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Factors that affecting firm performance mediated by digital transformation in Indonesia's state-owned enterprises plantation and forestry industries

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Abstract: Digital transformation refers to the integration of digital technology into all areas of a business, fundamentally changing the way it operates and adding value to a firm's performance. This can involve adopting new technologies, reorganizing business processes, and creating a digital culture within the organization. One of the State-Owned Enterprises (SOE) in Indonesia, PT Perkebunan Nusantara III (Persero) with a focus on agriculture and main commodities, namely Palm Oil and Rubber, is carrying out a digital transformation initiative with the aim of improving firm performance. Along the way, the company faced many obstacles related to implementing digital transformation and the large investment costs incurred. This research aims to test the influence of Digital Transformation Leadership, IT Capability, Digital Mindset, Work Culture Change, Organizational Agility, Human Capital and IT Alignment with Business and test the influence of these variables on Firm Performance with Digital Transformation as a mediating variable. This research uses quantitative research methods by distributing online questionnaires via Google Form to 234 company employees who use Digital Farming, GIS and SCADA applications. Data was analyzed using the SEM-PLS analysis method with Smart-PLS Software version 3.3.9. The results of the research show that IT Capability, Work Culture Change, IT Alignment With Business have a positive effect on Digital Transformation. Apart from that, this research also shows the positive influence of Digital Transformation Leadership on Digital Transformation which is mediated by IT Capability and Digital Mindset on Digital Transformation which is mediated by Work Culture Change. Then, research also shows that Digital Transformation has a significant effect on Firm Performance. the research outcomes can serve as valuable insights for what factors influence firm performance mediated by digital transformation in the SOE plantation and forestry industry business cluster in Indonesia.

Keywords: *Agriculture, Digital transformation, Firm performance, State-owned enterprises.*

1. Introduction

The plantation industry plays a crucial and increasingly significant role, particularly in light of the global energy crisis, which has elevated the importance of plantations on a worldwide scale. They are no longer solely associated with food production; rather, they now intersect with the interests of food, feed, and fuel. Additionally, the plantation sub-sector has become a major contributor to Indonesia's economic growth and the government's financial planning. [1]

Digitalization in agriculture is essential for companies to effectively leverage technological capabilities, optimize costs, identify obstacles in business processes, stay updated with current trends, and anticipate future positions. The outcomes of digital transformation include enhanced efficiency, increased competitiveness, and the generation of new value [2].

We are currently entering the industrial era 4.0 or the digitalization era which requires companies to be more adaptive to changes in IT implementation in order to win the competition [3]. Digital transformation is the process of changing from traditional technology to modern technology in the form of digital in various aspects of life. This includes companies, industry, government, and society as a

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whole. Digital transformation makes it possible to help technical work so that it can be done more quickly, easily and efficiently in overcoming various problems and meeting needs [4]. Digital transformation offers various benefits in its implementation such as increasing productivity, reducing costs and improving service quality. This also helps make companies more open and innovative and promotes sustainable digital economic development. Therefore, digital transformation is very important for all aspects of modern life because it can encourage economic growth for countries and society as a whole. In recent years, digital transformation has revolutionized the way companies run business processes and build relationships with consumers, suppliers and other stakeholders. [5]

From the interim analysis process that researchers observed through the results of initial interviews with the Head of Section and Head of Sub-Division which oversees Information Technology at PT Perkebunan Nusantara III (Persero), that digital initiatives in the company have been implemented, however it is interesting to carry out a comprehensive study of the implementation digital transformation, especially the implementation of Digital Farming, SCADA and GIS. Where the investment costs incurred by the company are quite large, but in its implementation, support and control from the management of PT Perkebunan Nusantara III (Persero) is still weak in overseeing the implementation of digitalization transformation, where it can be seen the costs used in The implementation of this initiative is considered large so it is considered that the development and use of existing information technology is considered not optimal, in other words it has not been able to be used to provide return value or beneficial impacts for the company to support the company's productivity, while the use of information technology also causes costs to be borne by the company. bloated, especially due to unplanned maintenance and implementation, the system is not integrated and the user managers are less professional. [6]

Based on this background, the researcher wishes to obtain information regarding what factors influence the success of the Digital Transformation strategy in implementing digital farming, SCADA and GIS at PT Perkebunan Nusantara III (Persero) and its relation to increasing company performance.

2. Literature Review

2.1. Related Works

Previous study [7] result show that digital transformation has a significant positive impact on firm performance which shows that successful digital transformation will improve firm performance.

Picture 1.
Research model [8].

The research of [9] results show a positive relationship between IT capabilities and digital transformation, as well as between digital transformation and firm performance. In addition, digital transformation mediates the relationship between IT capabilities and firm performance. These findings show the importance of digital transformation in supporting and improving firm performance through utilizing IT capabilities. This research provides a theoretical contribution by identifying IT capabilities as a key antecedent of digital transformation, as well as expanding understanding of how companies can use IT capabilities to achieve superior performance.

2.1. Hypothesis Development

The role of leaders is crucial in facilitating and promoting the transition to Industry 4.0. Leaders can enhance a company's success in the digital age through three key approaches: staying attuned to emerging technological trends, establishing the direction for digital transformation and investment strategies, and effectively guiding teams to implement changes swiftly and accurately. Leaders with a digital transformation mindset, also known as "digital leaders", can build collaborative network

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organizations and discover Digital transformational leadership (TFL) competencies have been particularly highlighted in digital transformation literature investigating leadership in digital environments. Transformational leaders engender trust, seek to develop leadership in others, demonstrate self-sacrifice, and act as moral agents, focusing themselves and their followers on goals that go beyond the immediate needs of the work group. Therefore, digital leadership is considered a combination of transformational leadership styles. and digital technology [10] then, [11] also investigated digital leadership from a transformational leadership perspective and determined that digital transformational leadership had a positive effect on innovation and organizational performance. Based on this context, the author formulates the following hypothesis.

H_1: Digital transformational leadership has a significant effect on Digital Transformation.

H_2: IT Capability plays a role in mediating Digital transformational leadership with Digital Transformation.

In research [8] states that organizations with strong IT capabilities such as Amazon, Unilever, and P&G enable high digital transformation in their product and service offerings to customers. To implement digital transformation, companies must build a strong IT infrastructure and also be consistent with IT-based resources, knowledge and skills. Furthermore, [12] elaborates that the interplay between IT capabilities and elements such as strategic vision, innovation culture, strategic alignment, and technological assets is critical to the success of digital transformation initiatives. Therefore, in this study the researcher proposed a hypothesis as below

H_3: IT Capability has a significant influence on Digital Transformation.

Digital mindset refers to the ability to think and operate effectively in a digital environment. This includes being open to new technology, accepting change and being willing to adapt to new ways of working. In the context of digital transformation, having a digital mindset is critical for organizations to successfully navigate and exploit the opportunities presented by digital technology [13].

One hypothesis regarding digital mindset and digital transformation is that organizations with a strong digital mindset will be more likely to successfully implement digital transformation initiatives and achieve desired results. Therefore, in this study the researcher proposed a hypothesis as below.

H^4: Digital Mindset has a significant effect on Digital Transformation.

H^5: Work Culture Change plays a mediating role between Digital Mindset and Digital Transformation

The implementation of digital transformation cannot be separated from changes in employee work culture. According to [14] employee work culture must be changed in order to create a successful digital transformation. They also stated that organizations with very rapid adaptation and development will be able to achieve successful digital transformation. The recommended indicators for determining digital transformation related to employee digital culture based on [14] are application availability, easy access, flexibility and fast work. Therefore, in this study the researcher proposed the following hypothesis:

H6: Work Culture Change has a significant effect on Digital Transformation.

Organizational Agility (OA) is characterized as an organization's ability to recognize unforeseen changes in its environment and respond swiftly and effectively by optimizing and reconfiguring internal resources, thus gaining a competitive edge. The process of digital transformation has enhanced organizational agility, as digitalization introduces new job roles and specific demands on organizational structure and responsiveness. Furthermore, digital transformation is regarded as a prerequisite for developing information processing capabilities that contribute to achieving an agile organization [10]. Therefore, in this study the researcher proposed the following hypothesis:

H7: Organizational Agility has a significant effect on Digital Transformation.

The relationship between human capital and successful digital transformation is very important in improving company performance [15]. Human capital is a valuable asset in facing technological change and digital transformation. Employees who have skills and knowledge that suit digitalization needs will simplify the digital transformation process and increase company productivity. Regarding digital transformation, of course human capital with adequate digital capacity is needed. In their research [16]

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describes a positive relationship between human capital and digital transformation. Therefore, in this study the researcher proposed the following hypothesis:

H_8: Human Capital has a significant influence on Digital Transformation.

The strategic relation between IT and business (IT Alignment with Business) will influence digital transformation capacity. Because the ultimate goal of digital transformation is innovation and organizational performance. [17] Therefore, in this study the researcher proposed the following hypothesis:

H_9: IT Alignment with Business has a significant influence on Digital Transformation

Basically, there is not much research that discusses whether the success of digital transformation is directly proportional to increasing firm performance. However, one study [17] states that digital transformation on company performance has a strong positive impact, namely that successful digital transformation will result in increased company performance. These results are consistent with most studies examining the influence of digital transformation, digitalization, or technology adoption. Therefore, in this study the researcher proposed the following hypothesis:

H_{10}: Digital Transformation has a significant effect on Firm Performance

Structural model hypothetical variables Figure 1 were obtained from previous relevant studies and will be tested based on the questionnaire data.

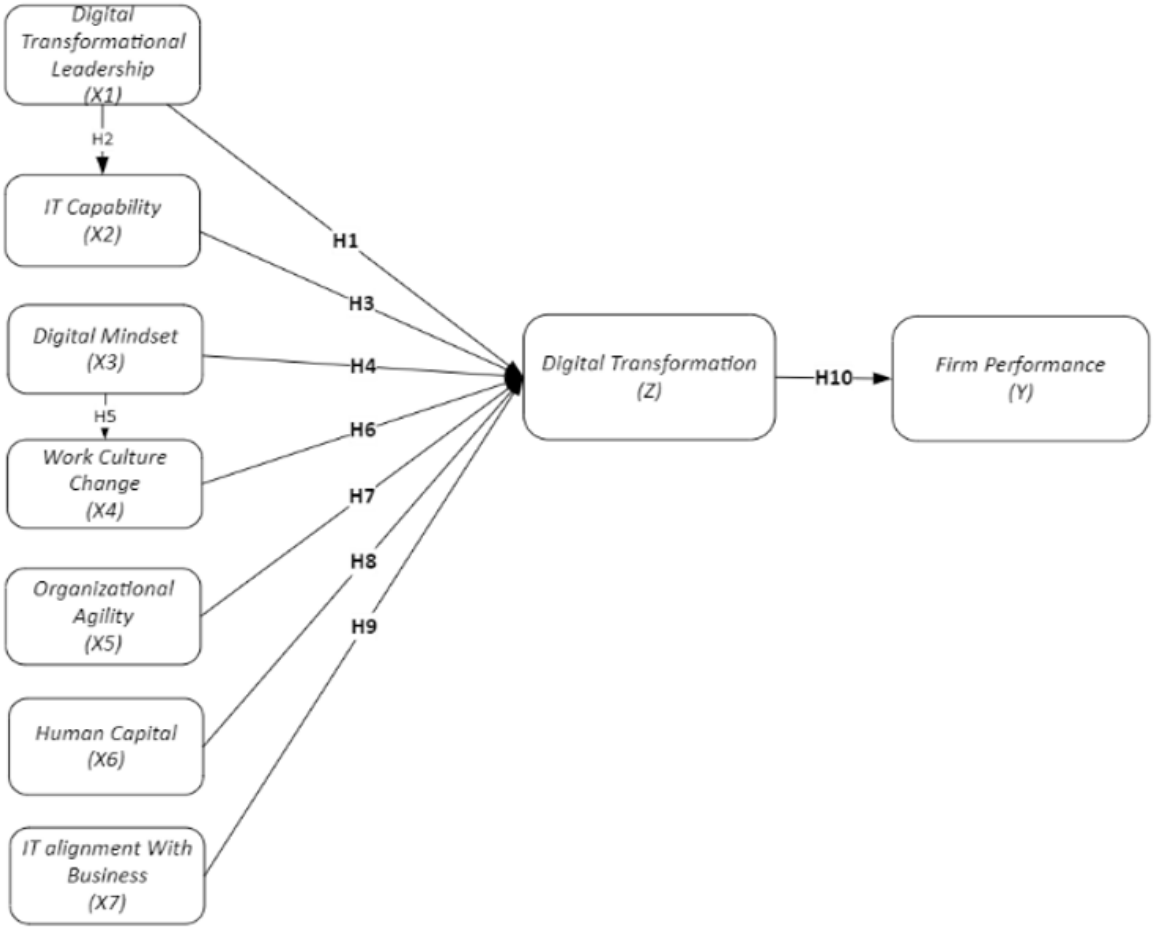

Figure 1.
Research model.

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3. Research Methodology

Research methods are stages used to solve research problems and achieve research objectives. In this study, research method can be seen in Figure 2.

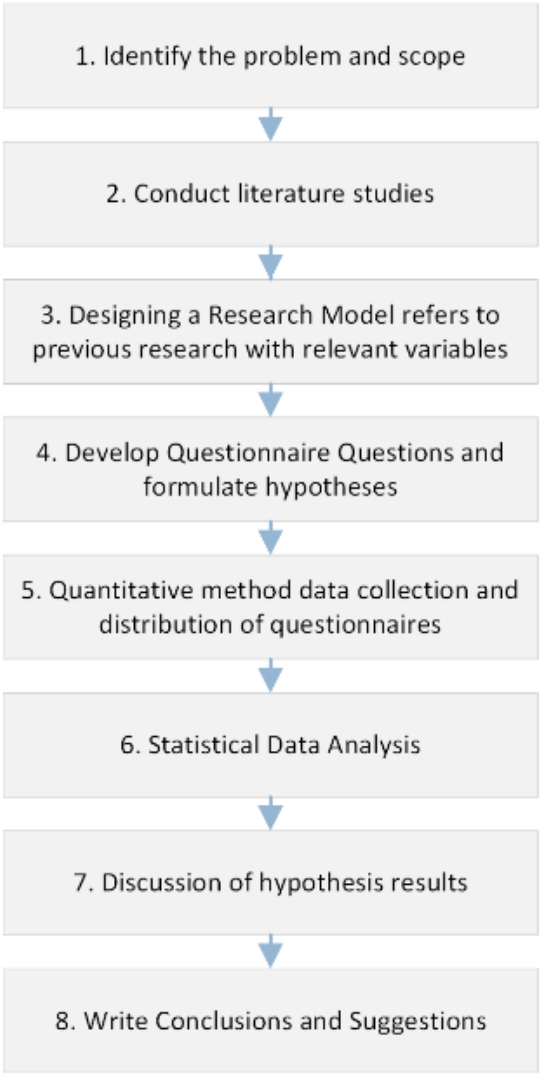

Figure 2.
Research method.

From figure 2, it can be explained the first step is identify the problem and scope. the researcher analyzes the determination of the background and formulates problems related to the research topic raised. The second step is conduct literature studies that related with the topic. The third step is to design a research model related to previous studies. the fourth step is develop questionnaires and formulate hyphotesis base on research model. The fifth step is create and distribute the questionaries to 234 respondents, Data collection was carried out for this research using an online survey platform with Google Form, to create questionnaires and distribution of questionnaires was carried out via social media and Whatsapp platforms. The sixth step is processing statistical data from the results of

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questionnaire distribution using the smart pls application using the SEM-PLS method. The seventh step is Discuss the hypothesis results involves discussing whether the research hypothesis was supported by the data, any potential reasons for the results, implications of the findings, and what possible directions for the future research are. The eighth step is to develop conclusions and recommendations based on the result of hyphoteses.

The population of this research is employees of PT Perkebunan Nusantara III (Persero) both BRM-1, BRM -2, BRM -3, BRM -4 and BRM -5, with 600 employees who use digital farming, SCADA and GIS applications (based on data on the number of employees active). This research will use the Slovin formula to take samples from the total population.

$$n = \frac{N}{1 + Ne^2}$$

N = Total Population
n = Total Sample size
e = Error Tolerance (0.05 or 5%)

So the number of samples in this study is:

$$n = \frac{600}{1 + 600.0{,}05^2}$$
$$n = 234$$

This research will use a margin of error of 5% and a confidence range of 95%.

Based on the calculations above, the sample for this study was 234 respondents. Sampling will use the stratified random sampling method. This method is used by taking probability samples from subgroups.

3.1. Research Data Analysis Techniques

3.1.1. Measurement Model

The measurement model is an integral component of the Structural Equation Modeling (SEM) approach utilizing Partial Least Squares (PLS), encompassing latent variables (indicators). Manifest variables are designed as survey questions to assess the characteristics of respondents. The objective of this research model is to evaluate the validity and reliability of each variable.

3.1.1.1. Validity Test

According to [18], validity tests are employed to determine whether the research indicators yield valid or invalid values. Each variable's validity can be assessed based on the following criteria:

Loading factor < 0.7 = not valid
Loading factor > 0.7 = valid

3.1.1.2. Reliability Test

As outlined by [18] Reliability tests measure the extent of error-free measurement, ensuring that the assessment of each variable remains stable and consistent. In this research, the reliability test utilizes the Cronbach's alpha coefficient, which serves to quantify the reliability of the research variables. The reliability of each variable can be evaluated using the following criteria:

Cronbach's alpha >0.7 = reliable

If the t-value is less than the critical t-value, then H0 is accepted and H1 is rejected.
Conversely, if the t-value exceeds the critical t-value, then H1 is accepted and H0 is rejected.

3.1.2. Hypothesis Testing

Hypothesis testing is used to test the independent and dependent variables of this research. To carry out a hypothesis test, the researcher must first determine the hypothesis of the research. After knowing the research hypothesis, the next step is to carry out a t-test which is the basis for making a decision

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whether the hypothesis is accepted or rejected. The interpretation of the t-test is as follows: If t count < t table then H0 is accepted and H1 is rejected. If t count > t table then H1 is accepted and H0 is rejected. [18]

4. Result and Discussion

4.1. Respondent Characteristics

In this study, the population of this research is employees of PT Perkebunan Nusantara III (Persero) both BRM-1, BRM -2, BRM -3, BRM -4 and BRM -5, with 234 employees who use digital farming, SCADA and GIS applications (based on data on the number of employees active).

The results of the questionnaire illustrate that the work location of the respondents who filled in the most was in the Kebun, namely 114 respondents or the same as 48.7% of the number of respondents, followed by the Bagian with 64 respondents or the same as 27.4% of the number of respondents, then from the Unit as many as 45 respondents or equal to 19.2% of the total number of respondents and the last one from the Distrik was 11 respondents or equal to 4.7% of the total number of respondents. We can see from the table of distribution of questionnaires for work locations shown in Table 1.

Table 1.
Work locations.

Work location	Respondent	Percentage (%)
Bagian	64	27.4%
Distrik	11	4.7%
Kebun	114	48.7%
Unit	45	19.2%
Total	234	100%

The results of the questionnaire illustrate that the positions filled most often came from BRM – 3 with 80 respondents (34.2%), followed by BRM – 4 with 80 respondents (34.2%), then BRM – 2 with 33 respondents (14.3%). %), then BRM – 1 with 26 respondents (11.1) and finally BRM – 5 with 15 respondents (6.4%) shown in Table 2.

Table 2.
Respondent job position.

Job position	Respondent	Percentage (%)
BRM – 1	26	11.1%
BRM – 2	33	14.3%
BRM – 3	80	34.2%
BRM – 4	80	34.2%
BRM – 5	15	6.4%
Total	234	100%

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For the distribution of respondent's age, there were 55 respondents (23.5%) in the 36-40 year age range, followed by 48 respondents aged 31-35 years (20.5%), followed by 40 respondents aged 41-45 years. respondents (17.1%), 36 respondents aged 46-50 (15.4%), 32 respondents in the 25-30 age range (13.7%) and 23 respondents in the 51-55 year age range (9, 8%). shown in Table 3.

Table 3.
Respondent's age.

Age	Respondent	Percentage (%)
25 – 30	32	13.7%
31 – 35	48	20.5%
36 – 40	55	23.5%
41- 45	40	17.1%
46 – 50	36	15.4%
51 - 55	23	9.8%
Total	234	100%

For the last education, it was found that Bachelor Degree education was mostly filled with 109 respondents (46.6%), followed by high school education respondents with 100 respondents (42.7%), then Associate Degree education with 13 respondents (5.6%) and so on. Master's degree education was 12 respondents (5.1%). shown in Table 4.

Table 4.
Respondent's education.

Education	Respondent	Percentage (%)
Master degree	12	5.1 %
Bachelor degree	109	46.6 %
Associate degree	13	5.6 %
High school	100	42.7 %
Total	234	100%

In this study, the majority of respondents were male, of which there were 192 respondents or around 86.8% of all respondents, while 31 respondents or around 13.2% of respondents were female. shown in Table 5.

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Table 5.
Respondent's gender.

Gender	Respondent	Percentage (%)
Male	203	86.8%
Female	31	13.2%
Total	234	100%

The results of the questionnaire explained that 62 respondents worked in the 11-15 year period (26.6%), followed by 48 respondents (20.6%) in the 6-10 year period, 46 respondents (20.6%) in the 16-20 year period (19.7%), followed by 21-25 years with 40 respondents (17.2%) and then in the 1-5 year period with 37 respondents (15.9%). shown in Table 6.

Table 1.
Employee's length of service.

Employee's length of service	Respondent	Percentage (%)
1-5	37	15.8%
6-10	48	20.5%
11-15	62	26.5 %
16-20	47	20.1 %
21-25	40	17.1%
Total	234	100%

4.2. Validity and Reliability Testing Results

To consider a research instrument reliable, there are two parameters that are often used, namely Cronbach's alpha and composite reliability.

Composite reliability is regarded as a superior metric for assessing the internal consistency of a construct. A common guideline is that Composite Reliability values should exceed 0.7 while Cronbach's alpha should also be greater than 0.7 [19] Composite reliability reflects the actual reliability of a variable, whereas Cronbach's alpha indicates the minimum reliability threshold. so that the composite reliability value is > 0.6 and the Cronbach Alpha value is > 0.60.

The composite reliability value can be used to test the reliability value of each indicator on a variable. [19] stated that the composite reliability value must be > 0.70 although a value of 0.60 is still acceptable.

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Table 2.
Validity and reliability testing result.

Variable	Cronbach's alpha	rho_A	Composite reliability	Average variance extracted (AVE)	Status
Digital transformation leadership	0.845	0.846	0.896	0.682	Reliable
IT capability	0.886	0.887	0.913	0.637	Reliable
Digital mindset	0.841	0.848	0.894	0.679	Reliable
Organizational agility	0.901	0.908	0.927	0.716	Reliable
Work culture change	0.844	0.849	0.895	0.682	Reliable
Human capital	0.922	0.923	0.945	0.811	Reliable
IT alignment with business	0.876	0.876	0.923	0.801	Reliable
Digital transformation	0.920	0.921	0.944	0.807	Reliable
Firm performance	0.820	0.869	0.879	0.646	Reliable

According to Table 6, the composite reliability and Cronbach's alpha values for all constructs satisfy the established criteria, exceeding the recommended thresholds. Each construct's composite reliability value surpasses 0.70, indicating that all constructs demonstrate good reliability.

4.4. Hypothesis Testing Results

Hypothesis testing is performed to determine the acceptance or rejection of the proposed hypotheses. This investigation encompasses evaluations of both direct and indirect effects. The testing was carried out utilizing the bootstrap methodology on the sample data, with the corresponding bootstrap results presented in Figure 3.

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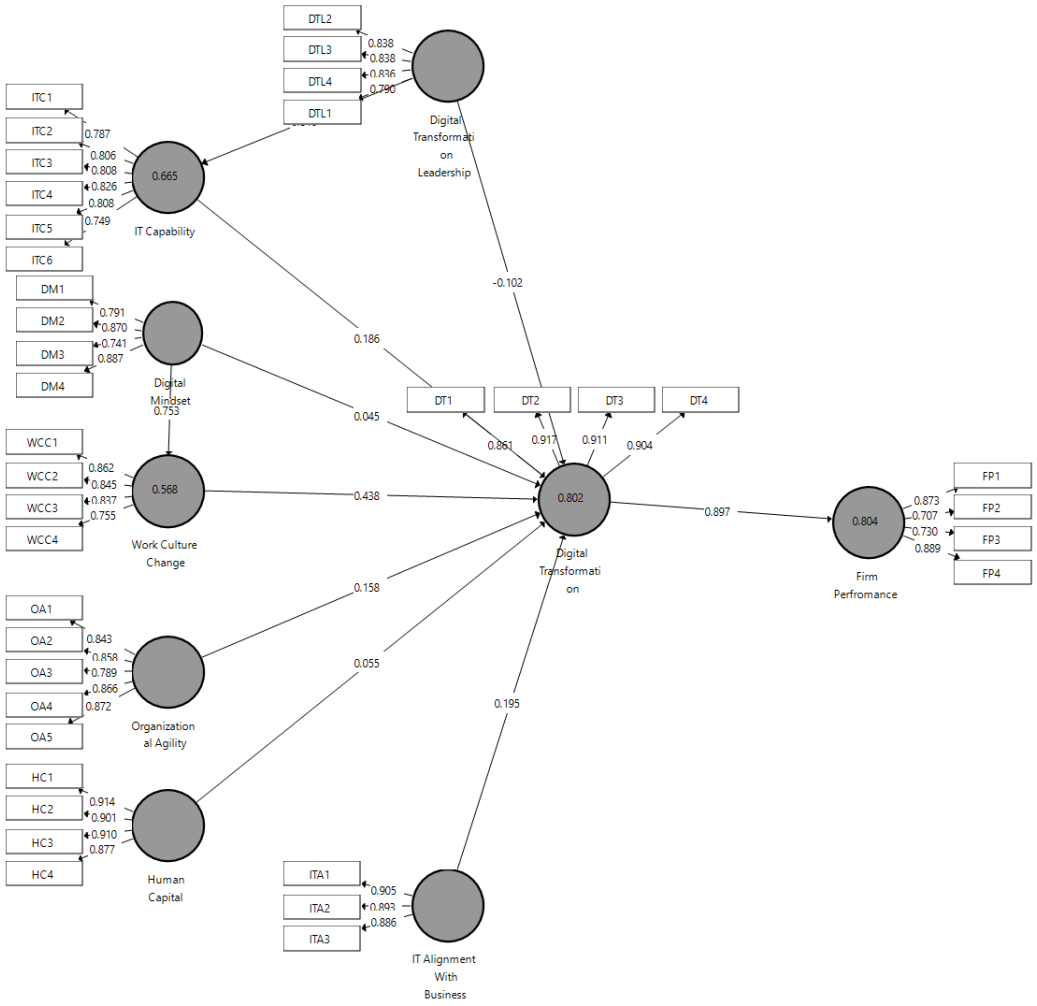

Figure 3.
Boostrapping output results.

The interpretation of the t-test is as follows :
If t Count < t table then H0 is Accepted and H1 is rejected
If t count > table then H1 is accepted and H0 is rejected [18]

Table 3.
Path coefficient (Direct effect).

	Hypothesis	Standard deviation (STDEV)	T statistics	P values	Result
H1	Digital transformation leadership -> Digital transformation	0.061	1.662	0.097	Significant
H2	Digital transformation leadership -> IT capability	0.037	22.107	0.000	Significant
H3	IT Capability -> Digital transformation	0.070	2.668	0.008	Significant

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	Hypothesis	Standard deviation (STDEV)	T statistics	P values	Result
H4	Digital Mindset -> Digital transformation	0.083	/0.539	0.590	Not Significant
H5	Digital mindset -> Work culture change	0.049	15.472	0.000	Significant
H6	Work culture change -> Digital transformation	0.117	3.727	0.000	Significant
H7	Organizational agility -> Digital transformation	0.099	1.595	0.111	Significant
H8	Human capital -> Digital transformation	0.104	0.526	0.599	Not Significant
H9	IT alignment with business -> Digital transformation	0.098	2.002	0.046	Significant
H10	Digital transformation -> Firm performance	0.015	59.750	0.000	Significant

As shown in Table 6, the data analysis conducted using the Partial Least Squares (PLS) method via SmartPLS involved sample of 234 respondents. Out of the ten hypotheses examined in this study, eight were found to be acceptable. The overall results from the hypothesis testing of direct effects indicate that all path coefficient values align with the criteria for determining whether a hypothesis exerts a significant or insignificant influence.

4.4.1. Theoretical Implication

The theoretical implication of digital transformation on company performance is that digital transformation can mediate the relationship between Digital Transformational leadership, IT Capability, Work Culture Change, Organizational Agility, IT Alignment With Business and company performance. In other words, digital transformation can be a factor that connects Digital Transformational leadership, IT Capability, Work Culture Change, Organizational Agility, IT Alignment With Business with company performance results. This research provides a deeper understanding of how companies can use Digital Transformational leadership, IT Capability, Work Culture Change, Organizational Agility, IT Alignment With Business and digital transformation to achieve superior performance. In addition, this research also expands our understanding of how digital technology can influence company performance, especially through innovation and increasing operational efficiency. Thus, digital transformation is not only an important factor in supporting company performance, but can also be a source of significant competitive advantage [9]

4.4.2. Managerial Implications

The managerial implication of digital transformation on company performance is that managers need to understand the importance of integrating digital technology with their business strategy to achieve better performance. By leveraging strong IT capabilities and implementing effective digital transformation, companies can improve customer offerings, increase customer satisfaction and reduce operational costs. Managers need to focus on innovation in their business processes and utilize digital technology to create added value for the company. Thus, digital transformation can be the key to improving company performance and creating competitive advantages in an increasingly digital market.

Then, it is important to consider the role of IT capabilities in managing technology effectively to improve organizational performance. Managers need to understand that investment in IT capabilities

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and digital orientation can be a key factor in achieving competitive advantage and long-term success of the company [20]

Thus, this research provides practical insights for managers in developing effective digital transformation strategies to improve company performance [8].

5. Limitations and Further Research

The author acknowledges several limitations of this study. First, the research is constrained by its focus on a limited respondent pool, consisting solely of employees from a single Indonesian state-owned enterprise. Involvement of multiple state-owned companies from various industries could yield different insights. This presents an opportunity for future research to explore potential fundamental differences in the factors influencing digital transformation across state-owned enterprises in diverse sectors. Additionally, as the study is confined to one country (Indonesia), it restricts the generalizability of the findings related to the implementation of digital transformation.

6. Conclusion

This research was conducted with the aim of analyzing the factors that influence company performance mediated by digital transformation in one of the state-owned plantation and forestry industry business clusters, namely PT Perkebunan Nusantara III (Persero) as a whole. The method used in this research is a combination of adaptations of several research methods related to digital transformation.

This research shows that:

- Digital Transformation is influenced by IT Capability, Digital Mindset and Work Culture Change where Digital Mindset has the greatest influence on the successful implementation of digital transformation at PT Perkebunan Nusantara III (Persero). A digital mindset has a very important influence because it can produce an open mind towards new technological developments which can open up opportunities for the use and utilization of new technology in companies which can increase efficiency and create return value and improve company performance. This is also related to IT Capability where the ability to use technology also greatly influences the success of implementing digital transformation in the company, then Work Culture Change also influences the success of digital transformation where the company must be able to change the work culture from manual to technology-based, this change is of course will produce ease in work that can streamline both time and energy by utilizing digital technology.
- Furthermore, there is a positive influence of Digital Transformation on firm performance. This is in line with the existence of digital transformation at PT Perkebunan Nusantara III (Persero) which is running well, so the costs incurred by the company can produce return value in the form of increased performance company, this is in line with the digital initiatives that have been taking place at the company, namely the use of digital farming, SCADA and GIS which are considered capable of improving the company's performance in terms of production administration in the field, monitoring factory equipment and also the field area mapping process.

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Data Reponden

Lokasi Kerja

- ○ Bagian
- ○ Distrik
- ○ Kebun
- ○ Unit

Kelompok Jabatan

- ○ BRM-2
- ○ BRM-3
- ○ BRM-4
- ○ BRM-5

Rentang Usia

- 25-30
- 31-35
- 36-40
- 41-45
- 46-50

Pendidikan Terakhir

- S2
- S1
- D3
- SMA

Jenis Kelamin

- Laki – laki
- Perempuan

Lama Bekerja

- 1-5 Tahun
- 6-10 Tahun
- 11 – 15 Tahun
- 16 – 20 Tahun
- 21 – 25 Tahun

Petunjuk pengisian kuesioner Jawablah pertanyaan di bawah ini dengan memberikan pendapat 1 : Sangat Tidak Setuju
2 : Tidak Setuju
3: Setuju
4 : Setuju Sekali
5 : Sangat Setuju Sekali

No	Item pertanyaan	STS (1)	TS (2)	ST (3)	SS (4)	SSS (5)
Komitmen Top Manajemen Komitmen top manajemen dalam transformasi digital merujuk pada kesediaan dan dukungan yang diberikan oleh kepemimpinan senior atau puncak organisasi dalam mengadopsi dan mendorong perubahan digital di perusahaan. Komitmen ini mencakup pemahaman, dukungan, dan partisipasi aktif dari top manajemen dalam seluruh proses transformasi digital.						
1	Manajemen Puncak telah menetapkan visi yang jelas mengenai penggunaan TI dalam mendukung operasional bisnis					
2	Manajemen Puncak telah menciptakan dukungan					

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No	Item pertanyaan	STS (1)	TS (2)	ST (3)	SS (4)	SSS (5)
	untuk inisiatif Transformasi Digital dalam bisnis					
3	Manajemen puncak telah merumuskan konsep pemberdayaan sumber daya manusia yang tepat untuk meningkatkan pemanfaatan TI					
4	Manajemen puncak telah menetapkan investasi yang cukup untuk meningkatkan efektivitas pengguna TI					
IT Capability IT Capability dalam transformasi digital merujuk pada kemampuan organisasi untuk mengadopsi, mengelola, dan memanfaatkan teknologi informasi (IT) dengan efektif dalam rangka mencapai tujuan transformasi digital. Ini melibatkan pengembangan dan penerapan berbagai keterampilan, pengetahuan, proses, dan infrastruktur IT yang diperlukan untuk mendukung perubahan digital dalam organisasi.						
5	Pengelolaan data perusahaan (baik pengelolaan data-data operasional, ketersediaan data, aksesibilitas data) proses sharing data, dll) telah dijalankan dengan baik Perusahaan telah mengadopsi infrasturktur teknologi yang memadai					
6	Saluran Komunikasi digital dalam perusahaan berjalan dengan baik (seperti jaringan internet, intranet dll) Perusahaan memiliki akses jaringan internet dan intranet yang memadai dengan konektivitas yang stabil					
7	Perusahaan memiliki Portofolio & layanan aplikasi yang baik (Meliputi Digital Farming, SCADA, GIS, ERP, aplikasi pendukung lainnya, dll)					
8	Pengopersioan/pelayanan fasilitas IT (seperti CCTV, ICT (Perangkat TIK), Hrdaware) dijalankan dengan baik					
9	Perusahaan telah mengembangkan visi yang jelas tentang bagaimana TI berkontribusi pada kemajuan bisnis					
10	Perusahaan telah mengintegrasikan perencanaan strategi bisnis (RJPP & RKAP) dan perencanaan TI (IT Master Plan & Program Kerja TI)					
Digital Mindset Digital mindset dalam transformasi digital merujuk pada sikap, keyakinan, dan pendekatan mental yang diperlukan oleh individu dan organisasi untuk mengadopsi dan mengintegrasikan teknologi digital dalam aktivitas sehari-hari. Ini melibatkan perubahan cara berpikir dan berperilaku agar sesuai dengan tuntutan dan peluang yang						

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No	Item pertanyaan	STS (1)	TS (2)	ST (3)	SS (4)	SSS (5)
dihadapi dalam era digital.						
11	Saya sangat termotivasi untuk terus belajar dengan teknologi informasi baru I always try to be up to date with technological changes that can improve results in my work area.					
12	Saya termotivasi untuk mendorong keberagaman, saling berbagi, dan berkolaborasi menggunakan alat digital dan teknologi informasi baru I have great ease in dealing with technology and new digital processes					
13	saya memiliki pemikiran yang out of the box, inovative, kreatif dan proaktif					
14	saya termotivasi untuk melibatkan teknologi digital dalam proses kerja sehari-hari I'm passionate about technology.					
Digital skill Digital skill dalam transformasi digital merujuk pada keterampilan dan kompetensi yang diperlukan oleh individu dan organisasi untuk beroperasi secara efektif dalam lingkungan digital. Ini mencakup pemahaman, kemampuan, dan keahlian dalam menggunakan teknologi digital, memahami konsep dan prinsip dasar teknologi digital, serta menerapkan solusi digital dalam konteks bisnis.						
15	Saya selalu tertarik mempelajari teknologi digital					
16	Saya memiliki digital skill dan digital role yang imbang					
17	Saya memahami baik proses bisnis di bidang saya bekerja maupun digitalisasi yang berkaitan dengan proses tersebut					
18	Perusahaan memberikan kesempatan untuk memperoleh keterampilan digital guna mendukung transformasi digital					
Perubahan Budaya Kerja Perubahan budaya kerja dalam transformasi digital merujuk pada pergeseran sikap, nilai, norma, dan praktik yang terjadi dalam organisasi sebagai respons terhadap adopsi dan integrasi teknologi digital. Ini melibatkan perubahan dalam cara orang bekerja, berkolaborasi, berkomunikasi, dan berpikir di era digital.						
19	Saya menggunakan aplikasi dan teknologi digital dalam pekerjaan sehari-hari					
20	Hasil pekerjaan saya dapat dengan mudah diakses melalui aplikasi digital Perusahaan					
21	Aplikasi digital membuat fleksibilitas dalam bekerja					

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No	Item pertanyaan	STS (1)	TS (2)	ST (3)	SS (4)	SSS (5)
22	Aplikasi digital membuat saya bekerja lebih cepat					
Kapasitas Sdm Kapasitas sumber daya manusia (SDM) dalam transformasi digital merujuk pada kemampuan individu dan tim dalam mengadopsi, menguasai, dan memanfaatkan teknologi digital untuk mencapai tujuan organisasi. Ini melibatkan peningkatan keterampilan, pengetahuan, dan sikap yang diperlukan untuk beroperasi dalam lingkungan yang semakin terhubung dan digital.						
23	Perusahaan selalu berusaha untuk meningkatkan awareness karyawan erhadap transformasi digital					
24	Perusahaan selalu berusaha untuk meningkatkan kapasitas digital karyawan melalui pelatihan-pelatihan digital					
25	Perusahaan selalu berusaha untuk meningkatkan kapabiltas digital karyawan					
26	Perusahaan selalu berusaha untuk meningkatkan kapasitas karyawan dalam hal teknologi digital					
Digital Transformation Transformasi digital dalam perusahaan merujuk pada penggunaan teknologi digital untuk mengubah cara perusahaan beroperasi, berinteraksi dengan pelanggan, dan menciptakan nilai tambahan. Ini melibatkan adopsi dan integrasi teknologi digital dalam semua aspek bisnis, termasuk proses internal, model bisnis, pengalaman pelanggan, dan hubungan dengan mitra bisnis.						
27	Perusahaan mendorong adopsi teknologi baru pada bisnis proses seperti big data analysis, cloud computing, mobile technology, dll					
28	perusahaan menggunakan dan mengintegrasikan teknologi digital untuk mendorong perubahan					
29	perusahaan menggunakan dan mengintegrasikan teknologi digital untuk mendorong perubahan					
30	Perusahaan terus mengembangkan dan menghasilak produk dan layanan baru berdasarkan perkembangan teknologi					
31	Perusahaan memanfaatkan teknologi digital dalam mendukung proses pengambilan Keputusan					
Produktivitas Perusahaan Produktivitas perusahaan merujuk pada kemampuan perusahaan untuk menghasilkan output atau kinerja yang diinginkan dengan efisiensi yang tinggi. Tingkat produktivitas yang tinggi menunjukkan bahwa perusahaan dapat menggunakan sumber daya yang ada dengan baik untuk mencapai tujuan bisnisnya.						
32	Dalam persepsi saya transformasi digital yang telah dilakukan perusahaan telah dapat meningkatkan					

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No	Item pertanyaan	STS (1)	TS (2)	ST (3)	SS (4)	SSS (5)
	kualitas produk dan layanan					
33	Dalam persepsi saya transformasi digital yang telah dilakukan perusahaan telah dapat meningkatkan proses operasional produksi					
34	Dalam persepsi saya transformasi digital yang telah dilakukan perusahaan telah dapat membantu perusahaan menarik lebih banyak pelanggan baru					
35	Dalam persepsi saya transformasi digital yang telah dilakukan perusahaan telah mempercepat proses produksi yang ada di perusahaan					

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