by the community.

Exciting property growth in Indonesia is also in line with the high level of business competition, which is marked by an increasing number of developers and property brokers. For that reason, as business actors, they must continually strive to improve quality and innovate to win the competition. In marketing the property business, the ability to negotiate and choose ways to be able to convince consumers through a personal approach is one of the critical factors. Next, is an effort to understand all the needs and desires of consumers so that they feel comfortable with the services offered. The entrepreneurs of the property industry in Indonesia believe that the property industry is one area that will not die because occupancy is a primary human need. The residential property apartment market segment in Indonesia is still classified as very broad for the middle-class consumer segment, whereas the upper-class property consumers, such as office buildings, shopping stalls, and real estate. The number of new property developers in the Indonesian property makes competition among developers increasingly fierce. However, in the course of several obstacles that are often faced by business actors in the property sector, it is difficult to convince potential consumers to buy, so that the level of transactions for the sale and purchase of property products cannot routinely occur every day.

Market competition will undoubtedly have an impact on company performance; in fact, this competition is what forges entrepreneurs and companies should ideally be better. Locus of control company becomes a determinant of whether entrepreneurs can overcome and resolve all the problems they are facing so that the company they lead becomes more developed and advanced or vice versa. In essence, the performance of the company The company's performance is essentially an achievement achieved by a business organization that can be seen from the results. The researchers agreed that measuring business performance is not just enough to use a single measure (Jaworski & Kohli, 1993). Jaworski & Kohli (1993) and (Iqbal, Huq, & Bhutta, 2018) states that company performance is measured by overall business performance compared to last year and overall performance compared to its main competitors, while in research Narver & Slater (1990). Kristianto & Tarigan (2019) States that business performance is measured by profitability compared to predetermined targets. One effort to achieve excellent performance must also be through improving the process of proper quality management. To realize an improved quality management process, TQM practices are a standard requirement in modern management. TQM has played an essential role in developing management practices in an organization, where a concept of quality is now considered a major strategic factor in business success. To improve competitive position and improve business performance, companies around the world, large or small manufacturing and services are applying the principles of TQM (Kanji, 1996). The role of

TQM, which aims to improve product quality is marked by the improvement in terms of innovation, creativity, and consistent productivity to produce valuable products. Also, the role of TQM means to give a touch to better service that aims to meet customer satisfaction. This perspective is based on the argument that TQM practices in both the human and technological dimensions and help create an environment and culture that supports innovation (Thai Hoang, Igel, & Laosirihongthong, 2006). The core of implementing TQM is customer satisfaction. The realization of TQM is continuous and continuous innovation. Innovation can be seen with a structuralist approach and a process approach. The structuralist approach views change as a unit with fixed parameters such as technology and management practices, while the process approach views innovation as a complex process, which often involves various social groups in organizations (Swan et al., 1999). Some studies also identify a positive relationship between TQM and innovation in terms of market penetration. Wiklund et al (2003) and (Baldwin & Johnson, 1996) in his study findings, the TQM have a positive impact on management improvisation in organizations. Other findings were also conveyed by Thai Hoang, Igel, & Laosirihongthong, (2006) which examines the effect of TQM and innovation on the manufacturing industry in developing countries. Thai Hoang, Igel, & Laosirihongthong Found that TQM was considered as a set of corporate tools that had a positive impact on corporate innovation. TQM, in addition to affecting innovation and company performance, also has an effect on market competition. The arguments for consideration of including market competition in this research model are based on the arguments presented by several previous studies. Chong dan Rundus (2004) indicates that the higher the level of market competition, the more positive the relationship between TQM practices with product design and organizational performance.

(Lawrence, 1999) In his research that raised the theme of the application of TQM in the property industry sector, defined the use of TQM diction as important concepts and elements that ended in increasing customer satisfaction through the implementation of ISO 9000. Opinions from Lawrence were agreed by Rategan, 1992, which stated the application of TQM was not just to improve competitiveness and performance. This study seeks to bridge between the results of research from Lawrence (1999), which focuses on enhancing the quality through indicators ISO 9000 and research Retegan (1992), where the focus of TQM on his studies rests on customer satisfaction. Whereas in this study trying to recompile TQM by involving the variables Innovation and competitive advantage to stimulate managerial performance improvement where performance measurements include various measurements such as financial performance, marketing performance, and production performance in the property industry. Where the results of this study can provide development in terms of theoretical scientific management and management strategies as well as an impact on company managerial.

## **2. Literature Review**

### **2.1. *Total Quality Management***

Initially, the idea of TQM first appeared in the US, but later it was organized and implemented in several Japanese companies. Particularly after WW-II, TQM was summarized and applied in the form of training programs in various industrial sectors, W. Edward Deming and Joseph M. Juran as a pioneer TQM research (see. Kanji, 1990). TQM is an approach in running a business that tries to maximize the competitiveness of an organization through continuous improvement of its products, services, people, processes, and environment. The success or failure of TQM implementation is determined mainly by the competence of the company's human resource management

(HRM) to realize it. (Powell, 1995). Evans (2002) explained that TQM is a philosophy that emphasizes sustainably improving manufacturing processes by eliminating waste, improving quality, developing skills and reducing production costs. Hackman & Wageman (1995) designate this aspect as a supervisory process, an approach where product quality is determined by employees. Creech (1996) Stated that there are five main pillars in TQM to drive an organization, i.e., products produced, processes carried out in providing products, then the organization is driven by a leader, and there is a commitment among the leaders in an organization.

Products are the focal point for organizational goals and achievements; quality in commodities is not possible without merit in the process. Quality in the process is not possible without the right organization. The right organization is meaningless without adequate leadership. A strong commitment, from the bottom-up, is a supporting pillar for all others. Each pillar depends on the other four components, and if one is weak by itself, the other is also weak. The principles in the TQM system must be sourced from the top down and operate from the bottom up if the desired everything works excellently. The principle of TQM is to focus on the customer. Customer focus means placing the customer at the center of activity and no longer as a production-oriented company. Do it right (term number one) is necessary to continuously improve and make quality an attitude that all people must be responsible for the quality. Communicate and train (term number two). Communicating means telling employees what is happening. For this reason, it is necessary to improve communication channels and make it easier for employees to convey something (Arfah & Putra, 2019). Finally, Measure the results achieved and record (term number three). Measurements were taken to maintain standards and processes to be within agreed tolerance levels.

## *2.2. Innovation*

Innovation can be defined as the process and / or results of developing the utilization / mobilization of knowledge, skills (including technology skills) as well as experience to make or make improvements to new products / services, processes or systems, which provide value which has meaning or significantly. Innovation has four characteristics i.e., having a particular / specific means that a change has features that are unique in the sense of ideas, programs, order, systems, including the possibility of expected results. Having the characteristics or elements of novelty, in the sense of innovation must have the attributes as work and thought that has a degree of originality and novelty. Innovation programs are implemented through planned programs, in the sense that innovation is carried out through a process that is not rushed, but the innovation activities are prepared carefully with a clear agenda and planned. The innovation that is rolled has a goal; the innovation program that is carried out must have the direction to be achieved, including the leadership and strategy for achieving that goal. Grover, Agrawal, & Khan (2004) High product quality will increase the company's competitive advantage, which will ultimately have an impact on company performance. Innovation is a technological, managerial and social process, where new ideas or concepts are first introduced to be put into practice in a culture and are a determining factor in industrial competition and a formidable weapon against competition.

## *2.3. Performance*

Performance is the result of work that can be achieved by a person or group of people in an organization, following their respective authorities and responsibilities, in the context of efforts to make the organization's objectives legally, not violating the law and per morals and ethics. There are several ways to measure company performance,



namely: Assessment system, which is an evaluation that provides information about the state or position of the order. Evaluation using this model can produce information about the final position of all elements of the promotional program is completed. Program planning, which is an evaluation that helps assess activities in a particular program that might be successful in meeting their needs. Program improvement, which is an evaluation that provides information about how the program functions, how the program works, how to anticipate problems that might interfere with the implementation of activities. The certification program, which is an evaluation that provides information about the values or benefits of the program. In the example of the promotion program above, this model is intended to evaluate whether it has an impact on potential customers, that is, getting more interested in buying products or encouraging consumers to subscribe.

#### 2.4. *Resource Based View (RBV) Approach and Hypothesis Development*

Resource-based view Theory (RBV) is a concept that was born from the research of economists around the world, where this theory is believed to provide answers in creating a competitive advantage for a company (Commer et al, 2016), (Kaufman, 2015), (Madhani, 2009). The creation of sustainable competitive advantage allows companies to use their resources through innovation to encourage better performance (Mansur et al., 2019). On the other hand, a good management process through the TQM mechanism to create innovation and improve performance is also related to market competition.

The management of an organization that relies on resources owned by the company encourages the company to maintain its competitive advantage, which causes a company to improve its performance. Competitive advantage itself arises from the resources owned by a company, and this is in line with a theory called RBV. Chong & Rundus (2004) found that the higher the level of market competition, have positive relationship between TQM. Besides, the results also confirm that the higher the level of market competition, the more positive the relationship resulting from TQM implementation. Agus & Hassan (2011) shows that manufacturing and retail companies must emphasize more considerable attention to aspects of measuring the quality of TQM and a higher level of management support for TQM initiatives to ensure a sustainable strategic competitive advantage. Apart from that, TQM content can produce cost-based leads or differentiation. The inherent complexity of the TQM process has the potential to provide superior products and is difficult to emulate by competitors suggesting that manufacturing and retail companies must emphasize more considerable attention to aspects of measuring TQM quality and higher levels of management support for TQM initiatives to ensure competitive advantage strategic sustainability. Apart from that, TQM content can produce cost-based advantages or differentiation. the inherent complexity of the TQM process has the potential to provide superior products and are difficult for competitors to emulate. (Reed, Lemak, & Mero, 2000). So the hypothesis is built: ***H1 = TQM has a positive effect on market competition.***

The extraordinary impact of process management and information and analysis of innovation systems can be demonstrated by improving the quality of integrated management (Wiklund et al, 2003), (Kanji, 1996). Powell (1995) concluded that open culture, employee empowerment, can affect company performance, but not TQM tools and techniques, such as process improvement. Anderson & Sohal, (1999) also found only organic elements that showed an impact on innovation. (Yusr, 2016) Argued that TQM had a positive impact on corporate innovation. So the hypothesis is built ***H2: TQM has a positive effect on innovation.***

(Tang, 2006) states that the company's perception of a competitive environment is essential for realizing innovation and shows that the relationship between innovation and market competition can be positive or negative,

depending on the understanding of specific game and specific innovation activities. (Dereli, 2015) states that Innovation will be a strategic tool in this prestigious competition for the improvement, creation, and improvement of businesses to create competitive advantages that are equal or better than those in foreign countries to realize sustainable development. (Distanont & Khongmalai, 2018). So the hypothesis is built ***H3 = Innovation has a positive effect on market competition***

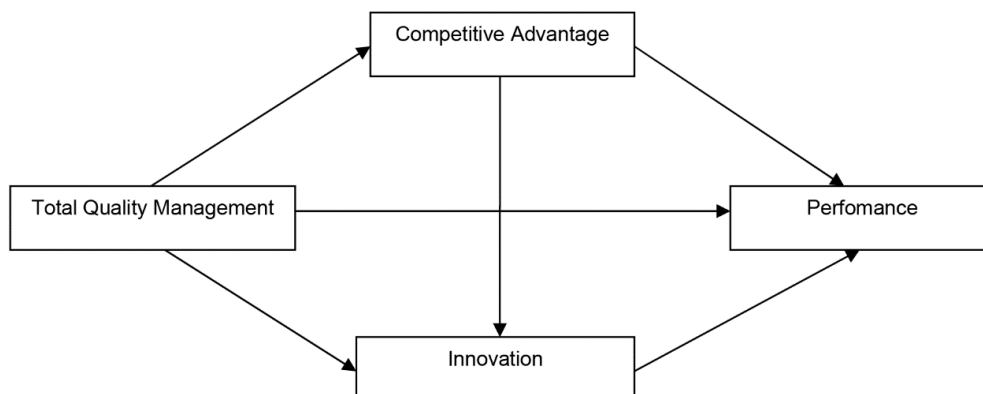
Corredor & Gozni, (2011) Designate this aspect as a supervisory process, an approach whereby product quality is determined by the employees who work. Whereas Performance can be interpreted as "a periodic determination of the operational effectiveness of a company, a part of the company and its employees based on predetermined targets, standards, and criteria. The quality management is recognized as a strategic tool for achieving performance and highest competitive advantage; TQM practices are also found to be interrelated to help achieve organizational performance goals (Ramlawati & Putra, 2018). These arguments provide the basis for the following hypothesis. ***H4: TQM has a positive effect on the Company's performance.***

(Kaufman, 2015) Argues that the company's performance can be encouraged if faced with the situation of market competition, whether free or tight. But the results of the study (Gupta & Krishnamurti, 2016) Different from the results of Kaufman's research. Gupta believes that market competition has a indirect effect on company performance. So the hypothesis that is built is ***H5 = Market competition affects the company's performance.***

Al-Naser & Mohamed (2017) In his research concluded that organizational performance increases with the quality management practices that are explored. In this case, the development of innovation becomes essential to improve performance. The ability of a company to innovate is critical when striving for a competitive advantage (Porter Michael 1985). Innovation and performance will differ between companies. So, the hypothesis put forward is. ***H6: Innovation has a positive effect on Company Performance.***

TQM can have an impact on company performance while implementing a great system based on technology that continues to be developed in each of its activities (Brah, Tee, & Madhu Rao, 2002). The purpose of implementing the system provides the level of readiness of the company to be ready to compete (Corredor & Goni, 2011). The application of the system is also one of the innovations in terms of production. These arguments provide the basis for the following hypothesis. ***H7 = TQM has a positive effect on company performance by making the market competition as intervening, and H8 = TQM has a positive impact on company performance by making innovation as intervening.***

Based on the arguments presented in the introduction, prior research, and literature review sections, the theoretical framework of this research can be formulated in the following diagrams:



**Figure 1: Research Framework**

### 3. Research Design and Methodology

#### 3.1. Samples

The number of samples in this study was 105 respondent from 43 property companies in Indonesia , with positions as project manager, General Manager, Head of Marketing, Supervision, Brand Manager, Project Director, Marketing Staff, Finance Staff, Sales Executive, and Project Coordinator. Sample of criteria who have held these positions for at least two years (see. Table 2). The selection of property companies in Indonesia as the subject of this study is based on companies that have been listed on the Indonesia Stock Exchange until 2019. Based on demographic data, there were 73 male respondents (69.5%) and 32 female respondents (30.5%). Based on the level of education, respondents with the bachelor education level were the most dominant 73 person (69.5%), Masters = 21 person (20%), Diploma = 7 person (6.6%) and others = 4 people (3.8%). Based on the age distribution of respondents. The dominant age range of respondents was 31 - 40 years = 48 person (45.7%). Age 41-50 years = 33 person (31.4%), age <30 years = 17 person (16.1%), age> 50 years = 7 person (6.6%).

#### 3.2. Measurement

This study uses electronic surveys, filling out survey results using a Likert scale 1-5 (Strongly disagree - Strongly Agree), such as measurements used in research. The measurement of the results of the study was carried out in several stages before entering data analysis and hypothesis testing. First Section; Validity testing, reliability testing with Cronbach alpha criteria> 0.60, Testing for normality with Kolmogorov-Smirnov criteria. Sig> 0.05. The Glesjer Test with criteria> 0.05. Multicollinearity test with criteria VIF> 10. Hypothesis testing stage through two stages, namely a direct relationship using regression with the criterion  $P < 0.05$  and an indirect relationship with the Sobel test. Second Section, namely the test of influence and structural relationship models as well as hypothesis testing (see Table 2). While the operational measurements of the variables and dimensions are explained as in table 1.

**Table 2: Measurement of Variabel**

Variable	Item	Major References
TQM	<ol style="list-style-type: none"> <li>1. The current trend in property is one of the essential bases for companies in designing products</li> <li>2. To reach markets in all consumer lines, product quality based on consumer needs is a critical reason for the company's strategy</li> <li>3. Development in the elements of planning (planning) is a precise strategic step to produce quality products</li> <li>4. Training will make employees skilled at work</li> <li>5. Excellent communication makes employees feel comfortable at work</li> <li>6. Standard Operational procedure is the policy direction and demands of work of all parties in the company.</li> <li>7. Companies with a sound system will make sustainable improvements</li> <li>8. The Quality improvement requires the full participation of all employees in the organization.</li> <li>9. Product quality can be achieved through good organizational leadership</li> <li>10. Product quality must be assessed from the beginning of product design</li> </ol>	(Grover et al., 2004), (Meiyani & Putra, 2019), (Ramlawati & Putra, 2018), (Chong & Rundus, 2004), (Kumar, Choisine, de Grosbois, & Kumar, 2009), (Yusr, 2016)
Innovation	<ol style="list-style-type: none"> <li>1. Products are made in several types as a classification so that consumers are free to choose according to the ability of consumers</li> <li>2. Training for salespeople is one of the right ways for them to be skilled at marketing products to potential customers</li> <li>3. Research in the development of new products is essential for companies to launch new products</li> <li>4. New product innovation means making a significant difference than competitors.</li> <li>5. Promotional strategy innovation in various media is the best way to carry out the marketing process of new products</li> <li>6. The company must establish cooperation with many parties.</li> <li>7. New product development always adapts to technological changes</li> <li>8. Development of new products is still an experience</li> </ol>	(Camisón et al, 2018), (Teece, Pisano, & Shuen, 1997), (Tang, 2006), (Reed et al., 2000), (Wiklund et al, 2003), (Anderson & Sohal, 1999), (Yusr, 2016)
Market Competition	<ol style="list-style-type: none"> <li>1. An excellent corporate marketing strategy is a corporate strategy in winning the competition</li> <li>2. To achieve the company's objectives, the marketing strategy must reflect the company's mission</li> </ol>	(Alam, Hamzah, Putra, Ginting, & Teng, 2019)

	3. Evaluation of marketing aspects is directed in detail to assess predetermined targets 4. In market competition. Product quality is one of the main reasons considered in product pricing 5. Focus on customers is the key to success in winning the business competition. 6. To win the competition, companies must improve the quality of service to customers.	(Amin et al, 2017), (Aquilani, Silvestri, Ruggieri, & Gatti, 2017), (Kotler, 2012), (Chong & Rundus, 2004)
Performance	1. Measuring excellent company performance if all work activities are as planned 2. Excellent company performance is reflected in excellent financial performance 3. Company performance can be seen in the production of its employees 4. The company's performance is getting better if its product sales exceed the target 5. Excellent company performance can be regarded from the company's ability to pay its liability 6. Excellent company performance can be seen from customer satisfaction through the products produced 7. Excellent company performance can be seen in the growing number of users Good 8. company performance can be seen from the loyalty of its employees	(Powell, 1995), (Brah et al., 2002), (Bouranta, Psomas, & Pantouvakis, 2017), (Amin et al., 2017), (Terziovski & Samson, 1999), (Raja & Wei, 2014)

## 4. Results and Discussion

### 4.1. Demography of Respondent

**Table 2: Data Demography (N = 105)**

Attributes	Item	F	%
Gender	Men	73	69.5
	Women	32	30.5
Age (years)	< 30 year	17	16.1
	31 - 40 year	48	45.7
	41 – 50 year	33	31.4
	> 50 year	7	6.6
		7	6.6
Education Level	Diploma	7	6.6
	Bachelor	73	69.5
	Magister	21	20
	Others	4	3.8

### 4.2. Statistical Result

In the first stage of statistical testing, as shown in table 3. Where the validity test for all items of the variable states valid. The most dominant item forming the TQM variable is the TQM10 item (0.734), while for the Innovation variable the most dominant item is IN5 (0.764), the dominant item forming the market competition variable is MC3 (0.768), and the dominant item creating the performance variable is P3 (P3 (0.771). Reliability test also shows that all items are declared reliable > 0.60. Testing for normality using the Kolmogorov-Smirnov > 0.05 method so that it can be concluded that all data are normally distributed. Likewise, in the heteroskedasticity test using the *glesjer* test method also showed that the glacier test value > 0.05 so that it can be stated that there is no heteroscedasticity in the statistical analysis of this study. The multicollinearity test showed that all the relationships of the VIF variable < 10, so it was also concluded that the statistical tests in this study did not have multicollinearity.

**Table 3: Statistics Test**

Variable	Item	Pearson Correlation	Cronbach Alpha	Normality Test & Heterokedastitas Test	Multicollinierity Test
TQM	TQM 1	0.507	0.860	TQM → Market Competition = 0.100 per 0.398	2.672
	TQM 2	0.652	0.838		
	TQM 3	0.671	0.837		
	TQM 4	0.676	0.838		
	TQM 5	0.705	0.833		
	TQM 6	0.712	0.832		
	TQM 7	0.694	0.835		
	TQM 8	0.677	0.836		
	TQM 9	0.610	0.844		
	TQM10	0.734	0.830		
Innovation	IN 1	0.681	0.816	TQM → Innovation → Market Competition =	2.796

	IN 2	0.660	0.819	0.271 per 0.700	
	IN 3	0.738	0.808		
	IN 4	0.702	0.819		
	IN 5	0.764	0.804		
	IN 6	0.654	0.819		
	IN 7	0.708	0.812		
	IN 8	0.598	0.836		
Market Competititon	MC1	0.682	0.762	TQM → Market Competititon → Innovation → Performance = 0.159 per 0.087	2.742
	MC2	0.682	0.751		
	MC3	0.768	0.720		
	MC4	0.741	0.731		
	MC5	0.628	0.773		
	MC6	0.676	0.747		
Performance	P1	0.679	0.837		
	P2	0.611	0.847		
	P3	0.771	0.825		
	P4	0.706	0.838		
	P5	0.695	0.834		
	P6	0.687	0.835		
	P7	0.721	0.831		
	P8	0.753	0.827		

Hypothesis testing, as shown in table 4 states that of the eight hypotheses previously raised in the literature review and the objectivity of this study, most of them have a significant effect <0.01. Except for the H4 explanation on the direct relationship of the TQM variable to performance showing a significance value of 0.966 > 0.05 so it can be stated that H4 has no significant effect. Indirect effects such as H1 - H6, it is indicated that TQM is positive and has a very substantial impact on market competition (t = 11,156). while the Indirect effect relationship such as H7 and H8 states that TQM also has a positive effect on performance by making the market competition variable an intervening variable.

**Table 4: Hypothesis Test**

Hyph	Path Analysis	$\beta$	t	Std. Error	Sig. Level	Result
H1	TQM → Market Competition	0.532	11.156	0.047	< 0.01	Support
H2	TQM → Innovation	0.390	4.396	0.089	< 0.01	Support
H3	Innovation → Company's Performance	0.655	5.213	0.126	< 0.01	Support
H4	TQM → Company's Performance	-0.005	-0.043	0.107	0.966	Not Support
H5	Market Competition → Company's Performance	0.609	3.900	0.156	< 0.01	Support
H6	Innovation → Company's Performance	0.515	4.713	0.109	< 0.01	Support
H7	TQM → Market Competition → Company's Performance	0.523 0.609	3.683	0.047 0.156	< 0.01	Support
H8	TQM → Innovation → Company's Performance	0.390 0.515	3.212	0.089 0.109	< 0.01	Support

### *Discussion*

Hypothesis (H4) shows that TQM does not have a direct influence on performance. The results of this empirical test reject a variety of previous research literacy that supports it as stated by (Chong & Rundus, 2004), (Reed et al., 2000) But besides that, the results of this study confirm the research results from (Raja & Wei, 2014) and (Terziovski & Samson, 1999) Also believes that TQM does not have a significant direct effect on performance. The implication of TQM on company performance does not always have a positive impact as in previous studies that took samples of the manufacturing industry. Several categories of companies will give different results, for example, as in the research in this study, namely companies engaged in the property industry. There are insignificant results besides being found in this study, and it also indicates that the application of TQM is not yet optimal in the property industry in

Indonesia, thus requiring that the implementation of TQM be truly optimized so that the results of the TQM implications have a real impact directly on company performance. Whereas in the indirect relationship variable on hypothesis H7 and H8 states that TQM has a positive and significant effect on performance if it is moderated by market competition and innovation. The assumption that can be formed is that the property companies examined in this study still focus on innovation entities and how tight the competition space is. So it can be justified that without innovation, the company will not describe a good company performance appraisal.

To this day, based on the results of studies in the case of the Property Industry in Indonesia, the innovations that occur are still limited to product innovations, not yet optimal and entirely property companies that access the latest innovations through service innovation models. However, if we look closely at technological advancements and digital access, it becomes an opportunity for companies to be able to compete through the latest digital technology-based distribution and service channels. Property companies in Indonesia should also try this. In an environment of global competition, innovation is the key to success for companies. While technology and research and development (R&D) activities significantly influence the organizational structure and have an impact on the right competitive innovation giving a competitive advantage (Dereli, 2015). Innovation will be a strategic tool in this prestigious competition for the improvement, creation, and improvement of businesses to create a competitive advantage to realize sustainable development. (Distanont & Khongmalai, 2018).

Ideally, the application of TQM should build a company image and professional company performance without innovation. This opinion is also in line with the justification of what was said by Laitinen et al., (2016) That there are still many companies that still see product innovation as a method of competitive advantage instead of making TQM as a clear guideline as a tool to realize competitive advantage. In its journey, TQM produces effective and efficient ways and efforts through the experience that the company has gone through. Departing from this, of course, the output from TQM itself can produce two superior innovations, namely product innovation and service innovation. This statement is in line with what has been stated previously by (Reed et al., 2000). Market competition can enter well as long as the products produced by property companies are based on consumer needs, consumer tastes, market segmentation, and the application of intricate management patterns. The role of TQM has a complex influence on the sustainability of a company's operations, especially property companies, but the implementation of TQM at the beginning, of course, has a high price in terms of costs because it demands improvements in all lines in which the role of capital and technology play that role. But the impact on cheap and controlled all cost effectively and efficiently and effectively in business activities in the future. TQM can be realized not only through products produced, initiated by commitments from all internal. Competency enhancement for HR, which is the party that implements TQM itself and the implementation of compliant the standard operational procedure (SOP). Because without improving the quality of human resources and a clear vision and mission, TQM can not run well. With the complex management elements that are passed through TQM, of course, the products produced should be based on market segments, consumer tastes and of course the trends that are rife among consumers primarily for property consumers in Indonesia. The application of TQM to the product will undoubtedly result in product innovation while other innovations produced by TQM activities that are integrated are increasing the company's HR competencies through training, and also developing other skills that aim to sharpen the company's actions further.



## 5. Conclusion

Application of TQM for internal organizations will certainly produce innovation in terms of skills and work skills, whereas the implementation of TQM based on the marketing channels and the development of product distribution will result in distribution innovation. Innovation in product distribution for the property industry in Indonesia can be further maximized if property companies can reach all aspects of distribution channels and chains, including distribution channels based on digital technology. Of course, this must be more also strengthened through the fabric of competent and professional cooperation with various parties. In entering the market competition, the patterned corporate strategy can guarantee the company's future performance to the maximum. Of course, to achieve these objectives, the company's strategy must be able to reflect the company's vision and mission. TQM as a part that prioritizes continuous improvement and development in all aspects will lead the company to develop various strategies intended to face competition, for example: for the marketing department, evaluation of marketing aspects must be directed in detail to assess the targets set previously. For the production section in facing market competition requires product quality that is attempted zero defect and zero mistakes because it is one of the considerations in product pricing. Strategies for marketing and production should be combined and combined to create synergy because the products made by the production department and the products sold by customer-focused marketing are the key to success in winning the competition. Of course, this does not only apply to the field of production and marketing because TQM focuses on all the internal joints of the company. The company's performance can be said to be achieved if all work activities go as planned.

## References

- Agus, A., & Hassan, Z. (2011). Enhancing Production Performance and Customer Performance Through Total Quality Management (TQM): Strategies For Competitive Advantage. *Procedia - Social and Behavioral Sciences*, 24(1), 1650–1662. <https://doi.org/https://doi.org/10.1016/j.sbspro.2011.09.019>
- Al-Naser, K., & Mohamed, R. (2017). The Integration between Strategic Cost Management Techniques to Improve the Performance of Iraqi Manufacturing Companies. *Asian Journal of Finance & Accounting*, 9(1), 210–223. <https://doi.org/10.5296/ajfa.v9i1.11003>
- Alam, R., Hamzah, N., Putra, A. H. P. K., Ginting, W. A., & Teng, S. H. (2019). What Is More Important In Business? The Fallacy In Interpreting Innovation As a Strategy. *1st International Conference on Life, Innovation, Change and Knowledge (ICLICK 2018)*. Atlantis Press. <https://doi.org/10.2991/iclick-18.2019.59>
- Amin, M., Aldakhil, A. M., Wu, C., Rezaei, S., & Cobanoglu, C. (2017). The structural relationship between TQM, employee satisfaction and hotel performance. *International Journal of Contemporary Hospitality Management*, 29(4), 1256–1278. <https://doi.org/10.1108/IJCHM-11-2015-0659>
- Anderson, M., & Sohal, A. S. (1999). A study of the relationship between quality management practices and performance in small businesses. *International Journal of Quality & Reliability Management*, 16(9), 859–877. <https://doi.org/10.1108/02656719910289168>
- Aquilani, B., Silvestri, C., Ruggieri, A., & Gatti, C. (2017). A systematic literature review on total quality management critical success factors and the identification of new avenues of research. *The TQM Journal*, 29(1), 184–213. <https://doi.org/10.1108/TQM-01-2016-0003>
- Arfah, A., & Putra, A. H. P. K. (2019). Analysis of Productivity and Distribution of Female Workers in FB's Industries. *Journal of Distribution Science*, 17(3), 31–39. <https://doi.org/10.15722/jds.17.3.201903.31>
- Baldwin, J. R., & Johnson, J. (1996). Business strategies in more-and less-innovative firms in Canada. *Research Policy*, 25(5), 785–804. [https://doi.org/10.1016/0048-7333\(95\)00875-6](https://doi.org/10.1016/0048-7333(95)00875-6)
- Bouranta, N., Psomas, E. L., & Pantouvakis, A. (2017). Identifying the critical determinants of TQM and their impact on company performance: Evidence from the hotel industry of Greece. *The TQM Journal*, 29(1), 147–166. <https://doi.org/10.1108/TQM-11-2015-0142>

- Brah, S. A., Tee, S. S. L., & Madhu Rao, B. (2002). Relationship between TQM and performance of Singapore companies. *International Journal of Quality & Reliability Management*, 19(4), 356–379. <https://doi.org/10.1108/02656710210421553>
- Camison, H., S., Clemente, A.J. A., & Gonzalez, C.T. (2018). How technology-based firms become also highly innovative firms? The role of knowledge, technological and managerial capabilities, and entrepreneurs' background. *Suma de Negocios*, 4(3) 162-170. <https://doi.org/10.1016/j.jik.2018.12.001>
- Chong, V. K., & Rundus, M. J. (2004). Total quality management, market competition and organizational performance. *The British Accounting Review*, 36(2), 155–172. <https://doi.org/https://doi.org/10.1016/j.bar.2003.10.006>
- Corredor, P., & Goñi, S. (2011). TQM and performance: Is the relationship so obvious? *Journal of Business Research*, 64(8), 830–838. <https://doi.org/https://doi.org/10.1016/j.jbusres.2010.10.002>
- Dereli, D.D. (2015). Innovation Management in Global Competition and Competitive Advantage. *Procedia - Social and Behavioral Sciences*, 195 (7), 1365–1370. <https://doi.org/10.1016/j.sbspro.2015.06.323>
- Distanont, A., & Khongmalai, O. (2018). The role of innovation in creating a competitive advantage. *Kasetsart Journal of Social Sciences*, Article In Press (xxx) 1-7. <https://doi.org/10.1016/j.kjss.2018.07.009>
- Evans, J.R., & Lindsay, W.M.C. (2002). *The management and control of quality (6<sup>th</sup> Edition)*. South-Western College Pub, ISBN: 9780324202236, 1-848
- Grover, S., Agrawal, V.P., & Khan (2004). A digraph approach to TQM evaluation of an industry. *International Journal of Production Research*, 42(19), 4031–4053. <https://doi.org/10.1080/00207540410001704032>
- Gupta, K., & Krishnamurti, C. (2016). Chapter 19 - Product Market Competition and Corporate Environmental Performance. *Handbook of Environmental and Sustainable Finance*, (Chapter Book), 385-404. <https://doi.org/10.1016/B978-0-12-803615-0.00019-4>
- Hackman, J. R., & Wageman, R. (1995). Total quality management: Empirical, conceptual, and practical issues. *Administrative Science Quarterly*, 40(2), 309–342. <https://doi.org/10.2307/2393640>
- Hoang, T.D., Igel, B., & Laosirihongthong, T. (2006). The impact of total quality management on innovation: Findings from a developing country. *International Journal of Quality & Reliability Management*, 23(9), 1092–1117. <https://doi.org/10.1108/02656710610704230>
- Hussain, J., Rahman, W., & Shah, A.F. (2016). Market Orientation and Performance: The Interaction Effect of Entrepreneurial Orientation. *Pakistan Journal of Commerce and Social Sciences*. 10(2), 388-403
- Iqbal, T., Huq, F., & Bhutta, M.K.S. (2018). Agile manufacturing relationship building with TQM, JIT, and firm performance: An exploratory study in apparel export industry of Pakistan. *International Journal of Production Economics*, 203(9), 24–37. <https://doi.org/10.1016/j.ijpe.2018.05.033>
- Jaworski, B.J., & Kohli, A.K. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing*, 57(3), 53. <https://doi.org/10.2307/1251854>
- Kanji, G.K. (1990). Total quality management: the second industrial revolution. *Total Quality Management*, 1(1), 3–12. <https://doi.org/10.1080/09544129000000001>
- Kanji, G.K. (1996). Can total quality management help innovation? *Total Quality Management*, 7(1), 3–10.
- Kaufman, B.E. (2015). Market competition, HRM, and firm performance: The conventional paradigm critiqued and reformulated. *Human Resource Management Review*, 25(1), 107–125. <https://doi.org/https://doi.org/10.1016/j.hrmr.2014.08.001>
- Kotler, P. (2012). *Marketing management, 14<sup>th</sup> edition*. Pearson Education.
- Kristianto, I., & Tarigan, Z. J. H. (2019). The impact TQM System on Supply Chain Performance through Supply Chain Integration and Employee Satisfaction. *Petra International Journal of Business Studies*, 2(1), 8–17. <https://doi.org/10.9744/ijbs.2.1.8-17>
- Kumar, V., Choisine, F., Grosbois, D., & Kumar, U. (2009). Impact of TQM on company's performance. *International Journal of Quality & Reliability Management*, 26(1), 23–37. <https://doi.org/10.1108/02656710910924152>
- Laitinen, E.K., Lämsiluoto, A., & Salonen, S. (2016). Interactive budgeting, product innovation, and firm performance: empirical evidence from Finnish firms. *Journal of Management Control*, 27(4), 293–322. <https://doi.org/10.1007/s00187-016-0237-2>
- Lawrence, C. & Poh, L.K (1999). Implementing quality in property management: The case of

- Singapore. *Property Management*, 17(4), 310–320.  
<https://doi.org/10.1108/02637479910299624>
- Madhani, P.M. (2009). Resource Based View (RBV) of Competitive Advantages: Importance, Issues and Implications. *Indian Management Research Journal*. 1(2) 13-21
- Mansur, D. M., Sule, E. T., Kartini, D., Oesman, Y. M., Putra, A. H. P. K., & Chamidah, N. (2019). Moderating of the role of technology theory to the existence of consumer behavior on e-commerce. *Journal of Distribution Science*, 17(7), 15–25.  
<http://dx.doi.org/10.15722/jds.17.07.201907.15>
- Meiyani, E., & Putra, A. H. P. K. (2019). The relationship between islamic leadership on employee engagement distribution in FMCG industry: Anthropology business review. *Journal of Distribution Science*, 17(5), 19–28. <http://dx.doi.org/10.15722/jds.17.05.201905.19>
- Narver, J.C., & Slater, S.F. (1990). The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*, 54(4), 20–35. <https://doi.org/10.2307/1251757>
- Powell, T. C. (1995). Total quality management as competitive advantage: a review and empirical study. *Strategic Management Journal*, 16(1), 15–37.  
<https://doi.org/10.1002/smj.4250160105>
- Raja, M.W., & Wei, S. (2014). TQM Practices and Innovation Performance : A Review of Current Literature. *British Journal of Economics, Management & Trade*, 4(7), 1018–1032.
- Ramlawati, R., & Putra, A.H.P.K. (2018). Total Quality Management as the Key of the Company to Gain the Competitiveness, Performance Achievement and Consumer Satisfaction. *International Review of Management and Marketing*, 8(5), 60–69.  
<https://doi.org/10.32479/irmm.6932>
- Reed, R., Lemak, D. J., & Mero, N. P. (2000). Total quality management and sustainable competitive advantage. *Journal of Quality Management*, 5(1), 5–26.  
[https://doi.org/https://doi.org/10.1016/S1084-8568\(00\)00010-9](https://doi.org/https://doi.org/10.1016/S1084-8568(00)00010-9)
- Tang, J. (2006). Competition and innovation behaviour. *Research Policy*. 35(1), 68-82.  
<https://doi.org/10.1016/j.respol.2005.08.004>
- Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*. 18(7), 509-533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Terziovski, M., & Samson, D. (1999). The link between total quality management practice and organisational performance. *International Journal of Quality & Reliability Management*, 16(3), 226-237. <https://doi.org/10.1108/02656719910223728>
- Wiklund, H., Klefsjö, B., Wiklund, S.P., & Edvardsson, B. (2003). Innovation and TQM in Swedish higher education institutions—possibilities and pitfalls. *The TQM Magazine*, 15(2), 99–107.  
<https://doi.org/10.1108/09544780310461116>
- Yusr, M.M. (2016). Innovation capability and its role in enhancing the relationship between TQM practices and innovation performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 2(1), 2-6. <https://doi.org/10.1186/s40852-016-0031-2>