

# Uncertain Supply Chain Management

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## Linking of digital supply chains and digital transformation on the competitiveness of government companies in the supply chain 4.0 era

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### ABSTRACT

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In the ever-growing digital era, technology has changed various aspects of human life, including the way governments manage supply chains in procuring goods and services. Digital transformation has opened new opportunities to increase efficiency, transparency, and accountability in procurement in government companies. This research aims to investigate the relationship between digital supply chains and competitiveness and the relationship between digital transformation and the competitiveness of government companies. This type of research is quantitative through survey methods. The population of this research is employees of government logistics companies who are responsible for supply chain processes, have digital activities and implement Enterprise Resource Planning (ERP). The research questionnaire was designed using a Likert scale of 1 to 9, a scale of 1 indicating strongly disagree and a scale of 9 indicating strongly agree. Questionnaires were distributed via social media to 780 employees of government logistics companies related to supply chain processes, respondents were determined using a simple random sampling method. Of the 780 questionnaires that were returned, 570 were returned for analysis. Data analysis uses the partial least square-structural equation modelling (PLS-SEM) method with data analysis tools, namely SmartPLS 3.0. The data analysis stages are reliability, validity and hypothesis testing. The independent variables of this research are digital supply chain and digital transformation. The dependent variable is the company's competitiveness. The results of this research show that digital supply chains have a positive and significant relationship to competitiveness and digital transformation has a positive and significant relationship to competitiveness. By utilizing digital technology optimally, companies can obtain several extraordinary benefits. Among other things, companies will be able to expand markets and increase revenue more effectively. Apart from that, digital technology also makes it easier to monitor business activities, create structured financial reports, and reduce costs, especially in terms of marketing, logistics and shipping.

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## 1. Introduction

In the digital era, technology has changed various aspects of human life, including the way governments manage supply chains in procuring goods and services. Digital transformation has opened new opportunities to increase efficiency, transparency, and accountability in government public procurement. The development of digital technology and logistics does not just mean shipping goods anymore (Tseng et al., 2021). It's about how technology helps manage each stage in the supply chain. Logistics started as a manual process with hand notes to the digital revolution we are experiencing today. These changes have had a

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major impact on the way companies manage inventory, ship goods, and provide service to customers. In this article, we will discuss how the digitalization of logistics is impacting the modern supply chain and why efficient management is so important (Lee et al., 2022).

Industry 4.0 is creating disruption and requiring companies to rethink the way they design their supply chains. Several technologies have emerged that are changing the traditional way of working. Additionally, big trends and customer expectations are changing the game (Febransyah & Camelia, 2022). In addition to the need to adapt, supply chains also have opportunities to reach the next horizon of operational effectiveness, take advantage of emerging digital supply chain business models, and transform enterprises into digital supply chains. Several major trends are having a major impact on supply chain management: there is continued growth of rural areas around the world, with wealth shifting to areas that have never been served before. Digitalization of the supply chain allows companies to meet new customer requirements, supply-side challenges, as well as remaining expectations in improving efficiency (Farahani et al., 2017).

Nowadays, many companies are sensitive to digital transformation. However, not everyone is aware of the importance of changes to the supply chain (Ahmed et al., 2022). A digital supply chain will help the flow of information much more quickly and sustainably. In implementing a digital supply chain, other things need to be added. Namely services in the value chain which previously only emphasized products. Then we also need to formulate a strategy to get closer to customers. By utilizing technology, companies can make it easier for customers to access products. In this digital system, there are several types of supply chain flows. The development of digital technology has changed many aspects of life, including the business world. One area that has been greatly impacted is the supply chain. The supply chain is a series of activities that involve various processes and parties who play a role in bringing products from raw materials to final consumers. Supply chain can be done traditionally or digitally. Both have their respective advantages and disadvantages (Büyüközkan et al., 2018). A digital supply chain is a supply chain system that uses digital technology and data analysis to assist in decision-making, maximize performance efficiency, and be able to respond quickly to changing conditions. The essence of the digital supply chain lies in the use of data generated from existing supply chains. This is then stored in a data warehouse and analyzed to obtain information that can be used for further action. A new approach to product distribution reduces high-runner delivery times to a few hours. In digital performance management systems, clean sheet models for warehousing, transportation, or inventory are used to automatically set targets. To maintain target aspirations also in the event of supply chain disruptions, the system will automatically adjust targets that are no longer achievable to realistic aspiration levels. Dynamics are utilized to drive advanced demand generation activities (Asbari, 2024). Digital supply chains use data from each stage of the supply chain to plan and handle delays quickly. Digital supply chains are supported by real-time big data flows, allowing transportation and outbound logistics to be managed more efficiently. As a result, digital supply chains can handle unexpected challenges more effectively than traditional supply chains.

Digital transformation is also part of the business transformation process. Every business certainly needs to transform, because this will be able to improve the performance of the business, company or individual significantly from before (Borissova, 2021). There are many reasons why all brands should go digital, especially now that the whole world has gone digital. The new business strategy of start-ups in this modern era is quickly becoming the introduction of digitalization, as old processes are increasingly being abandoned in favor of new business models. These modern brands have not been able to survive the so-called “digital disruption” that has impacted legacy companies, so they are already at the forefront when it comes to operational efficiency. This means that if brands want to keep up, they need to update their workflows for the digital age. But this doesn't just stop competition. Using digital technology can provide huge benefits to your team, company culture, and overall productivity (Ordóñez, 2024). Digital transformation has moved forward very quickly and has changed the paradigm of the global economy and society. There are many positive things brought by this digital transformation, including taking advantage of digitalization to achieve economic and business goals. Digital transformation is the future of economics and business. Digital transformation is the process of moving from being analogue or completely conventional to digital or completely automated. This move to the digital realm will ultimately also have a significant impact on the business sector because the process of collecting and processing data will be carried out with the help of machines. Several stages of business operations and marketing have also been replaced by sophisticated robots for reasons of efficiency and cost considerations. Despite the various controversies that exist in the digital transformation process, there are still noble goals for this process. For businesses, efforts to move to digitalization make it faster to keep up with world developments (Wiechmann et al., 2022). This of course plays a big role in advancing businesses so they can compete with competitors in similar fields. Apart from that, digital transformation also encourages start-up businesses to compete at the next level with the support of social media. Now starting a business does not require you to have a physical shop first, but you can start by building a digital presence so you can increase brand awareness among the public (Li et al., 2023).

## **2. Literature Review**

### *2.1 Digital supply chain*

Digitalization of the supply chain allows companies to meet new customer requirements, supply-side challenges, as well as remaining expectations in improving efficiency (Tseng et al., 2021). Information must have characteristics to be useful in making supply chain decisions, including being accurate, precise, and accessible when needed. Digital supply chain has a

crucial role in increasing the efficiency and effectiveness of Supply Chain Management (SCM). The following is a description of how Information Technology can make a positive contribution to SCM. Digital supply chain is all forms of technology used to collect, process and disseminate information (Purwanto et al., 2023). In the context of supply chain management, information technology can be used to integrate various activities in the supply chain, speed up the flow of information, and increase operational efficiency (Li et al., 2023). Digital supply chain can integrate warehouse management systems, inventory management systems, transportation management systems, and production management systems into one integrated system. This can increase operational efficiency and reduce production costs. Digital supply chains can be used to install sensors and RFID on products and packaging. This allows businesses to track product locations, monitor inventory status, and speed up delivery times. Digital supply chain can be used to develop applications and software that can help businesses carry out supply chain management (Weerabahu et al., 2023). For example, applications to monitor inventory, software to plan production, and software to optimize delivery routes. Information technology can be used to develop e-commerce, which allows businesses to carry out business transactions online. This can speed up the flow of information, reduce transaction costs, and increase operational efficiency. Benefits of digital supply chains in supply chain management, businesses can increase operational efficiency, reduce production costs, improve product quality, and speed up delivery times. Apart from that, information technology can also help businesses to compete in an increasingly tight and dynamic market. Digital supply chain has a crucial role in increasing the efficiency and effectiveness of Supply Chain Management (SCM).

Digital supply chain enables automation of business processes related to SCM. By using a digital supply chain-based supply chain management system, companies can automate various tasks and activities such as order processing, inventory management, delivery monitoring, and inventory tracking. This automation speeds up task execution, reduces human error, increases efficiency, and reduces overall operational costs. Digital supply chain facilitates the integration of data and information from various systems and business partners in the supply chain. Digital supply chain-based supply chain management system allows companies to share real-time data with suppliers, manufacturers, distributors, and customers (Purwanto & Juliana, 2022). Digital supply chain enables the application of data analytics and AI in SCM (Permana & Soediantono, 2022). By leveraging data collected from multiple sources in the supply chain, companies can apply predictive and prescriptive analytics to improve planning, inventory management and decision-making. Data analytics and AI help identify patterns and trends that can be used to improve operational efficiency, forecast demand more accurately, and optimize resource allocation. Digital supply chain provides better visibility over the entire supply chain (Febransyah & Camelia, 2022). By using an IT-based supply chain management system, companies can monitor and track the flow of materials, information, and financial flows in real time. Better visibility enables faster identification and resolution of problems, enables timely and fact-based decision-making, and minimizes risks or disruptions that could impact the supply chain (Ning & Yao, 2023). Digital supply chain helps companies reduce costs and increase operational efficiency in SCM. With an integrated supply chain management system based on a digital supply chain, companies can reduce storage costs, optimize inventory, improve production and distribution planning, and reduce lead time in operational processes.

## *2.2 Digital transformation*

Digital transformation refers to the process and strategy of using digital technology to drastically change the way a business operates and serves customers (Wiechmann et al., 2022). This expression has become commonplace in the era of digitalization. That's because every organization – regardless of size or industry – is increasingly relying on data and technology to operate more efficiently and deliver value to customers. Digital transformation practices are usually used in a business context. The introduction of digital technology has fueled the creation of new business models and revenue streams (Youssef & Mashhour, 2021). Emerging technologies such as artificial intelligence (AI), cloud computing and the Internet of Things (IoT) are accelerating transformation, while foundational technologies such as data management and analytics are needed to analyze the vast amounts of data resulting from digital transformation (Laitsou et al., 2020).

Convergence gives life to digital businesses, enabling organizations to deliver digital experiences, digital operations and digital innovation. According to Sui et al. (2024) Digital businesses can innovate quickly and increase innovation to provide digital products and services that are valuable to customers. Digital transformation is the use of technology to transform analogue processes into digital. We have experienced digitalization in all areas of our lives from smart watches to artificial intelligence-enabled home assistants. Digital transformation refers more to the way technology revolutionizes business with new areas of technology such as machine learning, big data, and the Internet of Things. Brands may not have to worry about these tough topics right now, but you should implement a digital transformation strategy (Zhang et al., 2023). Digital transformation is a fundamental change in the way an organization operates, interacts with customers, and creates value. It involves the use of digital technologies, such as cloud computing, data analytics, Internet of Things (IoT), and artificial intelligence (AI), to improve business processes and provide better services (Guo, 2023).

## *2.3 Business competitiveness*

Business competitiveness is the ability of a company to perform well which is adapted from, or the ability of a company that will compete, can achieve a favorable competitive position that allows competition on company performance (Kamaruddin et al., 2024). Basically, in general, competitiveness is defined as the ability of an industry to show superiority in certain matters, by showing the most favorable situations and conditions, and better work results compared to other industries. The definition

of competitiveness is the ability of a company, industry, region, country or between regions to produce relatively higher and sustainable income and employment factors to face international competition (Iddris, 2018). Business competitiveness is the ability of a company to perform well which is adapted from, or the ability of a company that will compete with each other, can achieve a favorable competitive position that allows competition on company performance. Competitiveness in a company or business refers to a company's ability to balance the price of their products and services with quality to provide an optimal experience to customers (Büyükoğuzkan et al., 2018). Furthermore, competitiveness in business refers to a company's ability to achieve more sales or customer loyalty than its competitors due to quality, price, or a combination of both factors.

#### 2.4 The relationship of digital supply chains to competitiveness

By utilizing digital supply chains, companies can achieve high operational efficiency in their supply chains. Process automation, real-time monitoring, and data analytics help reduce processing time and increase productivity (Febransyah & Camelia, 2022). Digitalization enables greater transparency in the supply chain, from production to delivery. Companies that can provide high visibility of their entire supply chain can provide trust to their customers. With data collected through digitalization, companies can make faster and more precise decisions (Li & Boadu, 2023). Data analytics helps in forecasting market demand, identifying consumer trends, and responding to market changes more dynamically. The digital system allows real-time monitoring of the location and condition of goods during delivery (Rasool et al., 2022). This not only reduces the risk of lost goods but also increases delivery reliability, giving the country an edge in meeting global demand. In a digital supply chain, all supply chain processes are processed automatically by the system, thereby reducing the time required for each process and increasing operational efficiency (Fahmi et al., 2022). Based on the above study, a hypothesis is made:

**Hypothesis 1:** *Digital supply chains have a positive and significant relationship to competitiveness.*

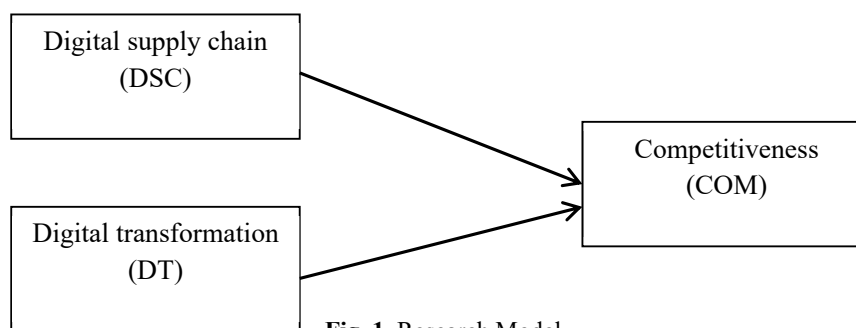
#### 2.5 The relationship between digital transformation and competitiveness

The goal of digital transformation is to improve and strengthen business processes, help meet customer and societal needs, as well as advance the economy and society as a whole and increase competitiveness (Rudyanto et al., 2020). Digital transformation helps speed up and simplify business processes, such as process automation, data processing, and collaboration between teams. Digital transformation can also help minimize costs and speed up processing times. The next goal of digital transformation is to improve customer experience. Digital transformation can be carried out by improving service, making business processes faster, easier and more efficient, increasing competitiveness and ensuring that customers receive service on time and as expected (Ordóñez, 2024). This makes digital transformation help companies and industries to meet customer needs and expectations. Later, this will also have an impact on increasing customer loyalty and satisfaction. Digital transformation can impact efficiency and productivity by automating processes, faster data processing, and more efficient collaboration between teams and increasing competitiveness (Kö et al., 2022). Based on the above study, a hypothesis is made:

**Hypothesis 2:** *Digital transformation has a positive and significant relationship to competitiveness.*

### 3. Method

This type of research is quantitative through survey methods. The population of this research is employees of government logistics companies who are responsible for supply chain processes, have digital activities and implement Enterprise Resource Planning (ERP). The research questionnaire was designed using a Likert scale of 1 to 9, a scale of 1 indicating strongly disagree and to scale of 9 indicating strongly agree. Questionnaires were distributed via social media to 780 employees of government logistics companies related to supply chain processes, respondents were determined using a simple random sampling method. Of the 780 questionnaires that were returned, 570 were returned for analysis. Data analysis uses the partial least square - structural equation modelling (PLS-SEM) method with data analysis tools, namely SmartPLS 3.0. The data analysis stages are reliability, validity and hypothesis testing. The independent variables of this research are digital supply chain and digital transformation. The dependent variable is the company's competitiveness. Fig. 1 shows the structure of the proposed study.



**Fig. 1.** Research Model

The independent variables of this research are digital supply chain (DSC) and digital transformation (DT), while the independent variable is competitiveness (COM). The digital supply chain variable is composed of 6 indicators, the digital transformation variable is composed of 6 indicators, and the competitiveness variable is composed of 6 indicators as in Table 1.

**Table 1**  
Indicators Development

Variables	Indicators	References
Digital Supply Chain (DSC)	DSC1- Companies use Digital to convey product and price information to customers and the market	Tseng et al., 2021
	DSC2- Companies use Digital to record product availability	Purwanto et al., 2023
	DSC3 -Companies use Digital to find out information about competitors' developments	Li et al., 2023
	DSC4 -The company uses digital to make it easier for customers to choose, order and return products	Weerabahu et al., 2023
	DSC5 -Companies use Digital to involve customers in the product creation process,	
	DSC6 -Companies use Digital to receive input and suggestions that suppliers and customers want.	
Digital Transformation (DT)	DT1 -The company uses information system technology to support work	Wiechmann et al., 2022
	DT2 -The company uses information system technology to create performance reports	Youssef & Mashhour, 2021
	DT3- The company applies information system technology in the future.	Laitsou et al., 2020
	DT4 -The company wants information system technology to create performance reports	Sui et al., 2024
	DT5- The company provides digital information system facilities	Zhang et al., 2023
	DT6 -The company uses an information system in every department	Guo, 2023
Competitiveness (COM)	COM1 -The products being marketed are ready to compete with domestic and foreign products	Weerabahu et al., 2023
	COM2 -The company follows technological developments to increase competitiveness	Wiechmann et al., 2022
	COM3- In producing products, the Company follows market demand in order to increase its competitiveness	Youssef et al., 2021
	COM4- Companies follow changing trends and have new ideas aimed at increasing competitiveness	Zhang et al., 2023
	COM5- Companies have access to extensive information to create opportunities to increase competitiveness	Chen, 2019
	COM6 -Products can compete with other competitor products	

## 4. Results and Discussion

### 4.1 Outer Model Testing

Outer model testing is carried out to test the validity and reliability of the construct. To find out, it can be seen in convergent validity and discriminant validity. Convergent validity is used to determine the validity of each indicator against the latent variable. In the SmartPLS software, the results of the validity can be seen in the outer loading Table 2.

**Table 2**  
Convergent validity and composite reliability testing

Variable	Item	Loading	CR	AVE
Digital supply chain (DSC)	DSC1	0.708	0.817	0.743
	DSC2	0.805		
	DSC3	0.815		
	DSC4	0.819		
	DSC5	0.723		
	DSC6	0.812		
Digital transformation (DT)	DT1	0.815	0.898	0.716
	DT2	0.850		
	DT3	0.819		
	DT4	0.789		
	DT5	0.723		
	DT6	0.823		
Competitiveness (COM)	COM1	0.845	0.812	0.717
	COM2	0.845		
	COM3	0.814		
	COM4	0.832		
	COM5	0.813		
	COM6	0.879		

Some numbers or values indicate the indicator shows similarity to the construct variable. The value for the indicator is said to be valid if the indicator explains the construct variable with a value of  $>0.7$ . The reliability test in this research aims to assess the extent to which the measuring instruments used in this research are reliable or trustworthy. Composite reliability tests the reliability value of indicators on a construct. A construct is declared reliable if the composite reliability values are above 0.70. Convergent validity of the measurement model can be obtained from the correlation between the item/instrument score and the construct score (loading factor) with the criterion of the loading factor value for each instrument being  $> 0.7$ . Convergent validity testing is carried out by looking at the outer loading value of each indicator on the latent variable. Based on the table above, all indicators have an outer loading value of more than 0.7. This indicates that each study variable has been able to be explained by its indicators and meets the requirements for convergent validity. The reliability value of a variable is if the Cronbach Alpha value is  $>0.6$ . A variable will be said to be reliable if the Composite Reliability must have a value of  $>0.7$ ,

for confirmatory research the value is  $>0.6 - 0.7$ . Based on Table 2, it can be seen that the value of Composite Reliability for each variable in this research has a value of 0.6. This value proves that each variable has met Composite Reliability, and it can be concluded that all variables have a good level of reliability.

This research analyzes the HTMT (Heterotrait-Monotrait) ratio with the Fornell-Larcker approach to test discriminant validity between constructs. The results show that the external model meets the conditions for discriminant validity with an HTMT value of no more than 0.90.

**Table 3**

Discriminant validity HTMT ratio and Fornell-Larcker method

	DSC	DT	COM	DSC	DT	COM
DSC				<b>0.845</b>		
DT	0.714			0.535	<b>0.856</b>	
COM	0.625	0.876		0.543	0.818	<b>0.804</b>

#### 4.2 Hypothesis testing

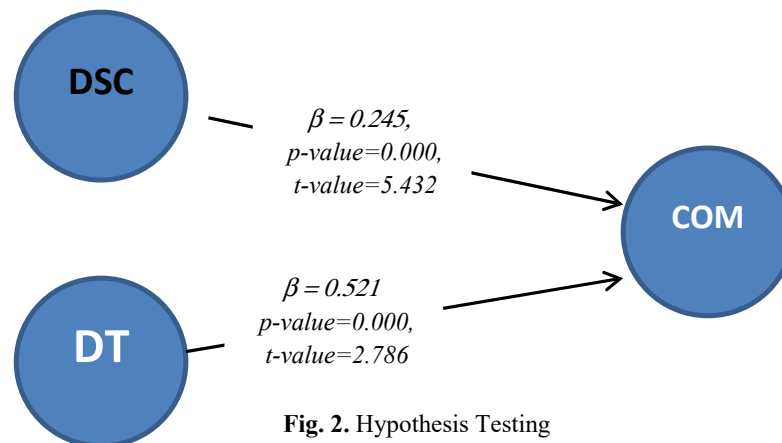
To find out the structural relationship between latent variables, hypothesis testing must be carried out on the path coefficient between variables by comparing the p-value with alpha (0.005) or a t-statistic of ( $>1.96$ ). The P-value and t-statistics are obtained from the output in SmartPLS using the bootstrapping method. A t-statistics value of more than 1.96 or a p-value that is smaller than the significance level ( $<0.05$ ) indicates that a relationship between variables is significant. The hypothesis for the statistical value for alpha is 5% and the t-statistic value used is 1.96. So, the criteria for declaring a hypothesis accepted or rejected is if the t-statistic is  $>1.96$ . And P-Values have a value  $<0.05$ . The following are the results of hypothesis testing in this research as Table 4:

**Table 4**

Outputs of path analysis

Hs	Path	$\beta$	p-value	t-value	supported
$H_1$	DSC $\rightarrow$ COM	0.245	0.000	5.432	Yes
$H_2$	DT $\rightarrow$ COM	0.521	0.000	2.786	Yes

Hypothesis testing is carried out by comparing the calculated t with the t table. A comparison of the t count with the t table is used to determine whether or not there is an influence between variables. The calculated t value is obtained from the results of bootstrapping with Smart PLS software. Hypothesis testing is carried out by looking at the path coefficient output from the bootstrap resampling results as Fig 2:



**Fig. 2.** Hypothesis Testing

To test the hypothesis in this research, the t-statistic value is used, so for  $\alpha=5\%$ , the t-statistic value used is 1.96. So the criteria for accepting or rejecting the hypothesis are that  $H_a$  is accepted and  $H_0$  is rejected when the t-statistic is  $> 1.96$ .

#### 4.3 The relationship of digital supply chains to competitiveness

Based on structural equation modelling analysis, the p-value is 0.000, which is smaller than 0.050, so it can be concluded that the digital supply chain has a positive and significant relationship with competitiveness. According to Tseng et al. (2021)

some benefits can be obtained by implementing this digital supply chain. Without using this application, processes in the supply chain will not be able to be monitored properly, the result is that consumer requests will not be processed promptly, not only that, but processes in the supply chain can also be hampered because they don't know what they need. Of course, this will hamper the process of each supply (Siswanto et al., 2023). Another advantage that can be obtained is efficiency in terms of costs and time because it is paperless, and accuracy is guaranteed so that work can run more optimally (Arijanto, 2022). What information each need can be seen clearly so that it does not hamper the supply chain process. Apart from that, critical tasks in operations can be identified early and can be handled quickly by the company. Companies that use a mobile-based supply chain are more flexible in handling the supply chain so that the process can be monitored anytime and anywhere. Digital supply chain is a solution for companies that want to increase their productivity, where with the help of this platform all parties involved in the supply chain can carry out their roles well and optimally (Farahani et al., 2017). The next advantage is that using digital media allows companies to utilize the data stored in useful information and assist in decision-making. For example, a company will be able to see the performance of partners such as suppliers or distributors, after which it can decide whether to continue collaborating with that party or not. Another example is that companies will be able to combine purchasing data in real-time to be able to predict the amount of inventory that must be purchased so that products will always be available (Núñez et al., 2020). This mobile supply chain will be able to revolutionize processes by managing the supply chain, which will enable companies to change business processes in a more collaborative, fast and transparent direction. Supply chain management is not a simple matter because it involves many parties inside and outside the company. That's why we need software that can connect various parties in all supply chains. In the supply chain, flexible delivery plays an important role in improving the customer experience (Luasiani et al., 2020). After placing an order, customers will be able to ask the sender to leave the product with a close neighbor. Mobile-based software can help you and your company manage various actions smoothly. In addition, companies will be able to improve supply chain control, resulting in better opportunities to increase cooperation between shippers and customers.

#### *4.4 The relationship between digital transformation and competitiveness.*

Based on structural equation modelling analysis, the p-value is 0.000, which is smaller than 0.050, so it can be concluded that digital transformation has a positive and significant relationship to competitiveness. Digital transformation is the process of changing from traditional technology to modern and digital technology in various aspects of life. This includes companies, industry, government, and society as a whole (Farahani et al., 2017).. Digital transformation makes it possible to be more efficient, easier, and faster in overcoming various problems and meeting needs. Digital transformation offers various benefits such as increasing productivity, reducing costs, improving service quality, and improving customer experience. It also helps make businesses more open and innovative and facilitates the sustainable development of the digital economy (Borissova, 2021). Therefore, digital transformation is important for everything in modern life and can help advance the country's economy and society. One of the main benefits of digital transformation is increasing efficiency in supply chain management. Procurement processes that previously required significant time and effort can now be completed more quickly and at lower costs. Digital transformation provides a greater level of transparency in public procurement. The public can access information about contracts, bids and payments online, reducing opportunities for corruption or unethical actions (Ordóñez, 2024). With a strong digital track record, governments and suppliers can be easily monitored and supervised. This increases the accountability of all parties involved in the supply chain. With digital transformation, the government can improve public services by ensuring that the goods and services purchased are of high quality and available promptly. By better monitoring the supply and use of funds, digital transformation helps reduce the waste of public resources and funds.

There are many benefits in digital transformation in public procurement, but there are also several challenges that need to be overcome, namely: The use of digital technology increases data security risks, especially in the management of sensitive information (Laitsou et al., 2020). Data protection and privacy are a priority. Digital transformation requires human resources skilled in new technologies. Governments need to invest in training and education for their employees. The use of digital technology in public procurement may involve regulatory changes. It is important to align regulations with technological developments to ensure compliance (Sui et al., 2024). Not all governments or suppliers have the access or resources to adopt digital technologies. This can create a digital divide that needs to be addressed.

Digital transformation in public procurement is a trend that will continue to grow. Some anticipated developments include the Advanced Use of AI and Data Analysis: AI will be used for more sophisticated data analysis, allowing governments to identify greater patterns and opportunities in supply chains (Papadonikolakin, 2020). Suppliers will increasingly participate in connected digital ecosystems, enabling smoother transactions and collaboration. Increased Security: Data security will become a top priority, with more advanced tools and protocols to protect sensitive information. The goal of digital transformation is to improve and strengthen business processes, help meet customer and societal needs, and advance the economy and society as a whole (Li & Boadu, 2023). The following are some of the main goals of digital transformation. Digital transformation helps speed up and simplify business processes, such as process automation, data processing, and collaboration between teams. Digital transformation can also help minimize costs and speed up processing times. The next goal of digital transformation is to improve customer experience. Digital transformation can be carried out by improving service, making business processes faster, easier and more efficient, and ensuring that customers receive service on time and as expected. This makes digital transformation help companies and industries to meet customer needs and expectations. Later, this will also have an impact on increasing customer loyalty and satisfaction (Purwanto & Praditya, 2024). Digital

transformation can influence efficiency and productivity by automating processes, faster data processing, and more efficient collaboration between teams.

## 5. Conclusion

The results of this research show that digital supply chains have a positive and significant relationship to competitiveness and digital transformation has a positive and significant relationship to competitiveness. Digital transformation has opened new opportunities in government public procurement. Using technologies such as data analysis, artificial intelligence, and IoT, supply chain management can become more efficient, transparent, and accountable. While there are challenges that need to be overcome, the benefits are far greater, helping governments deliver better public services and manage public funds wisely. By continuing to invest in digital transformation, government public procurement can become more effective in meeting society's needs. By utilizing digital technology optimally, companies can obtain several extraordinary benefits. Among other things, companies will be able to expand markets and increase revenue more effectively. Apart from that, digital technology also makes it easier to monitor business activities, create structured financial reports, and reduce costs, especially in terms of marketing, logistics and shipping.

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