

Company's Performance as Measured by the Application of Big Data Analysis Capabilities for Customers

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ABSTRACT: Based on earlier studies related to quality and big data analytics, this article seeks to discover the ideas of technology utilization, quality information, and talent quality in affecting company performance. The purposive sample consisted of 150 customers from around Indonesia who fulfilled the criteria. SEM-PLS techniques are used to examine preliminary data. We find that the Quality of Information, and talent substantially impact company performance. However, Big Data Analytics does not affect Technology Utilization. These studies may help the company develop its Consumer Big Data analytical skills. Practically, the findings are anticipated to improve the company's performance to satisfy the demands and desires of customers.

Keywords: Big Data; Technology Utilization; Quality of Information; Talent Quality; Company Performance

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INTRODUCTION

Internet technology has advanced significantly in the software business, and one of the benefits of this advancement is the emergence of millions of website addresses. Since then, the internet has been regarded as a medium for spreading information. E-commerce has expanded due to the internet and other worldwide online networks, which has led to innovative commercial opportunities for e-commerce and new global and national trading partnerships. This resulted in the idea that e-banking and e-commerce are now significant financial services components (Khan, 2016). By maximizing this media, a wealth of superficial information about consumer preferences, the number of consumers who purchase, and the length of time consumers take to complete transactions is exposed to customer journeys that incorporate extensive data analysis (BDA).

Unfortunately, most web developers pay no attention to overall Web quality, with some developers focusing on the frontend rather than the content. According to internet world stats, Indonesian internet users reached 212.35 million in March 2021, placing the country third in the Asian (Kusnandar & Mutia, 2021). This number represents more than half of Indonesia's current population, creating service providers, particularly those who utilize the internet. E-commerce service providers are businesses that use the internet in their operations; also, this business frequently employs the BDA system to attract customers. Some of the advantages of implementing big data to maximize e-commerce strategies are as follows: (1) Improve the consumer shopping experience, where data collected by the website can provide product recommendations that follow the interests of those consumers; (2) Personalization of shopping, where data collected on e-commerce platforms can provide promotional strategies that are following the interests of each consumer; (3) Increase e-commerce innovation, so that businesses remain flexible in changing trends.

This becomes important to investigate; thus, this study is carried out to examine the relationship between the combination of visible resources, such as employees, and intangible resources to develop BDA skills. While we agree that natural considerable data resources cannot create BDA functions, we feel that this also applies to human and intangible enormous data resources. The company needs one or two of these resources and a unique combination of the three, resulting in company-specific BDA capabilities.

A company with a lot of data and sophisticated computing technology but lacks managerial skills and big technical data, for example, is doubtful to gain from data and big data technology. Likewise, if an organization lacks the intensity of learning and adopts a culture that makes decisions based on people's wants, natural resources (e.g., data and technology) and excellent human data skills will not be rewarded. In this study, the concept function of the application of Big Data Analysis was tested, specifically how it moderates the Utilization of Technology, Quality of Information, and Quality of Talent derived from corporate performance to assist companies in developing their performance to increase the value of the company.

Research on the implementation of BDA in enhancing company performance seems to be quite rare in Indonesian national journals, particularly in the social sciences. As a result, this became part of the study's novelty we delivered. Furthermore, this research would explain how the interaction between assets owned by organizations can support the company's value by looking at how the implementation of variables on technology utilization, information quality, and talent quality.

This study examines the elements associated with extensive data analysis for business continuity in times of crisis. While achieving business resilience, growth, and sustainability has become increasingly tricky daily. It becomes exponentially more difficult during times of crisis, such as the Covid-19 pandemic. As a result, this study's four Research Questions (RQ) need to be improved, as follows: RQ1: Whether technology utilization has an effect on company performance when Big Data Analysis is used; RQ2: Whether the Information Quality variable has an effect on company performance when Big Data Analysis is used; RQ3: Does talent quality has an impact on company performance when Big Data Analysis is used; RQ4: Whether the Big Data Analysis variable can moderate the effect of Technology Utilization, Information Quality, and Talent Quality on company performance when Big Data Analysis is used. Finally, to answer the research question, this article will outline the applied theories, the research methods, and the data analysis to present conclusions and arguments concerning the study findings. The research's limitations will be discussed later, and it is hoped that they might eventually create an opportunity for additional in-depth analysis.

THEORETICAL REVIEW

Company Performance

The primary objective of the company's establishment is to enhance shareholder welfare. Wellness can be improved through successful business operations. A successful business's performance benefits consumers, communities, employees, and suppliers - even creditors, i.e., finance suppliers. As mentioned above, the company's secondary goal is to satisfy the parties. Secondary purposes serve as necessary for accomplishing primary goals (Nurhayati et al., 2019).

Proper use of information technology, supported by the expertise of the personnel who operate it, can significantly improve both the company's and individual's performance, to the point where each organization is required to succeed in information technology and optimize its information technology facilities to achieve its vision and goals. (Wijana, 2007) & (Mardjiono, 2009) ; (Nauap et al., 2017) found that a company's performance is related to its use of information technology, which means that the more experts and skilled in utilizing information technology, the more quickly work can be completed, which affects the company's performance.

Management Information Systems

Numerous articles have examined management information systems; one of the ways the system aids firms in remaining sustainable and relevant is through Big Data. The term "information system" refers to the individual, hardware, software, communication networks, data resources, and rules and procedures for storing, recovering, manipulating, and publishing information (Marakas & O'Brien, 2017). The corporate world's use of information technologies is associated with how the company's value is determined (Madura, 2004). The management of information systems determines the adoption, use, and administration of information technology, including computers and telecommunications.

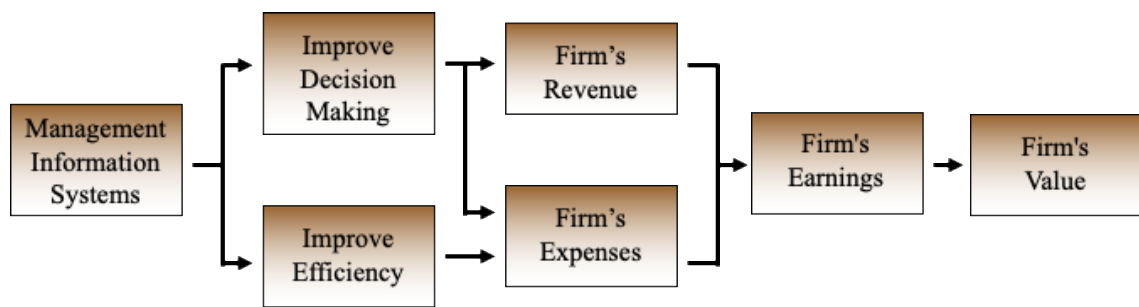


Figure 1 The Application of Management Information Systems to Increase the Value of a Business (Madura, 2004)

(De-Jun, 2009) Management Information Systems are different from regular information systems because they are used to look at other information systems used in their daily operations. Many people use the term "information management" to refer to a group of tools that help people make decisions, like Decision Support Systems and Executive Information Systems. Database management systems are the primary software of the database management approach because they control enterprise and end-user databases' creation, maintenance, and use. The main functions of database management are; (1) to create new databases and database applications, (2) to maintain the quality of the data in the enterprise database, and (3) to use the enterprise database to provide the information needed by the end-user.

Technology Utilization

Technology in a computer network consists of various information processing components that use multiple hardware, software, data management, and information network technology (Yudianta & Erawati, 2018). The use of technology in business can support business processes and operations, support decision-making by employees and managers, and support strategies for competitive toughness. The utilization of technology can provide information quickly and relevantly for every individual who runs it. (Anugrah et al., 2018) information is processed data, and its essence becomes other valuable data and

is commonly called information. The utilization of information technology is the behavior of individuals in using information technology to complete tasks and improve their performance. According to (Widiana, 2010), information technology is a benefit that users expect of information systems to carry out their duties or behavior in using technology while working. This research is based on (Thompson et al., 1991), namely the intensity of utilization, frequency of utilization, and the number of applications or software used. Proper utilization of information technology and supported by the expertise of the personnel who operate it can improve the company's performance and the performance of the individuals concerned. The research conducted by (Mustikarani & Irwansyah, 2019) revealed that implementing ICT that focuses on e-commerce, big data, and other fashion industry players can maximize marketing to consumers. (Murdifin et al., 2021); (Syahnur et al., 2018). The company's management and partners must be fully committed, which will result in the company's capacity to maximize the availability of infrastructure for internet access to provide high-quality internet services technology. Additionally, industry participants may maintain strong relationships with existing clients while expanding into new markets to reach new customers.

H1: There is a positive relationship between technology usefulness and big data analytics.

Information Quality

Information quality, system quality, service quality, utilization, user satisfaction, and perceived advantages are all relevant indicators of system success. Except for the influence of system quality on utilization, the hypothetical link between the six success variables is substantial. (Yuliana, 2000) explained that system quality has no effect on an individual's use or performance but affects user happiness. The quality of information refers to how data generated by a system can aid users in performing a job. The quality of data is indicative of the goods produced by an organization's information system (Medianto, 2016). The system's quality also influences individual performance via user use and pleasure.

Additionally, according to a study conducted by (Toba, 2016), the quality of information affects individual performance but does not affect user happiness or utilization. The quality of information also influences individual performance via user use and pleasure. Furthermore, individual performance affects organizational performance. Likewise, the service variable does not affect individual performance, while the variable of user satisfaction affects individual performance.

Quality information is often used as a criterion for assessing the performance function of an information system. One reason is that many organizations start computerized programs to generate better information to make decisions. The quality of information is constantly improving because data can be easily updated, manipulated, and processed promptly to provide relevant information for decision-making. Better information and improved decision-making can improve the work environment, improve staff morale, and make the job more attractive. In other words, if the quality of information increases, it will be more likely that the desired organizational impact will be obtained (Yudianta & Erawati, 2018). The quality of information is the quality of the output produced. (Lestari & Supadmi, 2017) his research mentioned that output quality is measured by the accuracy of output information, ease of understanding of output, completeness of output information, and availability when needed. In this study, Information Quality refers to the Information System Success Model (DeLone & McLean, 2003) as indicators of strengthening, namely: Accurate (accuracy), Relevant (Relevance), Completeness, and Ease of Understanding.

This finding is consistent with the previous study (Lestari & Supadmi, 2017), which indicated that a high degree of data quality is connected with a high perceived net gain. (Shita et al., 2011) demonstrate that information quality variables affect individual performance variables. The quality of information and organizational characteristics can impact user satisfaction with technology and, as a result, user beliefs about its use (Bach et al., 2016). System users can provide quality reporting for agencies, resulting in comprehensive, accurate, trustworthy, and auditable financial statements, which are all obligations that system users must meet (Hanadia et al., 2017). The effect of information quality on perceived usability and ease of use revealed that information quality has a beneficial impact on perceived usability and ease of implementation, influencing effective adoption.

H2: There is a positive relationship between information quality and big data analytics.

Talent Quality

Talented people have unique gifts, abilities, and talents to work effectively. As defined by (Truss et al., 2007), gifted people are made up of people who can make a difference in organizational performance, either through direct or indirect contributions (in the long run, by demonstrating high-quality potential). Research studies have shown that managing talented people will positively affect various organizational variables directly or through mediation effects (Collings & Mellahi, 2009).

Talent management identifies, develops, recruits, retains and deploys talented people. The talent management process (Armstrong & Kotler, 1996)

consists of several essential elements. Talent management starts with business strategies and what the organization needs talented people. The goal is to develop and nurture a group of gifted people. It is sometimes understood as 'pipeline' talent management, consisting of elements: a) Resource Strategy; b) Attractions and Retention Policies and Programs; c) Talent Audit; d) Role Design; e) Talent Relationship Management; f) Performance Management; g) Development and Learning; h) Succession Management Planning, and i) Career Management.

H3: There is a positive relationship between talent quality and big data analytics.

Big Data Analytics

In recent years, the amount of data collected about customers has increased. This is the result of three technological trends: 1) advances in communication technology allow companies to maintain closer relationships with customers; 2) improved data storage capabilities enable the storage of large amounts of customer data; 3) advances in information technology. The computing speed allows companies to analyze customer data in a reasonable time frame. (Mostgi & Limbongan, 2020) The resulting extensive customer database has been called "Big Data," and hiring data scientists has become a growing priority. Big data refers to an increasing amount of data that exceeds the capabilities of traditional database technologies for storage, processing, and analysis (Toba, 2016).

Although the four main characteristics of big data (high capacity, high speed, high diversity, and high accuracy) are usually defined, the definition of big data continues to evolve. (Ali, 2016) Organizational features and functions necessary to support better predictive and normative analysis are considered important in the literature. Farida (2018) also identifies the potential use of big data in capturing consumer behavior and developing marketing strategies. The proliferation of mobile devices and social media platforms, the generation of large amounts of data, and the development of information platforms used to manage this volume of data have created challenges for companies looking to leverage big data (Sutandi, 2018).

The main challenge for organizations and researchers is determining how significant data development and analytics translate into applications and actions that benefit customers and companies (Ahmad & Aliyudin, 2020). Case studies focus that big data offers opportunities for corporate organizational jobs; it can quickly analyze large amounts of data, but it can also estimate what benefits corporate organizations will have shortly (Toba, 2016). The results of predictive strategies are critical to improving an organization's services to customers and stimulating organizational innovation (Azlan et al., 2015).

H4: There is a positive relationship between big data analytics and performance

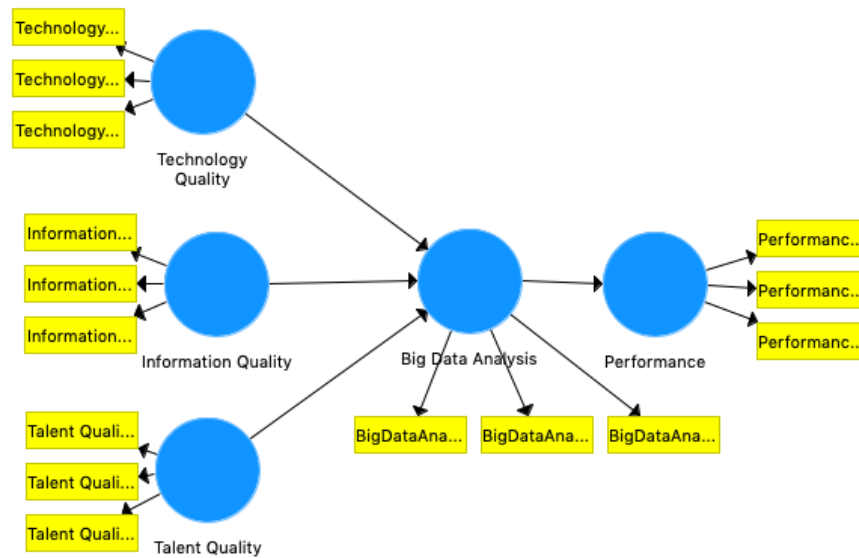


Figure 2 Conceptual Framework

METHODOLOGY

Our research belongs to this type of causal research because this study aims to find out the causal relationship between variables, variables that one causes or determines the value of the other variable. This research method is divided into exploration research and conclusive research. The study was conducted over six months, from April to September 2020.

The types of data we used in this study were divided into two types, namely quantitative data and qualitative data. Quantitative data can be calculated in numbers, such as the number of visitors to the Bukalapak website. In comparison, qualitative data is not in the form of numbers but is a description related to the problems studied, among others, the respondent's statement and the company's overview. The data sources we used in this study were divided into two types, namely primary data and secondary data. Primary data is obtained through questionnaires and interviews with consumers/respondents. In contrast, secondary information is obtained through recording bank documents or data from other parties that have to do with research materials.

The population in our study was consumers who had already made an online purchase on the e-commerce site or mobile application, and the sample number we used in the study was 150 respondents.

The number of samples used is the number of minimal samples obtained from several theories; (Bentler & Chou, 1987). The sample size for estimation should be at least five times the number of free parameters in the model, including errors; (Hoogland & Boomsma, 1998). The minimum sample size should be at least ten times the number of independent parameters, and (Ferdinand, 2002) states that the determination of a sample with an infinite population is the number of variables and the minimum parameter multiplied by 5 – 10.

This study took six months to process, and the size of the sample of respondents included 150 persons from a variety of demographic backgrounds, including gender, age, previous education, profession, and monthly income.

Table 1 Characteristic Respondent

No.	Gender	Frequency	Percentage
1	Man	60	40%
2	Woman	90	60%
Total		150	100%
No.	Age	Frequency	Percentage
1	18-24 Years	45	30%
2	25-31 Years	53	35%
3	32-40 Years	30	20%
4	≥ 41 Years	22	15%
Total		150	100%
No.	Educational Background	Frequency	Percentage
1	SLTA - Equivalent	68	45%
2	Diploma 3	7	5%
3	Strata 1/ Diploma 4	52	35%
4	Strata 2/ Strata 3	23	15%
Total		150	100%
No.	Profession	Frequency	Percentage
1	Student	45	30%
2	BUMN / Private Employees	60	40%
3	ASN/ TNI/ Polri	30	20%
4	Entrepreneurs	18	12%
5	Others	12	8%
Total		150	100%

Source Table 1. Researcher, 2021

Female respondents represented a considerable percentage of the 150 respondents, contributing to 60% of the total. This demonstrates that women are more enthusiastic about their usage of e-commerce than men. In terms of age, it is clear that respondents in this study are primarily between 25 and 31. This is explained by the fact that some people have begun their employment in this age range, which means they have earned income independently. Therefore the ability to conduct transactions in e-commerce becomes their responsibility to optimize their revenue. The study's majority educational background is students with a strong willingness to try new things, one of which may be transacting on e-commerce platforms. Meanwhile, many respondents in this study were dominated by workers of both private and SOEs.

To obtain good data information, the methods we use to collect data in this study are divided into three types: interview methods, observation methods, and questionnaire methods. The data analysis methods used in our research include descriptive analysis and inverse statistical analysis. At the same time, the

instrument test we used in this study was divided into two tests, namely the validity test and the reliability test. The next step in this test is the classical assumption test; we use two types of tests, namely the normality test and the multicollinearity test.

RESULTS

Convergent Validity

Evaluation of construct validity is done by calculating convergent validity and discriminant validity. Convergent validity is observing the loading factors of the items. An instrument is said to be valid with a loading factor above 0.7.

Table 2 Convergent Validity Test Results

Items	Loading	Mean	Std.Dev.	Error	t-value
BDA1 ← BDA	0,763	0,746	0,080	0,080	9,526
BDA2 ← BDA	0,865	0,860	0,027	0,027	32,013
BDA3 ← BDA	0,811	0,806	0,035	0,035	22,900
Inf1 ← InforQuality	0,852	0,832	0,047	0,047	18,094
Inf2 ← InforQuality	0,886	0,882	0,030	0,030	29,916
Inf3 ← InforQuality	0,863	0,864	0,036	0,036	23,902
KP1 ← CompPerformance	0,856	0,850	0,033	0,033	25,616
KP2 ← CompPerformance	0,845	0,845	0,029	0,029	28,854
KP3 ← CompPerformance	0,826	0,818	0,038	0,038	21,620
Tal1 ← Talent	0,883	0,877	0,025	0,025	35,610
Tal2 ← Talent	0,887	0,886	0,023	0,023	39,497
Tal3 ← Talent	0,840	0,834	0,034	0,034	24,910
Tech1 ← Technology	0,827	0,820	0,041	0,041	20,247
Tech2 ← Technology	0,803	0,808	0,042	0,042	19,388
Tech3 ← Technology	0,830	0,812	0,061	0,061	13,476

Source: Smartpls output

According to Table 2, all items measuring technology utilization, Information Quality, Talent, and Performance are worth more than 0.7. As a result, the item is declared valid for use in calculating the variable.

Discriminant Validity

Cross-loading is used to determine discriminant validity. Suppose the loading value of an item in a corresponding variable is greater than the loading value of the item in another variable. In that case, the scales are pronounced valid for measuring the corresponding variable. Table 3 summarizes the findings of cross-loading calculations:

Table 3 Discriminant Validity Test Results

	BDA	Information Quality	Company Performance	Talent	Technology Utilization
BDA1	0,763	0,699	0,500	0,486	0,578
BDA2	0,865	0,489	0,659	0,656	0,506
BDA3	0,811	0,465	0,626	0,720	0,482
Inf1	0,524	0,852	0,379	0,387	0,653
Inf2	0,649	0,886	0,506	0,516	0,626
Inf3	0,550	0,863	0,509	0,516	0,615
KP1	0,622	0,490	0,856	0,588	0,529
KP2	0,596	0,458	0,845	0,621	0,469
KP3	0,641	0,422	0,826	0,658	0,479
Tal1	0,673	0,421	0,611	0,883	0,479
Tal2	0,656	0,466	0,671	0,887	0,410
Tal3	0,678	0,549	0,646	0,840	0,554
Tech1	0,491	0,563	0,478	0,423	0,827
Tech2	0,562	0,657	0,542	0,453	0,803
Tech3	0,506	0,552	0,402	0,485	0,830

Source: Smarpls output

Cross-loading measurements in Table 3 indicate that all variables referring to Technology Utilities Variables, Information Quality, Talent, and Company Performance have a loading value greater than 0.6. One may argue that each indicator item in this study can be utilized to quantify the latent variables connected with it.

Discriminant Reliability

Discriminant reliability (AVE), Cronbach alpha, and Composite Reliability can all be used to assess Construct Reliability. According to the test requirements, if the Discriminant Reliability (AVE) value is better than 0.5, the Cronbach Alpha value is more significant than 0.6. If the Composite Reliability value is greater than 0.7, the construct is declared trustworthy. The summary shown in Table 4 summarizes the results of the Discriminant Reliability (AVE), Cronbach Alpha, and Composite Reliability calculations.

Table 4 Discriminant Reliability Test Results

Variable	AVE	CR	Rho alpha	Alpha
BDA	0,663	0,855	0,686	0,744
Information Quality	0,751	0,901	0	0,835
Company Performance	0,711	0,880	0,629	0,796
Talent	0,757	0,903	0	0,839
Technology Utilization	0,672	0,860	0	0,757

Source: Smartpls output

Based on table 4, the discriminant reliability (AVE) value on the BDA Capability variable is 0.663, the information variable is 0.751, the Company Performance variable is 0.711, the Talent variable is 0.757, and the Technology Utilization variable is 0.672. The result showed a value greater than 0.5. Thus, based on discriminant reliability (AVE) calculations, all items are expressed as reliable in measuring their latent variables. Then the composite reliability value on the BDA Capability variable of 0.855, the information variable of 0.901, the company performance variable of 0.880, the talent variable by 0.903, and the technology variable by 0.860. The result showed a value greater than 0.7. Thus, based on the calculation of composite reliability, all items are declared reliable in measuring their latent variables.

The Cronbach's alpha value on the BDA Capability variable was 0.744, the information variable was 0.835, the company performance variable was 0.796, the talent variable was 0.839, and the technology variable was 0.757. The result showed a value greater than 0.6. Thus, based on Cronbach's Alpha calculations, all sub-variables are expressed as reliable in measuring their latent variables.

Table 5 Goodness Fit of Model

Variables	R^2
Big Data Analysis	0.686
Company Performance	0.629

Source: Adapted Smartpls Output

R-square variable Big Data Analysis is worth 0.686 or 68.6%. This can show that the diversity of BDA capability variables can be explained by technology, information, and talent variables by 68.6%. In other words, the contribution of technology, information, and talent variables and service interactions to trust variables is 68.6%.

R-square variable Company Performance is worth 0.629 or 62.9%. This can show that the diversity of company performance variables can be explained by technology, information, and talent variables are 62.9%. In other words, the contribution of technology, information, and talent variables to satisfaction variables by 62.95%.

Q-Square predictive relevance (Q^2) is worth 0.680 or 68%. This can show that the diversity of company performance variables can be explained by the overall BDA technology, information, talent, and capability variables of 68.1%, in other words, the contribution of technology, information, skill, and broad BDA ability variables to the satisfaction variables of 68.1%.

Direct and Indirect Effect Test

This test measures the amount of an exogenous variable's effect on endogenous variables, either directly or indirectly. The following table summarizes the direct influence of this study:

Table 6 Coefficient of Direct Influence Test Results

Relationships	Effect	t-value	p-value
Technology Utilization → BDAC → Performance	0,142	1,436	0,153
Information → BDAC → Company Performance	0,265	3,134	0,002
Talent → BDAC → Company Performance	0,546	3,475	0,001
BDAC → Company Performance	0,736	4,478	0,000

Source: Smartpls output

Based on the table above, it is known that there is one variable that directly affects Company Performance and three variables that indirectly affect Company Performance. With indirect testing, it was discovered that Talent Quality has a dominant influence on company performance of 54.6%.

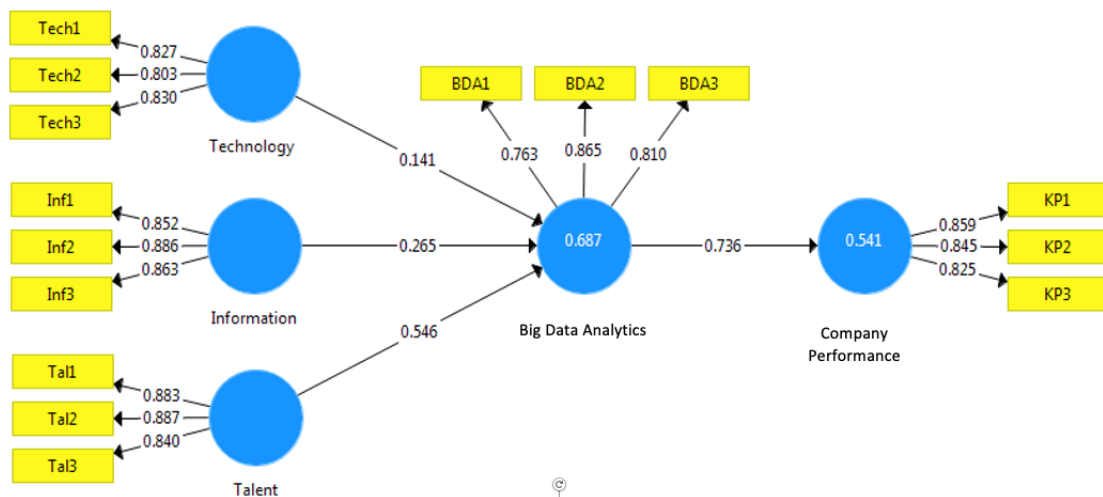


Figure 3. Relationship Markers

DISCUSSION

This study aims to analyze how e-commerce organizations can use Big Data Analysis variables to support Technology Utilization, Information Quality, and Talent Quality to improve Company Performance, particularly during the Covid-19 pandemic crisis. The findings indicate that the Big Data Analysis variable is ineffective in moderating the impact of technology utilization on company performance. The T-Statistic value is 1.436 in Table 6, which is less than the T-Table value of 1.96. As a result of these findings, Hypothesis 1 is rejected. Based on data calculations, technology also has no significant effect on Company Performance through Big Data Analytics. Thus, even if the adoption of technology improves or decreases, it will not automatically result in an in-company performance. When examined through the perspective of the

respondents' reactions to this study, the indicators of utilization intensity, frequency of use, and amount of apps or software used all correspond to the theory (Thompson et al., 1991). The findings of this study contradict those of (Mustikarani & Irwansyah, 2019), who research the subject of applying the concept of e-commerce to the fashion business. Differences in the research object could explain the different research findings. The findings of this study demonstrate that when big data analytics is used to moderate the use of information technology, it cannot affect company performance.

As the data analysis demonstrates, the quality of information has a significant positive effect on the performance of the business, which prominent data analysis moderates. When the quality of information improves, the company's performance improves as well. Hypothesis 2 is Approved. According to the respondents' answers to this study, indicators of the accuracy of output information, the ease with which output can be understood, the completeness of output information, and the product's availability when needed all indicate that these processes will improve maintaining the business's sustainability. The term "information quality" relates to the information system success model used in this study (DeLone & McLean, 2003).

Especially for e-commerce that depends on intangible resources, the concept of information quality becomes essential in determining a company's success. As a consequence of this study's findings, it is clear that one of the factors affecting the sustainability of a business, in this case, an e-commerce business, is the quality of information. Additionally, this study builds on prior research into the relationship between information quality and business continuity, which has been shown to have a significant positive impact (Shita et al., 2011; Bach et al., 2016; Hanadia et al., 2017; Lestari & Supadmi, 2017; Yudianta & Erawati, 2018).

We can see from the results in table 6 above that the quality of talent positively influences company performance through big data analytics. As the rate of talent improves, it will be followed by an increase in enterprise performance moderated by big data analytics. Judging from the answers of respondents in this study with indicators of talent quality such as elements: a) resource strategy; b) attractions and retention policies and programs; c) talent audit; d) role design; e) talent relationship management; f) performance management; g) development and learning; h) succession management planning; and i) career management (Armstrong & Kotler, 1996).

In business, talent quality is determined by human resource elements that are characteristics of the organization. In the case of e-commerce businesses, it is critical to have dependable human resources and particular talents in the field of technology used to ensure the company's success. According to the theory (Collings & Mellahi, 2009), managing talented people positively affects different organizational variables, both directly and indirectly, through mediation effects. This theory unifies nine various topics (Armstrong & Kotler, 1996) concerned with optimizing human resource utilization in businesses. According to the findings of this study, one of the elements affecting a company's performance is the level of talent it possesses, particularly in the e-commerce market. Additionally, this research builds on prior studies on the relationship between

talent quality and firms' sustainability with a considerable positive impact. (Armstrong & Kotler, 1996); (Truss et al., 2007) & (Collings & Mellahi, 2009).

Administrators of e-commerce sites must be fully competent at maximizing the value of extensive data analysis. The term "big data" refers to an increase in the volume of data that exceeds the capacity of traditional database technology for storage, processing, and analysis (Toba, 2016). Big data has four distinguishing characteristics: superb accommodation, high speed, diversity, and accuracy. Big data grows in popularity, as does the variety of consumers that require service. According to table 6, this study demonstrates that Big Data Analytics affects business performance. A significance level of 0.000 indicates that a variable has a statistically significant influence. In this study, we attempted to make this variable a moderator variable to determine how it improves or weakens the company's performance. The PLS-SEM test was used to determine the moderating effect of this variable, which has a P-value of 0.000. As a result, big data analytics can help moderate the relationship between technology adoption, information quality, talent quality, and organizational success. This finding is consistent with the general studies that found a positive and statistically significant relationship between the use of technology, the quality of information, and the quality of talent in a company's performance

The researchers conducted an online survey of respondents who had completed at least two e-commerce transactions to ascertain this issue. The analysis demonstrates that the talent quality variable has a greater impact on the company's success than the information quality or the use of technology moderated by significant data analytics variables, which affect 0.546 and 0.265 on the company's performance, respectively. This demonstrates the importance of having qualified human resource talent in increasing company performance, as human resource management is critical for e-commerce enterprises. This research bolsters the premise that the most vital investment should be in human resources, as the personnel who operate all business lines are humans and assumed to be trustworthy.

Additionally, this study reveals, in line with several earlier studies, that technology utilization is critical for the long-term viability of the business, not simply the scenario. The study's findings reveal that technology usage-controlled by big data analytics has no discernible effect on organizational performance. This study advances the theory by identifying the most crucial and deserving variable to pursue during a crisis, namely talent quality. By being aware of this, entrepreneurs interested in digital can utilize their human resources most effectively.

FURTHER STUDY

The study was conducted over a short period and included several limitations. As a result, whatever conclusions emerge from this study are likely to enhance science, particularly in applied technology in social science. We recommend that additional researchers expand their use of factors associated with company performance in future studies. Additionally, the study location

should be centered on a particular area and adaptable to different sorts of business.

REFERENCES

- Ahmad, E. F., & Aliyudin, R. S. (2020). Pengaruh Implementasi Big Data Terhadap Audit di Lembaga Pemerintah (Studi Pada Kantor Inspektorat Kabupaten Majalengka). *Syntax Literate ; Jurnal Ilmiah Indonesia*, 5(5), 68. <https://doi.org/10.36418/syntax-literate.v5i5.1141>
- Ali, I. (2016). Big Data : Apa dan pengaruhnya pada perpustakaan ? (What is Big Data and its Influence to Library). *Media Pustakawan*, 22(4), 19–23.
- Anugrah, I. M. A., Teddy, B., Ekonomi, F., Pendidikan, U., & Undiknas, N. (2018). Pengaruh Bisnis E-Commerce Dan Sistem Informasi Akuntansi Berbasis Teknologi Terhadap Kebutuhan Jasa Audit E-Commerce. 3(2), 197–208.
- Armstrong, & Kotler. (1996). *Dasar-Dasar Pemasaran*. Intermedia.
- Azlan, M., Herwanti, T., & Pituringsih, E. (2015). Pengaruh Kualitas Sumber Daya Manusia, Pemanfaatan Teknologi Informasi, Pengendalian Intern Keuangan, dan Pengawasan Keuangan Daerah terhadap Keandalan Laporan Keuangan Daerah pada SKPD Pemerintah Kabupaten Lombok Timur. *Jurnal Akuntansi Aktual*, 3, 188–198.
- Bach, M. P., Čeljo, A., & Zoroja, J. (2016). Technology acceptance model for business intelligence systems: Preliminary research. *Procedia Computer Science*, 100, 995–1001.
- Bentler, P. M., & Chou, C.-P. (1987). Practical issues in structural modeling. *Sociological Methods & Research*, 16(1), 78–117.
- Collings, D. G., & Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human Resource Management Review*, 19(4), 304–313.
- De-Jun, S. (2009). Constructing New Model of Management Information System Under E-Commerce Environment (ECMIS). *2009 International Conference on E-Business and Information System Security*.
- DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: a ten-year update. *Journal of Management Information Systems*, 19(4), 9–30.
- Farida, U. (2018). Pengelolaan big data pada perpustakaan : tantangan bagi pustakawan di era perpustakaan digital. *Journal Net. Library and Information*, 1(1), 19–29.
- Ferdinand, A. (2002). Structural equation modeling in management research. *Fakultas Ekonomi UNDIP: Semarang*.
- Hanadia, N., Rahayu, S., & Zultilisna, D. (2017). Pengaruh Kualitas Sistem, Perceived Usefulness, Dan Kualitas Informasi Terhadap Kepuasan Pengguna (studi Kasus Terhadap Sistem Dashboard Pdam Tirta Raharja Pada Tahun 2017). *EProceedings of Management*, 4(3).
- Hoogland, J. J., & Boomsma, A. (1998). Robustness studies in covariance structure modeling: An overview and a meta-analysis. *Sociological Methods & Research*, 26(3), 329–367.
- Khan, A. G. (2016). Electronic commerce: A study on benefits and challenges in an emerging economy. *Global Journal of Management and Business Research*,

- 16(1).
- Kusnandar, V. B., & Mutia, A. (2021, October 14). *Pengguna Internet Indonesia Peringkat ke-3 Terbanyak di Asia | Databoks*. <https://databoks.katadata.co.id/datapublish/2021/10/14/pengguna-internet-indonesia-peringkat-ke-3-terbanyak-di-asia>
- Lestari, N. K. L., & Supadmi, N. L. (2017). *Informasi Pada Kecurangan Akuntansi Fakultas Ekonomi Dan Bisnis Universitas Udayana (Unud), Bali , Indonesia 389–417*.
- Madura, J. (2004). *Introduction to business 3e*. Thomson.
- Marakas, G. M., & O'Brien, J. A. (2017). *Pengantar Sistem Informasi*.
- Medianto. (2016). Sistem informasi, keuangan, auditing dan perpajakan. *Jabe (Journal of Accounting and Business Education)*, 1(1), 22–28.
- Murdifin, I., Nasir, M., Ashoer, M., & Syahnur, M. H. (2021). Determination of Internet Banking Customer Satisfaction-Study at SOE Bank in Indonesia. *Jurnal Minds: Manajemen Ide Dan Inspirasi*, 8(1), 127–140.
- Mustikarani, T. D., & Irwansyah, I. (2019). Pemanfaatan Teknologi Informasi dan Komunikasi dalam Industri Fashion Indonesia. *Warta Ikatan Sarjana Komunikasi Indonesia*, 2(01), 8–18.
- Nauap, N. F., Ulfah, Y., & Setiawaty, A. (2017). Pengaruh pemanfaatan teknologi informasi dan pengendalian intern terhadap kinerja instansi. *Jurnal Ilmu Akuntansi Mulawarman (JIAM)*, 1(1), 25–33.
- Nurhayati, E., Sultan, U., Tirtayasa, A., Arifin, B., Sultan, U., Tirtayasa, A., Mulyasari, W., Sultan, U., & Tirtayasa, A. (2019). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Di Industri Perbankan Yang Terdaftar Di Bursa Efek Indonesia Dengan Competitive Advantage Sebagai. 14(1), 1–24.
- Palinggi, S., & Limbongan, E. C. (2020). Pengaruh Internet Terhadap Industri E-Commerce Dan Regulasi Perlindungan Data Pribadi Pelanggan Di Indonesia. 225–232.
- Shita, R. T., Triyono, G., Informasi, F. T., Luhur, U. B., Utara, P., & Lama, K. (2011). Analisa Dan Rancangan Sistem Informasi Antrian Menggunakan Biskitz Cms. 8(1), 27–33.
- Sutandi, S. (2018). Pengaruh Big Data Dan Teknologi Blockchain Terhadap Model Bisnis Sektor Logistik Dengan Pendekatan Business Model Canvas. *Jurnal Logistik Indonesia*, 2(1), 9–20. <https://doi.org/10.31334/jli.v2i1.214>
- Syahnur, M. H., Soehariyanto, M., & Tazlie, L. (2018). Analisis Customer Experience Dengan Importance Performance Analysis (Ipa) – Suatu Studi Pada Pelanggan Telkom Indihome. 5(2), 1–12.
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1991). Personal computing: Toward a conceptual model of utilization. *MIS Quarterly*, 125–143.
- Toba, H. (2016). Big Data : Menuju Evolusi Era Informasi Big Data : Menuju Evolusi Era Informasi Selanjutnya. *SeTISI, April 2015*.
- Truss, C., Soane, E., Edwards, C., Wisdom, K., Croll, A., & Burnett, J. (2007). *Working life: Employee attitudes and engagement 2006*. Chartered Inst. of Personnel and Development.

- Widiana, M. E. (2010). *Penggunaan Teknologi Internet dalam Sistem Penjualan Online untuk Meningkatkan Kepuasan dan Pembelian Berulang Produk Batik pada Usaha Kecil dan Menengah di Jawa Timur*. 71–81.
- Yudianta, I. G. A., & Erawati, N. M. A. (2018). Pengaruh Sumber Daya Manusia, Teknologi Informasi Dan Pengendalian Intern Terhadap Kualitas Laporan Keuangan. *Fakultas Ekonomi Universitas Udayana*.
- Yuliana, O. Y. (2000). Penggunaan Teknologi Internet. 2(1), 36–52.