





# “Hospital’s competitive advantage through service quality, information systems and Islamic work ethics”

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# HOSPITAL'S COMPETITIVE ADVANTAGE THROUGH SERVICE QUALITY, INFORMATION SYSTEMS AND ISLAMIC WORK ETHICS

## Abstract

The aim of this study is to analyze and measure the factors that influence competitive advantage seen from the quality of services, Islamic work ethics and information systems. The population of this study was all patients of BPJS participants in hospitals in Kuningan, West Java. This study uses a proportional random sampling technique to determine the sample. The respondents of this study were 115 respondents. Analysis was carried out using Partial Least Square (PLS). Results of the study prove that Islamic work ethics are positive and significant to competitive advantage. Competitive advantage can also be influenced by the hospital information system. Service quality also has a positive and significant influence on competitive advantage. Islamic work ethics, information system and service quality is a factor that can build competitive advantage in hospitals in Kuningan.

## Keywords

Islamic work ethics, information system, service quality,  
competitive advantage

## JEL Classification

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## INTRODUCTION

Having advantages in managing resources, skills, and capabilities in managing more effective company makes the company's position stronger than other companies. In the world of business competition, there is something that cannot be avoided, every company will compete in the market and market position. In an effort to survive in business competition, the company needs to have advantages that are difficult for competitors to follow. Competitive advantage is an advantage over competitors that is obtained by offering greater value to consumers than competitors' offers (Kotler, 2008). This advantage is something unique that makes the company different from other companies.

At present, the hospital has a paradigm shift towards profit-oriented, this is due to the entry of Indonesia into free market competition, which requires us to change the perspective of hospitals. The increasing number of hospitals makes them compete with each other to get customers. This can be seen in the data provided by Kemekes stating that the number of hospitals in Indonesia is increasing, since 2012 until April 2018, there has been an increase in the number of hospitals by 5.2%. In 2012, there were 2,083 hospitals, while as of April 2018, there were 2,820 hospitals.

Hospital growth spreads throughout the territory of Indonesia. However, in some regions, there is more rapid growth, namely West

Java and East Java, where growth reaches 7-8%. There is an increase in the number of hospitals in East Java and West Java that are quite large. This shows that in the competition between hospitals in East Java and West Java, Kuningan is one of the regencies in West Java. The development of hospitals is also included in this region. Even though Kuningan is not a big city, there are 8 dedicated hospitals that serve patients with BPJS.

According to Law number 24 of 2011 concerning the Social Security Organizing Body, the BPJS (Social Security Organizing Agency) is a legal entity established to organize social security programs. BPJS consists of BPJS Kesehatan and BPJS Employment. BPJS is a policy on social security carried out by the government. The BPJS program consists of two programs, namely health and employment. This BPJS health policy is closely related to hospitals as providers of health services and the public as BPJS health program participants.

In implementing the BPJS health program, the government encouraged all Indonesian citizens to participate as BPJS health program participants. This program provides a unique opportunity for hospitals that partners with BPJS. Until the end of 2017, the number of BPJS participants reached 187,982,949 (Ministry of Health, 2017). This shows that the majority of Indonesia's population are BPJS health program participants. This can be an opportunity for hospitals.

The positive impact of the BPJS hospital program has a large market, but, on the other hand, the hospital is bound by the rules and regulations of the BPJS, so that the hospital cannot expand its market as desired. Based on the regulation of Law number 24 of 2011 concerning the Social Security Organizing Agency, hospitals are bound to Zoning rules and tiered referral systems. The Zoning System is a referral system at the nearest hospital in the 15-30 km route. While the tiered referral system is a referral system based on the type of hospital, the type of hospital consists of types A, B, C, and D. This tiered referral is based on the lowest type of hospital, type D for the earliest referral, so that the selection of hospital patients participating in the BPJS is chosen based on the nearest location and the lowest type first if the system at the destination hospital cannot be fulfilled and then thrown at the house at the next level.

With the system implemented by BPJS, hospitals do not need to expand the target market. However, to develop a hospital hospital, it is necessary to build competitive advantage so that BPJS patients can make their own decisions to choose the hospital services they want. The competitive advantage of the hospital still needs to be developed to improve the position of the hospital. Competitive advantage is not just about getting as many consumers as possible, but how can hospitals manage all resources more effectively so that they can continue to maintain the best position of the company.

In developing the competitive advantage of the hospital, there is an important factor that needs to be considered by the hospital, namely the quality of service. Narver and Slater (1990, p. 21) state that companies will achieve competitive advantage when companies are able to provide more value to customers compared to what is provided by competitors. In an effort to be more than a competitor, the value that needs to be built by hospital services is in the form of the quality of services provided. In the opinion of Tjiptono (2001), another way to differentiate is to consistently provide better service quality than competitors.

According to Cronin and Taylor (1994), service performance is the performance of services received by consumers and assessment of the quality of the service they have felt. In service, hospital services are things that can be directly felt by consumers. As a service company that wants to continue to excel in competition, improvements in service must always be carried out. Service improvement is tailored to the needs of consumers so that consumers become satisfied and can be loyal to hospitals. Assessment of service quality is important for hospitals, by assessing the quality of hospital services the performance of services provided by the hospital can be evaluated.

According to Maukar (2015) who formulated that the quality of a service is determined by work ethics, the quality of a service is determined by work ethics (Maukar, 2015). Good service quality needs to be supported by the existence of the environment and ethical values applied by the hospital. This is so that the quality of services provided further reflects the characteristics of the hospital.

Hospital information system is an order that deals with data collection, data management, presentation of information, analysis and storage of information, and the delivery of information needed in hospital activities. The application of information in hospitals includes medical, nurse, administration, and support (Sabarguna, 2003). Richards et al. (2012) explained that IT strategies are able to connect doctors with hospitals or clinics. Hafizurrachman (2009) in his study concluded that efforts to create a quality hospital must be focused on customers as consumers.

## 1. EMPIRICAL STUDY

Competitive advantages according to Day and Wensley have at least two different meanings, but are related (Droge et al., 1995). The first meaning focuses on superiority in skills and/or resources, while the second is related to the superiority of performance results.

Company improvements both in terms of methods, approaches or company operations need to be carried out continuously in order to fulfill the needs of its customers. Companies must be responsive to changes and influences that are manifested in one or more product attributes. The main basic determinants of company's ability are industry attractiveness and competitive advantage (Porter, 1994). Adjustments are made by the company to meet customer needs. Narver and Slater (1990, p. 21) state that companies will achieve competitive advantage when companies are able to serve more benefit to customers than what is provided by competitors. In an effort to be more than a competitor, the value that needs to be built by hospital services is in the form of the quality of services provided (Tjiptono, 2001). Another way to differentiate is to consistently provide better service quality than competitors.

Zeithaml et al. (1990) developed a service quality measurement tool called SERVQUAL (service quality). The measuring instrument is a multi-item scale that contains two questions used to measure consumer perceptions of service quality. The quality of service is divided into several dimensions, namely:

- 1) physical evidence, which includes physical facilities, equipment, personnel, and means of communication;

- 2) reliability, which is the ability to produce accurate and definite service performance;
- 3) responsiveness, which is the ability of employees to help and provide services to customers responsively, quickly and accurately;
- 4) guarantee that is the ability, politeness, and trustworthy nature of the staff, including freedom from danger, risk and doubt;
- 5) empathy which is the ease of establishing relationships, making good communication, giving attention, and understanding customer needs.

In an effort to build quality services that have different values, it is necessary to have factors that support the quality of the service, one of the factors that support the performance of services provided requires work ethics. The work ethics that is currently needed to build sharia hospitals is ethics that is in accordance with Islamic principles, which is commonly called Islamic work ethics. Maukar (2015) formulates that the quality of a service is determined by work ethics.

Based on Foster and Fenwick (2014), Islam has a role in the work environment. In addition, several previous studies have concluded that Islamic work ethics has a significant impact on the company, namely the positive impact on company capability and performance (Yesil et al., 2012) and strong commitment to Islamic work ethics. Ali and Owaihan (2008) suggested that companies that have ethics are able to get several benefits, namely efficiency, employee accountability, communication efficiency, and competitive advantage.

To facilitate and accelerate services that spearhead service companies, information systems are the right solution. The use of information technology has a positive and significant effect on service quality (Poerbantoro, 2006). According to Richards et al. (2012), the IT (Information Technology) strategy is able to connect doctors with hospitals or clinics. Based on this opinion, IT relations, medical records, and doctors can be used as a competitive advantage for hospitals (Zhu et al., 2002). Research by J. Fitzsimmons and M. Fitzsimmons (1997) and Furey (1991) in Zhu (2000) states that IT-based services can improve service and customer satisfaction. The use of computers is expected to accelerate and improve the accuracy of data and traffic processing so that strategic decisions can be taken more quickly, which ultimately increases sustainable competitive advantage (Goodhue et al., 1996).

The application of the Shariah approach to hospitals is currently a growing trend in services because of the need for the community to get treatment in blessings, and the concept of Shariah for this hospital can be a new opportunity to become added value to the hospital. The application of this Shariah hospital is still limited to 2 hospitals, in 2018 it is planned that there will be 30 new hospitals that get Shariah labels, this label is not limited to Islamic hospitals, but even government hospitals can get Shariah labels if they are compatible with determined criteria. Kuningan is one of the small districts in West Java, demographically the people of Kuningan regency are predominantly Muslim and not many migrants. But in Kuningan district, there are 2 regional hospitals and several private hospitals. Kuningan hospital still uses systems and services that are relatively the same, so that each hospital is considered the same by the community. One way to build competitive advantage is to build different quality of service with its competitors. Islamic hospitals can be an alternative problem for hospitals in Kuningan. This makes researchers want to know the patient's perception if the hospital applies Shariah principles in the form of Islamic work ethics and information systems to sustainable competitive advantage through quality of service.

## 2. LITERATURE AND HYPOTHESES

### 2.1. Effects of Islamic work ethics on service quality

The quality of a service is determined by work ethics (Maukar, 2015). Triguno (2000) states that the formation of work ethics, which is a work culture, can increase satisfaction in work, establish closer relationships, improve discipline, reduce functional control, increase efficiency, reduce attendance, foster a desire to continue learning, and provide the best for the organization and environment. In running a business, a Muslim businessperson is required to behave in accordance with the recommendations stated in the Qur'an and sunnah. Manners of business behavior include three things, namely generosity, motivation to worship, and remembering God and His first priority (Ahmad, 2003, p. 109).

Generosity is always being friendly, polite, smiling, and relentless, but still responsible. This attitude will become a magnet for a businessman or trader who can attract consumers (Arifin, 2007, p. 107). This attitude is in accordance with the opinion of Groonros (1993) who states that service quality perceived by customers, especially in the dimensions of the process, is related to the way customers receive services from companies in the interaction between buyers and sellers.

Some of the results of previous studies also show the results that Muslims are the servants of Allah SWT and must be able to do good in business or human relations (Abbas & Gibbs, 1998). Any action that intends to harm another person even though it benefits the people who do it is not in accordance with Islamic law (Ali & Al-Owaihian, 2008). Research conducted by Rice (1999) reveals, based on Islamic principles, that ethics is something that dominates the economy and not vice versa. Based on theory and previous research, the following hypothesis can be stated:

*H1: Increased Islamic work ethics will be able to improve service quality.*



## 2.2. Effects of Islamic work ethics on sustainable competitive advantage

Excellence in competition basically grows from the value or benefits created by the company to buyers. The costs that must be incurred by the company to create this value are greater. Value and benefits are replaced by consumers. Superior value comes from the lower price offered compared to the competitor's price in getting the same or unique benefits above the price offered (Porter, 1985).

Companies are considered to have competitive advantage when implementing strategies that create values that are not simultaneously implemented by potential competitors (Ferdinand, 2003). Success is inseparable from various ethical endeavors and luck or blessings. Luck is inseparable from the value of *fatanah* (intelligence), *istikamah* (having the principle of holding fast to religion), trust (honest), and trusting (surrendering to God) in a moral economy (Salim, 2011). According to Mustika (2010), the application of business ethics will always benefit the company, both in the medium and long term, because it can increase competitive advantage. Barutcugil (2004) argues that companies that have ethics are able to get several benefits including efficiency, employee accountability, communication efficiency, and competitive advantage.

Based on some of these theories and previous researches, hypothesis 2 can be stated as follows:

*H2: Increasing Islamic work ethics should create sustainable competitive advantage.*

## 2.3. Effect of information systems on service quality

Information technology can help companies achieve sustainable competitive advantage in several ways, namely:

- 1) providing new avenues for companies to outperform their competitors by reducing costs or making differentiation;
- 2) creating barriers to entry, creating costs for change, or changing the basis of competition;

- 3) invading new businesses (Porter & Millar, 1985).

Previous research revealed that information technology-based services perceived by customers had positive effect on the overall dimensions of service quality (Zhu et al., 2002). In addition, Zhu (2002) explained that after trying and feeling the high quality of IT-based services, such as ease of use, time savings, convenience, accurate account information, ability to meet most needs, there was no risk of interference with privacy. Then the customer gives a higher rating for the quality of the service. Zhu et al. (2002) state that information technology-based services can improve service and customer satisfaction. Based on some of these theories and previous researches, hypothesis 3 can be stated as follows:

*H3: Increased information systems will be able to create quality services.*

## 2.4. Influence of information systems on sustainable competitive advantage

Day and Wensley (1988) argue that there are two factors that influence the company's efforts to create competitive advantage, namely superior capability and superior resources. This opinion is supported by Ferdinand (2003) who explains, based on resource-based theory, that the essence of excellence in competition is a unique combination of resources and capabilities.

Davenport and Short (1990) state that information technology is all the capabilities that can be done by computers, namely software applications in computer hardware and telecommunications, including data transfer. Because of its superiority, information technology is used by many companies to support their strategic goals, namely achieving excellence in sustainable competition.

Imitability and high information technology depend on organizational assets. Therefore, companies must manage information technology assets to maintain sustainable competitive advantage. These assets are human resources, technology, and partnerships between information technology and management as users. The use of computers

is expected to accelerate and improve the accuracy of data processing and traffic so that strategic decisions can be taken more quickly, which ultimately improves sustainable competitive advantage (Goodhue et al., 1997). Orlikowski and Gash (1992), and Davenport and Short (1990) also state that information technology performance supports sustainable competitive advantage. Based on some of these theories and previous researches, hypothesis 4 can be stated as follows:

*H4: Increased information systems will be able to create sustainable competitive advantage.*

## 2.5. Effect of service quality on sustainable competitive advantage

Quality is a dynamic condition that relates to products, services, people, processes, environments that exceed expectations (Goetsch & Davis, 1994). Poerbantoro (2006) found that service quality has a positive and significant effect on competitive advantage. Sustainable competitive advantage is influenced by imperfect markets in terms of expertise and resources (Bharadwaj et al., 1993). These expertise and resources can create quality services that are different from competitors so as to create a sustainable competitive advantage.

Gronroos (1993) explained that service quality perceived by customers has two dimensions. First, the process dimension is related to the way cus-

tomers receive services from companies in the interaction between buyers and sellers. Second, the dimensions of results are related to the results of service transactions, especially those concerning the things that customers feel when interacting with service providers.

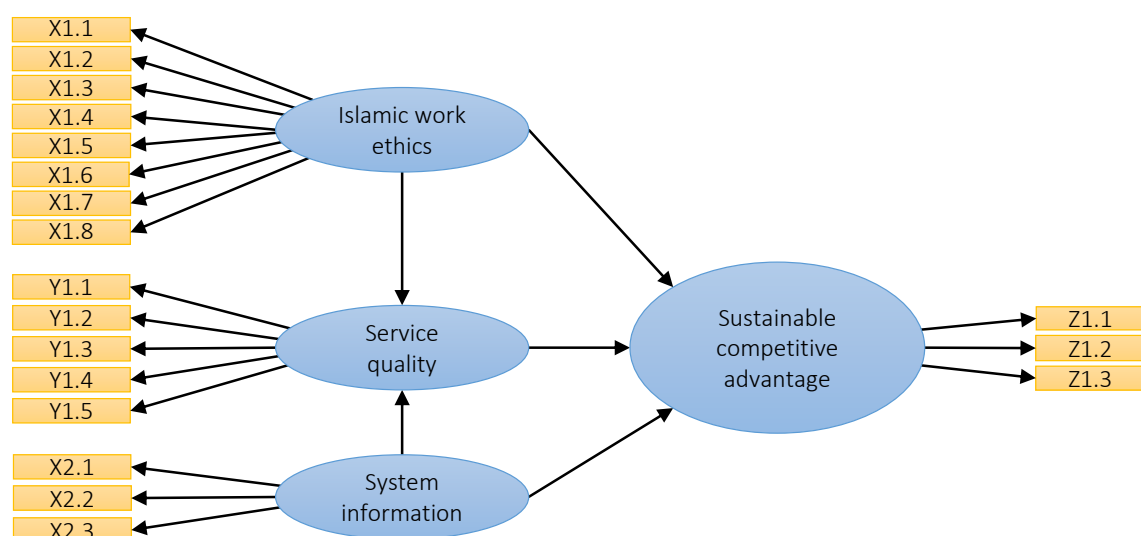
Based on some of these theories and previous researches, hypothesis 5 can be stated as follows:

*H5: Increasing the quality of services should form sustainable competitive advantage.*

## 3. RESEARCH METHOD

In this study, testing the hypothesis to measure the competitive advantage of hospitals in Kuningan is seen from Islamic work ethics and information systems through quality of service. The data were collected by distributing hospital patient questionnaires in brass. There were six hospitals that were the object of this study, namely Kuningan Hospital, Wijaya Kusumah Hospital, Juanda Kuningan Hospital, El Syifa General Hospital, Kuningan Medical Center and Linggarjati Kuningan District Hospital.

The hypotheses of the influence of Islamic work ethics and information systems on competitive advantage through service quality were analyzed in this study. In this study, researchers used empirical research to obtain general description and



**Figure 1.** Research model

test results of the influence of Islamic work ethics and information systems through service quality on competitive advantage. Testing is done using Partial Least Squares (PLS). The researcher used PLS to test and develop a model research model to predict. The population in this study were all hospital patients in Kuningan. The research respondents were inpatients in hospitals with BPJS health program. The number of respondents who met the criteria of the researchers who were researchers at the time of the study was 115 respondents.

## 4. RESULT

### 4.1. Descriptive results

The characteristics of respondents in this study were the majority of married women by 89% with age range of 21-30 years at 67%, with the majority of the last education being high school at 43% and the majority being patients who came with referral of 67% with work of 54% housewives where the majority of length of stay is 30% for 3-4 days.

### 4.2. Variable measurement

Based on the parameter estimation results, Table 1 shows the *t*-statistics value in, which will be compared to the Z score. The Z score in this study is 1.96. The error level received in this study was 0.05 or 5 percent. The results of the *t*-statistics coefficient values are as follows.

The influence of the relationship between exogenous latent variables and endogenous latent variables can be explained as follows.

**Table 1.** Path coefficient for Islamic work ethics and service quality

Variable	Hypothesis	Estimate	t-statistics value	p-values	Supported/rejected
Islamic work ethics → service quality	H1	0.474	6.380 > 1.96	0.000	Supported

The path parameter coefficient obtained from the relationship among the variables of Islamic work

ethics and service quality is 0.474, which shows the positive influence of Islamic work ethics (*X1*) on service quality (*Y1*). In addition, it can be interpreted that the higher the Islamic work ethics, the better the quality of service. The *t*-statistics value is 6.380 (*t*-table significance 5% = 1.96), because the *t*-statistics value is greater than the *t*-table, which is 1.96 (6.380 > 1.96).

**Table 2.** Path coefficient for Islamic work ethics and sustainable competitive advantage

Variable	Hypothesis	Estimate	t-statistics value	p-values	Supported/rejected
Islamic work ethics → sustainable competitive advantage	H2	0.327	3.285 > 1.96	0.001	Supported

The path parameter coefficient obtained from the relationship between the variables of Islamic work ethics and sustainable competitive advantage is 0.327, which means there is a positive impact on Islamic work ethics (*X1*) on sustainable competitive advantage (*Z1*). In addition, it can be interpreted that the higher the Islamic work ethics, the better the competitive advantage will be. *T*-statistics value of 3.285 is significant.

**Table 3.** Path coefficient for service quality and sustainable competitive advantage

Variable	Hypothesis	Estimate	t-statistics value	p-values	Supported/rejected
Service quality → sustainable competitive advantage	H3	0.572	6.101 > 1.96	0.000	Supported

The path parameter coefficient obtained from the relationship between service quality variables and sustainable competitive advantage is 0.572, this number shows the positive influence of information systems (*X2*) on service quality (*Y1*). In addition, it can be interpreted that the better the information system, the better quality of service. The *t*-statistics value of 6.101 is significant.



**Table 4.** Path coefficient for information systems and service quality

Variable	Hypothesis	Estimate	t-statistics value	p-values	Supported/rejected
Information system → service quality	H4	0.276	3.814 > 1.96	0.000	Supported

The path parameter coefficient obtained from the relationship among information system variables and service quality is 0.276, which shows the positive influence of information systems (X2) on service quality (Y1). In addition, it can be interpreted that the better the information system, the quality of service is increasing. *T*-statistics value of 3.814 is significant.

**Table 5.** Path coefficient for information system and sustainable competitive advantage

Variable	Hypothesis	Estimate	t-statistics value	p-values	Supported/rejected
Information system → sustainable competitive advantage	H5	0.316	4.248 > 1.96	0.000	Supported

The path parameter coefficient obtained from the relationship between information systems variables and sustainable competitive advantage is 0.316, which shows the positive influence of information systems (X2) on sustainable competitive advantage (Z1). In addition, it can be interpreted that the better the information system, the bigger sustainable competitive advantage. *T*-statistics value is 4.248.

**Table 6.** R-Square

Variable	R-Square	R-Square adjusted
Service quality	0.463	0.454
Sustainable competitive advantage	0.510	0.497

After the estimated model meets the criteria for the outer model, it is necessary to test the struc-

tural model (inner model). Here is the value of R-Square in the construct, it is perceptible that the construct of service quality described in the variable Islamic work ethics and information system is 46 percent, while the remaining 54 percent is affected by other factors. The constructs of sustainable competitive advantage described in the variables of Islamic work ethics, information systems, service quality, and corporate image are 51 percent, while the remaining 49 percent is affected by other factors.

## 5. DISCUSSION

Based on the results of the analysis, the results of hypothesis testing state that the Islamic work ethics is significantly able to improve the quality of service. This is in accordance with Maukar's (2015) research, which reveals that the quality of service is determined by work ethics. And success is inseparable from a variety of ethical efforts and luck or blessings (Salim, 2011). Service industries, especially hospitals, are related to service quality. To develop service quality, it requires an Islamic work ethics that contains harmonious values. In this study, the values in Islamic work ethics that are felt by consumers of hospitals in Kuningan are religious, business, competition, obligation to work, quality, collectivity, equality, and excellence.

Based on the explanation above, it can be concluded that Islamic work ethics carried out by hospitals can improve the quality of service from the hospital itself. To develop the quality of service expected by consumers, it requires an Islamic work ethics. This is in accord with the opinion of Groonros (1993), who states that the quality of service perceived by customers, especially in the process dimension, relates to the way customers receive services from the company during interactions between buyers and sellers. Values in Islamic work ethics are applied in daily life, especially in the work environment, affect the good and bad quality of services provided to consumers.

Based on the results of the hypotheses testing, the Islamic work ethics was able to significantly create sustainable competitive advantage. This is consistent with the opinion of Salim (2011) who found that success is inseparable from various ethical ef-

forts and luck or blessings. Blessings or luck are related to *fahahah* (intelligence), *istikamah* (holding firmly to religious values), trust (honest), and *tawakal* (self-giving to God) in a moral economy. A company is said to have a competitive advantage when implementing a strategy that creates value that is not simultaneously carried out by potential competitors (Ferdinand, 2003).

Kasasbeh et al. (2014) assess the ethics in activities that can be seen from how company management manages its relationship with each employee, customer, inventory, competitors based on credibility and trust building in four main themes that do meaningful, and do not harm others, and reduce fraud in any transaction, and impartial to engage in any practice that benefits one party without harming the other party. The practice of business ethics will always benefit the company both in the medium term and long term, if it is able to increase competitive advantage. Islamic values or work ethics applied provide a positive impetus for hospitals to bring better value than the products or services offered. Collaboration conducted within the hospital can be demonstrated by the cooperation with BPJS or other insurers. Not all hospitals are able to cooperate with BPJS, hospitals must first be standardized and then accredited to be able to cooperate with BPJS. This hospital collaboration with BPJS is the factor of sustainable competitive advantage.

From the explanation above, it can be concluded that Islamic work ethics carried out by hospitals related to transparency will be able to improve the competitive advantage of hospitals. This is in line with the results of research by Barutcugil (2004) suggesting that companies that have ethics are able to gain several benefits (efficiency, employee accountability, communication efficiency, and competitive advantage). Islamic work ethics in hospitals are developed by applying Islamic values, for example religious, namely the work culture in the hospital, which is thick with nuances, environment and Islamic habits. The concrete form is giving greetings when entering the patient's room, reminding and helping patients to perform prayers, and convincing patients that hospitals that implement Islamic work ethics have advantages over other hospitals. These habits give rise to characteristics that build sustainable competitive advantage for hospitals in Kuningan.

Based on the results of hypotheses testing, the information system can significantly create service quality. This is consistent with the results of Zhu et al.'s (2002) research, which revealed that information technology-based services perceived by customers have positive influence on the overall dimensions of service quality. J. Fitsmmons and M. Fitsmmons (1994) and Furey (1991) also stated that information technology-based services can improve customer service and satisfaction.

In addition, the scope of information technology is not only computer technology (hardware and software), which only functions as a processor and save information, but also communication technology to send information to various parts of the organization that need to make decisions (Martin, 1999). In the current era of globalization, this information technology greatly helps companies to improve the quality of services provided to consumers. Based on research conducted on consumer banking by Zhu et al. (2002), the use of IT-based services by customers has a positive impact on the overall dimensions of service quality, including reliability, responsiveness, and assurance as defined in SERVQUAL.

Information systems have a very important role in service quality. With the existence of an information system, patients will get convenience when asking the registration process, medical records, or administration related to the costs to be paid and others. Administrative services are quickly considered important by patients, because they show good quality hospital services. Another thing related to information systems is the ability of the front office to provide accurate information when there are family, relatives, or friends of patients who come to visit.

Regarding BPJS patients, information systems are considered very important. When making a payment, the patient is asked to submit a document (previously photocopied). With the existence of an adequate information system, the hospital can provide better services. In this case, the information system is a supporting factor to improve the quality of hospital services in Kuningan regency. The improvement of the system continues to be developed by the BPJS, which has been applied in several hospitals, one of them is by procuring fin-

ger print for patients, so that the previous patient registration process was quite time consuming, now it becomes easier and faster.

Based on the results of hypotheses testing, the information system is significantly adequate when creating sustainable competitive advantage. This is consistent with the research of Goodhue et al. (1996), which explains that computers are used to accelerate and improve the accuracy of data processing and its traffic. That way, strategic decisions are taken more quickly so as to increase sustainable competitive advantage. These results are also consistent with the research of Orlikowski and Gash (1992), and Davenport and Short (1990) who state that the performance of information technology supports sustainable competitive advantage.

The term competitive advantage, according to Day and Wensley, has at least two different, but related, meanings (Droge et al., 1995). The first meaning focuses on superiority in skills and/or resources, while the second meaning is related to the advantages of performance outcomes. Building excellence can be done by adding information system services that can support the convenience of its customers.

Based on the results of hypotheses testing, service quality can significantly form positive sustainable competitive advantage. This is in line with the opinion of Juran (1993) who states that higher quality allows companies to increase customer flexibility, make products sell well, carry out competition, increase market share and sales volume, and sell products with higher prices. Good service quality can create customer satisfaction, which leads to positive image of the company.

Assessment of the level of service quality is important as a basis for improving service quality and increasing customer loyalty. The actual benefits come from customers who are loyal to the hospital, not just to consumers who are satisfied. The main cause of hospital failure is to disappoint customers by providing poor service quality. So the top priority for health organizations is fulfilling the needs and retaining customers.

Quality is a dynamic situation that provides something that exceeds expectations including with products, services, people, processes, and the en-

vironment (Goetsch & Davis, 1994). Rangkuti (2009) reveals that service quality cannot be assessed from the company's point of view, but from the customer's assessment.

Good service quality is when patient expectations can be met, therefore if the hospital is able to provide a good guarantee for patients, then the process of information transfer is automatically carried out, so that the hospital is able to create value for the customers, which ultimately forms sustainable competitive advantage.

## 6. IMPLICATION OF THE STUDY

The results of this study empirically manifest the influence of Islamic work ethics, information systems, service quality and sustainable competitive advantage. The findings in this study were used to confirm the theory in previous studies, namely Islamic work ethics theory developed by Maukar (2015), Salim (2011), information system theory (J. Fitzsimmons & M. Fitzsimmons, 1997; Furey, 1991), service quality theory (Goetsch & Davis, 1994). The results of this study are confirmed by the findings of previous research that the better Islamic work ethics and information systems tend to be able to improve service quality and sustainable competitive advantage from hospitals, the better the quality of services can also increase sustainable competitive advantage.

This research is expected to contribute theoretically and practically. For theoretical contributions, this study contributes to the development of Islamic work ethics theory, information systems, service quality and sustainable competitive advantage in factors that influence customer satisfaction in service quality and its relationship with sustainable competitive advantage.

As a practical contribution, this research is expected to provide input to the hospital in improving or maintaining Islamic work ethics that have not or have been implemented so as to improve the quality of services and create sustainable competitive advantage. Furthermore, the hospital can also improve the information system to be able to provide expectations that are more than expected to patients so that they can provide better qual-

ity services and create a sustainable competitive advantage. Then, the quality of services provided by hospitals should be maintained so as to create competitive advantage for hospitals. despite the

existence of government regulations for tiered and Zoning referral systems, but if it is not balanced with good service quality, sustainable competitive advantage will be difficult to achieve.

## CONCLUSION

The results show that there is an influence of Islamic work ethics and information systems on sustainable competitive advantage through significant service quality. In the relationship of each variable, there is also a good positive relationship between Islamic work ethics and service quality and Islamic work ethics with competitive advantage. Similarly, information systems also have a positive relationship with service quality and sustainable competitive advantage. This provides an illustration that hospital patients in Kuningan perceive that Islamic work ethics and information systems are added values that can improve service quality and shape competitive advantage for hospitals. The influence of Islamic work ethics on competitive advantage through quality of service shows that hospitals that implement Islamic work ethics have advantages, this can be an opportunity for hospital business people in Kuningan, West Java. Limitations in this study are the objects in this study are hospitals that have not been certified as Shariah and limited to rumash only in Kuningan regency. For further research we can look at the perceptions of patients in Shariah hospitals compared to conventional hospitals.

## LIMITATION

This study limited only on Kuningan regency, which not owns type A and B hospitals, so the result of this study cannot be generalized to all hospitals yet. Also, all hospitals in research period are busy with standardization system and increase performance to face accreditation from government, which means that everyone who works in hospital has boost performance over patient and so has an impact regarding result of this research.

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