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DOES DISCLOSURE OF GOVERNANCE ACCOUNTABILITY AND DIGITALIZATION BUSINESS PROCESSES THROUGH COMPANY WEBSITE STRENGTHEN FINANCIAL INFORMATION?

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ABSTRACT

Purpose: This research aims to test whether Governance
Accountability Disclosure (GAD) and Digital Business
Process Disclosure (DBPD), made available through
corporate websites, reinforces the value relevance of
financial information.

Methodology/approach: This research uses cross-
sectional data from 2023 annual reports and website
content analysis from 84 companies that have automated
and consumer-facing digital service business activities.
Quantitative analysis was processed using multiple linear
regression.

Findings: The findings of this study found that GAD has
no influence on the relevance of financial value. In
contrast, DBPD has a significant influence on financial
value relevance. This result indicates that DBPD
information increases value relevance for investors,
because the information in it reinforces the importance of
financial information more than the information in GAD.
The test results by interacting GAD and DBPD with
earnings per share show that only GAD has an influence
on the value relevance of financial information, although
not significant.

Practical implications: This research provides strategies
to enhance company value that can be achieved by



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empowering governance systems and strengthening the capacity of digitized businesses, and then disseminating information through digital means.

Originality/value: Company websites have economic potential, but extensive analysis is lacking even though companies are increasingly interested in fostering a climate of trust through online disclosure, especially when interacted with the digitization of business process information, transparent corporate governance policies, and financial position. This empirical research makes a unique contribution by adding to the literature on information technology in accounting, which is linked to agency theory and signaling theory.

Keywords: Digital Business Process Disclosure, Governance Accountability Disclosure, Online Disclosure, Value Relevance of Financial Information.

ABSTRAK

Tujuan penelitian: Penelitian ini bertujuan untuk menguji apakah pengungkapan akuntabilitas tata kelola (GAD) dan pengungkapan proses bisnis digital (DBPD), yang disediakan melalui situs web perusahaan, memperkuat relevansi nilai informasi keuangan.

Metode/pendekatan: Penelitian ini menggunakan data cross-sectional dari laporan tahunan 2023 dan analisis konten situs web dari 84 perusahaan yang memiliki aktivitas bisnis layanan digital otomatis dan berhadapan langsung dengan konsumen. Analisis kuantitatif diproses dengan menggunakan regresi linier berganda.

Hasil: Temuan penelitian ini mendapatkan hasil bahwa GAD tidak berpengaruh terhadap relevansi nilai informasi keuangan. Sebaliknya, DBPD memiliki pengaruh yang signifikan terhadap relevansi nilai keuangan. Hasil ini menunjukkan bahwa informasi DBPD meningkatkan relevansi nilai bagi investor, karena informasi di dalamnya lebih memperkuat pentingnya informasi keuangan dibandingkan informasi di dalam GAD. Hasil pengujian dengan menginteraksikan GAD dan DBPD dengan laba per lembar saham, diperoleh hasil hanya yang GAD memiliki pengaruh terhadap relevansi nilai informasi keuangan, walaupun tidak signifikan.

Implikasi praktik: Penelitian ini memberikan strategi untuk meningkatkan nilai perusahaan yang dapat dicapai dengan memberdayakan sistem tata kelola dan memperkuat kapasitas bisnis yang terdigitalisasi, dan kemudian menyebarkan informasi melalui sarana digital.

Orisinalitas/kebaharuan: Situs web perusahaan memiliki potensi ekonomi, namun analisis ekstensif sangat kurang dilakukan padahal perusahaan semakin berminat dalam menumbuhkan iklim

kepercayaan melalui pengungkapan online, terlebih jika diinteraksikan dengan digitalisasi informasi proses bisnis, kebijakan tata kelola perusahaan yang transparan, dan posisi keuangan. Penelitian empiris ini memberikan kontribusi unik dengan menambah literatur tentang teknologi informasi dalam akuntansi, yang dibubungkan dengan teori keagenan dan teori pensinyalan.

Kata kunci: *Pengungkapan Akuntabilitas Tata Kelola, Pengungkapan Online, Pengungkapan Proses Bisnis Digital, Relevansi Nilai Informasi Keuangan.*

INTRODUCTION

The Indonesian economy has undergone a major digital transformation in the last twenty years. [Huda et al. \(2024\)](#) argue that this transformation is caused by technological advances that support easy internet access and the growth of the telecommunications industry, thus driving changes in people's behavior, regulatory changes, and innovations in various fields. By adapting digital technologies companies reconfigure their dynamic prospects to capture the market by generating additional revenue streams or enhancing existing revenue streams. To align with the development of corporate business, traditional governance is required to adapt to support the digitization of corporate business by utilizing digital communication platforms. Governance demands are becoming increasingly complex as the digital age has brought about new corporate communication methods that allow companies to disclose information globally without time constraints, at lower costs, and with greater levels of distribution, frequency and speed ([Gandia, 2008](#)).

In light of the growing public belief that sustainable digital transformation may improve corporate performance, different research have identified multiple competitive benefits for more digitalized organizations. Businesses employ digital technology to generate income, expand their operations, replace or modify existing business processes, and build environments that are centered around digital information ([Salvi et al., 2020](#); [Ferreira et al., 2018](#)). Digital technology can help companies quickly adapt to changing customer demands, build opportunities, and reduce risks ([Shan & Troshani, 2021](#)). Digitalization helps create smooth operations, opens up revenue opportunities, and delivers competitive advantage, thus increasing corporate value in the eyes of investors ([Rachinger et al., 2018](#)). Growth prospects significantly impact the value of the company ([Nufyar & Mulyani, 2023](#)). Digital transformation enhances information quality and corporate governance, diminishes agency costs, strengthens internal control, and increases analyst coverage, so establishing an effective trust mechanism between the firm and the external market ([Deqiu & Qing, 2023](#)).

To align with its digital transformation goals, firms disseminate ideas and principles of sustainable digitalization development by utilizing digital communication channels through the internet. A company's website is an ideal communication channel to provide information about its digitization initiatives, especially those designed to improve financial performance ([Vitolla et al., 2020](#)). Firms leverages internet and social media platforms to disseminate sustainable development principles, thereby raising employee awareness and improving sustainable development performance within the organization ([Sun et al., 2024](#)). To build employee awareness of the value creation and product development process, the company identifies and adjusts the right employee qualifications and competencies so that they are able to collaborate between disciplines using digitalization to improve business processes.

The practical implications of research related to the growth of business digitalization in agency theory have a focus on how to maximize company profits through effective resource

utilization strategies and at the same time make cost efficiency has been in great demand as an increasing number of companies are developing businesses with the support of digital platforms. [Troshani et al. \(2015\)](#) concluded that the cost of collecting, processing and disseminating information to users has become more efficient after the implementation of digitization. The use of appropriate media to transmit digitization-level signals such as websites has the advantage of being able to disseminate information at a low cost ([Gandia, 2008](#)). Finally, investors' perceptions are influenced by information published by the company, especially information related to expected cash flows and acceptable levels of risk so as to reduce the cost of equity capital for investors and determine the value of the company ([Plumlee et al., 2015](#)). This research contributes to providing strategies designed for company leaders to increase firm value by utilizing the support of digital platforms to disseminate information that the company has mobilized its resources towards digital business processes through effective control using good governance mechanisms and then disseminating them transparently through digital media. This research also contributes to developing empirical evidence by adding to the literature related to the role of information technology in accounting, especially connecting the framework of agency theory and signaling theory, where owners and agents align their interests in profit maximization by integrating digital platforms into the company's business processes, have implemented good control and then disseminate the information to the public effectively to reduce the emergence of information asymmetry through the company's web to be more efficient so as to increase company value.

Recent research by [Sun et al. \(2024\)](#) on the theme of sustainable digital transformation trends mainly highlights the importance of strengthening the governance and operational decision-making aspects of digital transformation to support the company's business sustainability performance. Online disclosure, a supplementary component of good corporate governance, enables firms to increase visibility and foster stronger public oversight ([Kaymak & Bektas, 2017](#); [Dias et al., 2017](#)). [López-Arceiz et al. \(2019\)](#) argue without the disclosure of accountability, the development of corporate governance practices will not necessarily improve the financial position of the organization. [Striebing \(2017\)](#) and [Sanzo-Pérez et al. \(2017\)](#) argue for extensive analysis of how global interactions occur between corporate governance, online disclosure, and financial position, due to increasing interest in transparent policies designed to foster a climate of trust. [López-Arceiz et al. \(2019\)](#) underscore the need for understanding online disclosures because it has not yet expanded to certain aspects of transparency in corporate governance practices and its positive interaction with the financial position.

Researchers argue that the level of digital information dissemination still has limitations in some aspects of disclosure such as financial and governance. Even though company websites have economic potential, [Salvi et al. \(2020\)](#) argue that there is still a lack of actual data on how digitizing information, whether supplied directly by the business through its website or indirectly, affects company value. This may be because information about the level of digitization, although extremely valuable, cannot always be measured in financial terms. Furthermore, generally accepted norms regarding non-financial disclosures do not particularly call for the inclusion of information related to digitization, so it can be difficult for investors to utilize this information, potentially creating significant information asymmetry that can have a major impact on investor perceptions, as well as impacting firm values ([Gamayuni, 2015](#)). These limitations in financial disclosures can mean investors and other stakeholders are under-informed about the level of company digitization ([Vitolla et al., 2020](#)). In its development, companies need to continue to recognize which important aspects of their digital transformation need to be disseminated sustainably.

In this research, we apply the method of measuring firm value by using the stock price of digital growth-oriented firms attributed to the relevant of accounting information. This research adds evidence of the development of digitalization in Indonesia in two ways. First, we use relevant variables measuring digitalization from [Barth et al. \(2023\)](#) who postulate that the value relevance of accounting information, especially earnings, is rising, particularly regarding intangible assets, growth potential, and alternative performance measurements, which are significant in the new economy, dan Second, we modified the governance variables by [Gandia \(2008\)](#) to include determinants that are in line with the challenges of corporate leadership in the current era of digitalization by [Vitolla et al. \(2019\)](#). This research aims to analyze further empirical evidence about the effect of Digital Business Process Disclosure (DPBD) on the relevance of financial value, and how Governance Accountability Disclosure (GAD) contributes to the transparency of corporate accountability to the public, which has an impact on increasing the relevance of financial value.

Agency theory in this research is based on the alignment of interests between the principal and the agent to win the competition in their industry by utilizing digital advances. Management then allocates a number of company resources optimally in order to integrate digitalization in its business processes so as to support operations to be more effective, and efficient. However, the problem of information asymmetry arises when management does not use digital publication channels to disseminate how corporate governance has been implemented to support the digitization of business processes that they are working on so that it does not bring an increase in company value as expected. Online disclosure can be crucial since it helps manage various resources, build public trust, and reduce information asymmetry between the parties involved ([López-Arceiz et al., 2019](#)).

The disclosure of digital governance is explained by [Gandia \(2008\)](#) who takes an agency theory perspective to show that when disclosure policies are actively deployed by companies, it can reduce agency costs; high agency costs are a concern for investors because unreliable governance mechanisms result in low levels of public transparency ([Healy & Palepu, 2001](#)), or because less than optimal managers, together with controlling shareholders, tend to lead a reduction in the quality of disclosures ([Tahir et al., 2022](#)). Disclosure reduces information asymmetry by implementing an adequate level of control so that the interests of shareholders and managers can be aligned, thereby reducing agency costs ([Vitolla et al., 2019](#)). Dissemination of corporate governance information is the main factor that determines the level of information asymmetry between internal and external.

On the other hand, signal theory ([Spence, 1973](#)), provides insights into how disseminating more information ([Salvi et al., 2020](#)), including voluntary disclosures ([Ibrahim et al., 2022](#)) and higher quality information like accuracy, relevancy, clarity, etc. ([Kundeliene & Leioniene, 2015](#)), to signal that the company is a high-value business. Management voluntarily disseminates information on operational activities to show that they can bring economic benefit to shareholders. Signals about digitization are disseminated using corporate websites to support rational investment decisions ([Vitolla et al., 2020](#)), and to increase firm value, which impacts decision-making by investors ([Salvi et al., 2020](#)). Disclosure is the main means of communication between management, investors, and the market, and can be through annual reports, conference calls, investor relations, interim reports, and corporate websites. Equal access to information, enabled through digital dissemination, allows investors to react and influence stock prices.

The Ohlson model ([Ohlson, 1995](#)) of the value relevance of financial information proposes that a perfect capital market requires additional assumptions due to the dynamics of

information, so that the value of a company can be restated using the book value of net profit, equity, dividends, and other items, according to a linear function ([Barth et al., 2001](#)). Many research utilize the Ohlson model ([Ohlson, 1995](#)) to assess the value and relevance of non-financial information ([Ricci et al., 2020](#); [Sutopo et al., 2018](#)). This research enhances previous research on the relevance of the value of non-financial information with reference to digital business information disclosure and digital governance disclosure.

Digitalization increases competitive capabilities and provides new ways to leverage corporate value to investors. [Benner & Ranganathan \(2017\)](#) and [Ricci et al. \(2020\)](#) report an important interaction between digitalization disclosures and capital market valuation, and the latter revealed that investors' view of corporate decisions and assessments is influenced by information related to digitalization, which is equated with the disclosure of intellectual capital. [Björkdahl \(2020\)](#) believes that integrating digital technology into corporate operations can help improve business performance by improving the supply of data and allowing for deeper data analysis. Research by [Salvi et al. \(2020\)](#) reports that knowledge of the digitization process enhances the value of a company.

Engendering a positive public view of the integration of company operations requires strong governance and leadership because digital platforms give decision makers clearer information, act as a foundation for sophisticated analysis, and provide new digital services ([Manita et al., 2020](#)). However, information asymmetry can occur when governance interacts with the company's financial position as evidenced by the different opinions from previous research. [Manafi et al. \(2015\)](#), [Buse et al. \(2016\)](#), and [Mahrani & Soewarno \(2018\)](#), concluded a positive relationship between governance mechanisms and corporate financial performance, on the contrary, [Mollah & Zaman \(2015\)](#), [Peters & Bagshaw \(2014\)](#); [Hermiyetti & Manik \(2013\)](#) concluded a negative relationship between governance mechanisms and corporate financial performance. The improvement of a company's financial position cannot be attributed to the growth of corporate governance standards alone, if disclosure of accountability implementation is not also communicated online ([López-Arceiz et al., 2019](#)). Good corporate governance and high levels of digital disclosure will usually improve the financial position ([López-Arceiz et al., 2019](#)) and a higher business value ([Mikrad et al., 2024](#)).

Research in the field of corporate governance, online disclosure, and financial position will expand our understanding of aspects of transparency in the online disclosure of corporate governance practices and their interaction with financial performance. In fact, information about a company's level of digitalization is less well documented than financial disclosures ([Vitolla et al., 2020](#)), so the global interaction between corporate governance, online disclosure, and financial position needs to be analyzed more extensively to be useful in formulating policies around transparency that are designed to create an atmosphere of trust ([Striebing, 2017](#); [Sanzo-Pérez et al., 2017](#)). On the other hand, [Deqiu & Qing \(2023\)](#) argue that the company's digital business transformation to be trusted by investors needs to be analyzed on a broader scope of aspect including its impact on improving information quality, governance, strengthening internal controls, and agency cost efficiency. Therefore, this research seeks to analyze what types of non-financial information have higher value relevance for investors and to further examine the impact of digital governance information disclosure on increasing the relevance of firm value.

H1. Governance accountability disclosure increases value relevance because it reinforces the importance of financial information.

The changing reality of information technology has pushed other fields to adapt in parallel. Information digitization is a process of producing information in a digital format so that it is

easy to produce, store, manage, and distribute as either text, numbers, audio, or visuals (Salvi et al., 2020) and to support income generation, business improvement, and business process renewal (Salvi et al., 2020; Ferreira et al., 2018). Information digitalization is seen as a crucial factor that can affect financial performance (Martín-Peña et al., 2019). Companies that are highly digitized have a competitive advantage over competitors, which enables an increase in performance (Martín-Peña et al., 2019). Andrikopoulos & Krikhani (2013) emphasized the worldwide role of the internet, which has revolutionized the publication of company information, and cited company websites to be the best channels for delivering corporate information to investors, thereby minimizing information asymmetry and enhancing business performance. Disclosures of digital business processes has value relevancy since the information can reinforce the importance of financial information. Beisland (2009) defines value relevance as the ability of financial statement information to capture and summarize information that determines the value relevance of earnings. Whereas the cost of digitizing business processes is relatively expensive and requires complex efforts from planning, updating, and continuous monitoring. For this reason, the more positive information disclosure related to the digitization of business processes is disclosed, the more it will attract investors' attention, thereby increasing the relevance of earnings value. However, further proof is still required of the impact of information, disclosed directly or indirectly via a company's website, on a company's value (Salvi et al., 2020).

Based on the previous discussion, the researcher is motivated to further analyze empirical evidence of the effect of digital business process disclosure on the relevance of financial information that can explain a company's market value. Following Baboukardos & Rimmel (2016) and Cardamone et al. (2012), we include disclosure of digital business processes in the research model as an individual independent variable and as an independent variable paired with financial data. We are of the opinion that disclosures of digital business processes are a source of information relevant to financial value that has an effect on stock prices. The interaction between disclosure of digital business processes, BVS, and EPS values is expected to provide insights about the significance of each financial detail. For this reason, we formulate the following hypothesis:

H2. Digital business process disclosure increases value relevance because it reinforces the importance of financial information.

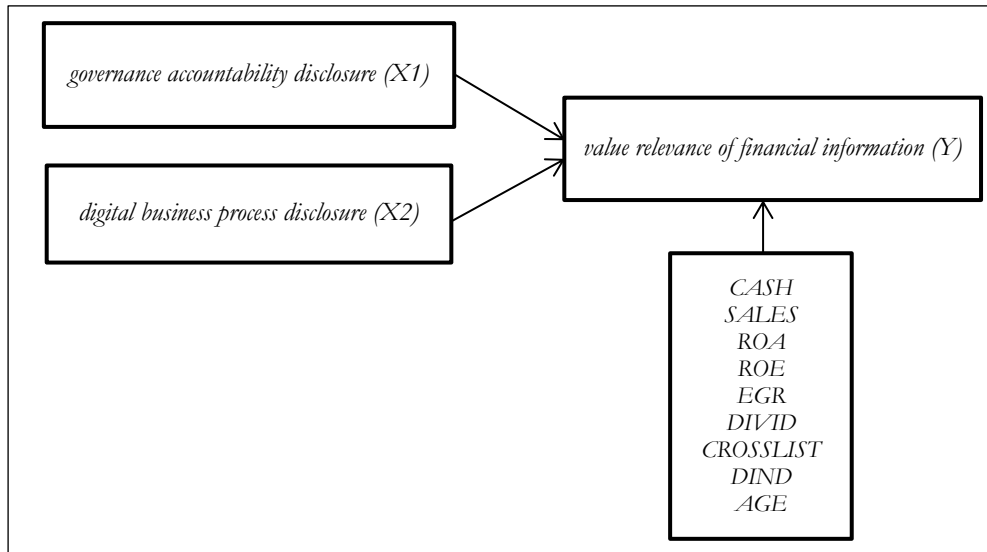


Figure 1.
Conceptual
Framework

METHOD

Companies that provide automated digital services (ADS) and consumer-facing businesses (CFB) have a wider scope of activities and are increasingly digitized (OECD, 2020). We followed the updated sector and industry classification of companies listed on the Indonesia Stock Exchange (IDX) and took all CFB companies in the cyclical consumer, non-cyclical consumer, and healthcare sectors, and all ADS companies in the information technology and telecommunication sectors. The secondary data used in this quantitative research was gathered from several sources. Data on financial ratios, company characteristics, and stock prices that we use to calculate the value relevance of financial information was provided by Osiris; the list of company names, including website addresses and the length of time digitization has been in progress at each company, came from the official IDX website; and we accessed the relevant corporate websites to obtain the digital governance disclosure index and the digital business process disclosure index from the 2023 annual reports.

This research uses cross-sectional data with a website content analysis period and referencing the 2023 annual reports. We impose three inclusion criteria:

1. The company must be listed on the main board of the IDX;
2. The company has used its website to disseminate digital information;
3. The company has published an annual report for 2023.

This led to an initial sample of 113 companies, which was reduced to 87 when we removed those not using their websites and those without a 2023 annual report. We excluded three further companies that had incomplete data, leaving 84 companies in the final sample, as presented in Table 1.

Industry	Frequency	
	Absolute	Relative (%)
Consumer cyclical	25	29.8
Consumer non-cyclical	37	44.0
Healthcare	10	11.9
Information technology	6	7.1
Telecommunication	6	7.3
Total	84	100.0

Table 1.
Sample
Distribution
Based on
Industry

Source: Processed by Researchers (2024)

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Information has value relevance if it increases market value ([Cardamone et al., 2012](#)), and investors use a combination of non-financial and financial data to help them make investment decisions ([Permatasari & Narsa, 2022](#)). [Chen & Srinivasan \(2023\)](#) found that the disclosure of information, both textual information and non-financial metrics, is relevant to market prices. Investors tend to respond positively when they can quickly determine the risk profile of a firm, based on disseminated governance information, and expect that they will not have to incur high agency costs or costs related to the monitoring of executive behavior ([Vitolla et al., 2019](#)); this causes them to be interested in investing capital in the company ([Cormier et al., 2016](#)) which sometimes leads to an increase in the share price. The stock market price model developed by [Ohlson \(1995\)](#) is used to determine the relevance of financial value; we follow research by [Firmansyah et al. \(2022\)](#) by using the formula:

$$PRICE_{it+1} = \beta_0 + \beta_1 BVS_{it} + \beta_2 EPS_{it} + \epsilon_{it}$$

where $PRICE_{it+1}$ is share price as of the end of fourth month of the following year; BVS_{it} is book value of equity per share of the company i in year t ; EPS_{it} is earnings per share of the company i in year t .

Data collection on GAD and DBPD was carried out using a content analysis approach on information published by companies on their websites; this involved visiting the official company websites of 84 issuers in October 2023 sequentially to assess the presence (or lack thereof) of the items classified in Appendices I and II. The process and operationalization of our content analysis follows the procedure used by [Neuendorf \(2017\)](#) to obtain valid, reliable, accurate, and precise measurement standards. Two coders were hired to carry out the content analysis, one as the main coder and the other as the comparison coder to avoid subjective judgment and coder bias ([Spurgin & Wildermuth, 2009](#)). The researcher acts as a referee when conducting reliability tests, namely measuring the percentage of agreement between the coders in assessing content.

Publishing information online is an effective way for companies to build workflow processes with their stakeholders ([Vitolla et al., 2020](#)). The content analysis was carried out based on two criteria; the characteristics of the measuring instrument are reliable in analyzing the information provided ([McMillan, 2000](#)), and the method used to reach our conclusions is valid and replicable ([Vourvachis & Woodward, 2015](#)).

This content analysis aims to assess the existence of indicators that have been identified and classified into categories and sub-categories by following several academic contributions. First, 36 indicators were formulated from [Gandia \(2008\)](#), which were synthesized with the board characteristic indicators proposed by [Vitolla et al. \(2019\)](#) and [Sánchez et al. \(2011\)](#), and relate to the governance mechanisms described in Appendix I. In addition, the 23 indicators proposed by [Salvi et al. \(2020\)](#) relate to the disclosure of business processes, in Appendix II.

The minimum tolerable reliability figure is 0.7, or 70%; anything above this means that the measuring instrument is reliable ([Neuendorf, 2017](#)). Indicator reliability is calculated using the Holsti formula ([Neuendorf, 2017](#));

$$CR = \frac{2M}{N_1 + N_2}$$

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where CR is the reliability (between coders) coefficient, in which 0 indicates that nothing is agreed upon by the coders, and 1 indicates perfect agreement; M is the amount of agreement between coders; N_1 is the amount of coding obtained by coder 1; and N_2 is the amount of

coding obtained by coder 2. [Barth et al. \(2023\)](#) reveal the interaction between stock prices and accounting information, mainly influenced by growth opportunities using cash, and income growth (*CASH*). Sales growth (*SALES*) has an influence on company performance ([Bose et al., 2017](#)). Return On Equity (*ROE*) shows comparable wealth between shareholders and share prices ([Chen et al., 2018](#)). Earning Growth Rate (*EGR*) is a marker of growth potential and is predicted to be positively correlated with company value ([Salvi et al., 2020](#)). Dividend payments (*DIVID*) increase the investor's trust base in markets ([Kapons et al., 2023](#)). We then consider the following specific items; company size (*TA*) is connected to the level of investor confidence ([Kim et al., 2021](#)); Companies tend to cross-list (*CL*) in nations with more established markets and better investor protections after enacting governance improvements ([Liao et al., 2022](#)); and the firm effect (*DIND*) mitigates the auto-correlation problems by clustering companies with similar characteristics ([Xu et al., 2020](#)). The digitalization age (*AGE*) indicator follows [Duréndez et al. \(2016\)](#), and is the length of time a company has carried out digital transformation in years, measured on a ratio scale between the time when the regulations for publishing annual reports online came into effect in 2013 and the year the company was listed. The multiple linear regression equation used is;

$$PRICE_{it+1} = \beta_0 + \beta_1 BVS_{it} + \beta_2 EPS_{it} + \beta_3 GAD_{it} + \beta_4 DBPD_{it} + \beta_5 (BVS_{it} * GAD_{it}) + \beta_6 (BVS_{it} * DBPD_{it}) + \beta_7 (EPS_{it} * GAD_{it}) + \beta_8 (EPS_{it} * DBPD_{it}) + \sum_{j=5}^{13} \beta_j Controls_{it} + \beta_{14} DIVID_{it} + \beta_{15} CL_{it} + \beta_{16} DIND_{it} + \beta_{17} AGE_{it} + \epsilon_{it}$$

where $PRICE_{it+1}$ is the market price of company *i* in the end of fourth month after the end of the fiscal year; BVS_{it} is the book value per share of company *i* in year *t*; EPS_{it} is the earnings per share of company *i* in year *t*; GAD_{it} is the accountability governance disclosure index of company *i* in year *t*; $DBPD_{it}$ is the digital business process disclosure index of company *i* in year *t*; other value-relevant information from company *i* in year *t* orthogonal to revenue and book value; $DIVID$ is the dividends provided by the company in year *t*; CL is the number of capital markets where company *i* is registered in year *t*; $DIND$ is the industrial sector dummy; and AGE is the length of time since a company began digitalization initiatives. In testing H1 and H2, we consider the significance of the correlation coefficient among GAD_{it} and $DBPD_{it}$ with the stock price.

Variables & Notations	Definition	Measurement
$PRICE_{it}$	Stock market prices the following year.	Stock market prices in the fourth month after the end of the fiscal year.
BVS_{it}	Book value per share in year <i>t</i> .	The ratio between equity owned by shareholders and the number of shares outstanding.
EPS_{it}	Earnings per share in year <i>t</i> .	The ratio between the net profit value and the number of shares outstanding.
GAD (accountability governance disclosure)	Transparent dissemination of information about accountable governance practices via the website.	Perfect agreement among coders on an item = 1, 0 otherwise. Partial index formula;
$DBPD$	The level of information about the digitalization of business processes	$I_i^p = \frac{\text{Score Obtained in the sub-group}}{\text{Maximum total score obtainable}} \times 10$

Table 2. Operational Definition of Variables

(digital business process disclosure)	provided directly or indirectly via the website.	Total index formula; $I^T = \sum_{i=1}^n I_i^P \times P_i^T$ where I^T = Total Index Score I_i^P = Partial Index Score P_i^T = Proportion of the total overall index score represented by the partial index "i".
<i>LnCASH</i>	Cash and cash equivalents.	Natural logarithm of the company's cash and cash equivalents.
<i>SALES</i>	Changes in sales this year compared to the previous year, expressed as a percentage.	$(SALES_t - SALES_{t-1}) / SALES_{t-1} * 100\%$.
<i>ROE</i>	Comparable wealth between shareholders and share price.	Net income divided by shareholders' equity in year <i>t</i> .
<i>EGR</i>	Valuation of the company using a measure of earnings from future cash flows.	Profit <i>t</i> – Profit <i>t-1</i> / Profit <i>t-1</i> .
<i>LnTA</i>	Conditions or characteristics of a company with several parameters that can be used to determine the size (large or small),	Natural logarithm of the company's total assets.
<i>DIVID</i>	Paying annual dividends.	If the company provides dividends in year <i>t</i> , given a value of 1, otherwise 0.
<i>CL</i>	The stock market where the company is registered.	The number of stock markets where the company is listed.
<i>DIND</i>	The company's industry sector.	Industrial sector dummy.
<i>AGE</i>	The length of time the company has published its digital transformation information via the website, in years.	Ratio scale between the 2013 annual report regulations to publish via the website and the year the company was registered on the capital markets.
β	Regression coefficient.	
ε	Error term.	

RESULTS AND DISCUSSION

Before testing our hypotheses, we tested the classical assumptions on the data and we found that the normality ($0.2 > 0.05$) and homoscedasticity ($0.43 > 0.05$) tests are fulfilled because they fail to reject the null hypothesis. The multicollinearity test using the variance inflation factor (VIF) method shows that some of the independent variables show coefficient values higher than the threshold value of 10 (see last row of table 6), however, [Gujarati & Porter \(2009\)](#) argue that research models that experience multicollinearity in their independent variables as long as they do not experience full multicollinearity, testing of the model can still be done. The autocorrelation test results obtained 2,124 are higher than the threshold value of 2. The results of this test show that there are no problems with the data used in this research.

Results

Table 3 shows descriptive statistics for several variables such as governance accountability disclosure, digital business process disclosure, value relevance of financial information, and control variables used in the equation. The mean value of the PRICE observation results is 2.088, with a variation in values between 50 and 28.450. The average GAD value, 0.71, is higher than the average DBPD value, 0.39, in contrast to the standard deviation value.

	Minimum	Maximum	Mean	Std. Deviation
<i>PRICE</i>	50	28.450	2.088	3.582
<i>BVS</i>	-123.13	30,069.29	637.96	3,268.11
<i>EPS</i>	-669.92	1,444.71	109.22	250.42
<i>GAD</i>	0.53	0.83	0.71	0.07
<i>DBPD</i>	0.09	0.70	0.39	0.13
<i>LnCASH</i>	10.78	24,01	19.20	3.73
<i>SALES</i>	-65.04	1,402.99	31.31	158.50
<i>ROE</i>	-496.20	238.42	1.66	75.54
<i>EGR</i>	-1,972.85	552.69	-9.50	228.20
<i>LnTA</i>	10.78	25.91	21.72	3.24
<i>ROA</i>	-27.93	29.29	4.99	9.19
<i>DIVID</i>	0	1	0.57	0.50
<i>CL</i>	1	6	1.96	1.51
<i>AGE</i>	3	10	9.75	1.00

Table 3.
Descriptive
Statistics of
All Test
Samples

Note: n = 84. BVS = book value per share; EPS = earnings per share; GAD = accountability governance disclosure; DBPD = digital business process disclosure; LnCash = natural logarithm of the company's cash and cash equivalents; Sales = changes in sales this year compared to the previous year; ROE = return on equity; EGR = earnings growth rate; LnTA = natural logarithm of the company's total assets; ROA = return on assets; Divid = annual dividends; CL = stock market registered; Age = length of time to digitally transform information.

The adjusted R-squared value of 0.521 (see table 4) shows that the variation in the dependent variable can be explained by the independent variables in the model amounting to 52.1%, while the remaining 47.9% is explained by other variables outside the model.

Table 4.
Summary of
Model Test
Results

Model	R	R-Squared	Adjusted R-Squared	Std. Error of the Estimate
1	0.805 ^a	0.648	0.521	1.0129

The correlations between the observed variables as shown in Table 5, indicate a positive correlation between GAD and PRICE, as well as between DBPD and PRICE. These positive correlations are consistent with the expected direction and indicate that Hypotheses H1 and H2 was reasonable.

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Variables	PRICE	BVS	EPS	GAD	DBPD	EPS x GAD	EPS x DBPD	BVS x GAD	BVS x DBPD	Ln CASH	SALES	ROE	EGR	LnTA
PRICE	1.000													
BVS	0.261	1.000												
EPS	0.548	0.586	1.000											
GAD	0.084*	0.157	0.139	1.000										
DBPD	0.174	-0.067*	-0.022*	-0.068*	1.000									
EPS x GAD	0.539	0.629	0.997	0.174	-0.028*	1.000								
EPS x DBPD	0.496	0.411	0.950	0.098*	0.039*	0.936	1.000							
BVS x GAD	0.262	1.000	0.586	0.165	-0.069*	0.630	0.411	1.000						
BVS x DBPD	0.269	0.997	0.585	0.149	-0.024*	0.628	0.416	0.996	1.000					
LnCASH	0.351	0.072*	0.296	0.008*	0.109	0.285	0.272	0.075*	0.070*	1.000				
SALES	0.014*	-0.029*	-0.061*	-0.174	-0.082*	-0.061*	0.045*	-0.032*	-0.029*	0.001	1.000			
ROE	0.278	0.020*	0.299	0.197	-0.018*	0.274	0.283	0.018*	0.026*	0.111	0.040*	1.000		
EGR	0.220	0.012*	0.051*	-0.042*	-0.113	0.047*	0.050*	0.009*	0.015*	-0.016*	0.306	0.069*	1.000	
LnTA	0.236	0.094*	0.257	-0.026*	0.094*	0.253	0.234	0.098*	0.088*	0.885	-0.013*	0.036*	-0.006*	1.000
VIF		9124	473.9	2.249	1.765	460.6	18.04	6613	441.6	5.251	1.199	1.549	1.148	5.147

Table 5.
Correlations
Test Results

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15.3

Notes: * $p < 10\%$, PRICE = stock market prices; BVS = book value per share; EPS = earnings per share; GAD = accountability governance disclosure; DBPD = digital business process disclosure; LnCash = natural logarithm of the company's cash and cash equivalents; Sales = changes in sales this year compared to the previous year; ROE = return on equity; EGR = earnings growth rate; LnTA = natural logarithm of the company's total assets; VIF = variance inflation factor.

The regression test results reported in Table 6 get a positive constant value of 6.491, this indicates a positive influence of the independent variable on the dependent variable. The relationship between GAD and stock price has a positive value of 0.393; at a significance level of 10%, we can state that there is insufficient evidence that GAD has a significant effect on stock prices, so H1 is rejected. The negative regression coefficient value of -2.219 means that governance accountability disclosure is not related to stock price.

We find that the interaction between stock prices and DBPD has a positive value of 0.024 and a significance level of 5%, so there is sufficient evidence to state that digital business process disclosure has a significantly positive effect on the value relevance of financial information, thereby supporting H2, that the disclosure of business process digitization through a company's website contributes to an increase in value relevance because it significantly reinforces the importance of financial information that impacts the stock price.

Variables	Expected result	Coeff.	z-stat	p-value
(Constant)		6.491	2.421	0.018
<i>BVS</i>	(+)	0.002	0.472	0.639
<i>EPS</i>	(+)	-0.013	-1.242	0.219
<i>GAD</i>	(+)	-2.219	-0.860	0.393
<i>DBPD</i>	(+)	2.893	2.315	0.024**
<i>LnTA</i>	(+)	-0.019	-0.197	0.844
<i>LnCASH</i>	(+)	-0.011	-0.123	0.902
<i>SALES</i>	(+)	0.000	0.316	0.753
<i>EGR</i>	(+)	0.001	1.509	0.137
<i>ROE</i>	(+)	-0.001	-0.305	0.761
<i>ROA</i>	(+)	0.065	2.552	0.013**
<i>DIVID</i>	(+)	0.599	1.948	0.056*
<i>CL</i>	(+)	0.145	1.506	0.137
<i>AGE</i>	(+)	0.069	0.565	0.574
<i>EPS × GAD</i>	(+)	0.022	1.559	0.124
<i>EPS × DBPD</i>	(+)	-0.006	-1.251	0.216
<i>BVS × GAD</i>	(+)	-0.002	-0.439	0.663
<i>BVS × DBPD</i>	(+)	-0.001	-0.567	0.573
<i>Number of obs.</i>	84			
<i>df</i>	140			
<i>Chi2 value > Chi2 table</i>	171,755 > 168,613			

Notes: * and ** indicate significance at the 10% and 5%, respectively.

The analysis of the significance of the coefficient of the interaction impact among EPS and BVS with GAD and DBPD shows that the interaction coefficient of EPS and GAD has a positive result of 0.022 and does not show significance at the 10% level, indicating that if there is a rise in the value of financial information as measured by EPS, the value of companies that disclose digital governance information will also rise, although not significantly. The interaction coefficient of EPS and DBPD is -0.006 and did not show significance at the 10% level, indicating that if there is a decrease in the value of financial information as measured by EPS, it will not affect the share value of companies that disclose their business processes digitally. Finally, the results of the interaction coefficient between BVS and GAD with BVS and DBPD are both negative and were not significant at the 10%

Table 6.
Summary
of
Regression
Test
Results

level, showing that if there is a decrease in the value of fiscal information in terms of BVS, it will not have an impact on market value, regardless of whether they disclose governance or business processes digitally. The calculated Pearson Chi2 value is greater than Chi2 (table 6 bottom row) indicating there is a relationship between GAD and DBPD variables.

Additional Analysis

In the first test, we use stock prices in the fourth month since the end of the fiscal year to test the effect of digital governance disclosure and digital business disclosure on financial value relevance. Next, we retest to assess the objectivity and reliability of the results in the first and third months since the end of the fiscal year, as shown in Table 7. The results of the first test were consistent, showing that investors have an interest in corporate business digitalization decisions.

	a month since the end of the fiscal year			three months since the end of the fiscal year		
	Coeff.	z-stat	p-value	Coeff.	z-stat	p-value
(Constant)	6.938	2.697	0.009	6.095	2.165	0.034
<i>BVS</i>	0.001	0.322	0.748	0.001	0.230	0.819
<i>EPS</i>	-0.013	-1.257	0.214	-0.012	-1.033	0.306
<i>GAD</i>	-2.680	-1.083	0.283	-1.798	-0.664	0.509
<i>DBPD</i>	2.978	2.484	0.016**	3.061	2.333	0.023**
<i>LmTA</i>	-0.042	-0.453	0.652	-0.027	-0.264	0.793
<i>LmCASH</i>	0.020	0.229	0.820	-0.002	-0.017	0.986
<i>SALES</i>	0.000	0.116	0.908	0.000	0.409	0.684
<i>EGR</i>	0.001	1.737	0.087*	0.001	1.514	0.135
<i>ROE</i>	-0.001	-0.349	0.728	-0.001	-0.223	0.824
<i>ROA</i>	0.059	2.407	0.019**	0.066	2.453	0.017**
<i>DIVID</i>	0.601	2.038	0.046**	0.414	1.283	0.204
<i>CL</i>	0.137	1.479	0.144	0.161	1.593	0.116
<i>AGE</i>	0.060	0.511	0.611	0.085	0.668	0.507
<i>EPS* GAD</i>	0.020	1.522	0.133	0.020	1.365	0.177
<i>EPS* DBPD</i>	-0.004	-0.981	0.330	-0.006	-1.303	0.197
<i>BVS* GAD</i>	-0.001	-0.231	0.818	-0.001	-0.215	0.831
<i>BVS* DBPD</i>	-0.002	-0.677	0.501	-0.001	-0.324	0.747

Table 7.
Additional
Analysis of
Regression
Test
Results

Notes: * and ** indicate significance at the 10% and 5% levels, respectively.

Discussion

The conclusion from the previously discussed test results found that online disclosure of governance accountability does not improve value relevance. This result is in contrast to [Ataünal & Aybars \(2017\)](#) who report that corporate governance information disseminated more intensely online improves the financial position of the firm. However, [López-Arceiz et al. \(2019\)](#) acknowledge the possibility of contradictory results obtained when interacting online governance information disclosure practices with firm financial performance. The conclusions of this test indicate that changes need to be made to GAD information by companies in Indonesia, so that the information in GAD can strengthen the importance of financial information. Companies need to identify which information components in corporate governance receive more or less attention from investors.

Investors generally want online disclosures of governance accountability information that helps them comprehend the actual risks associated with the digitalization transformation that

has consumed a significant allocation of the company's resources. Investors react positively to the company, when the disclosed information can be assessed with the company's risk profile and when investors expect the company's performance to increase in the future ([Farhana & Adelina, 2018](#)). Previous research have concluded that corporate governance disclosure has a positive effect on company performance ([Salman et al., 2014](#); [Ammann et al., 2013](#)). To avoid governance disclosures losing their value relevance in the future, managers need to disclose governance indicators that correspond to changes in digitized business processes, such as context and structure ([Berman & Marshall, 2014](#)), board activities that have strong implications for practices and capabilities related to digital transformation ([Collin et al., 2015](#)), and so on.

In the agency theory framework, managers may have more consideration in making information changes, because concentrated shareholders have a preference to control managers disseminating company information and are able to obtain more information and information that is not openly available for opportunistic purposes. [John & Senbet \(1998\)](#) argue that agency problems arise due to information asymmetry that occurs between shareholders (insiders and outsiders) or between majority and minority shareholders. There is a general belief that transparency can overcome asymmetric aspects of information ([Nielson & Madsen, 2009](#)). Online disclosure can play a key role in this context due to the need to manage different types of resources, create public trust, and reduce information asymmetry among the parties involved.

The test results further concluded that the disclosure of business process digitization through the company's website has a positive effect on value relevance because it significantly strengthens the importance of financial information that has an impact on stock prices. This result is in line with [Vitolla et al. \(2019\)](#) who found that the more intense the dissemination of information related to the company's digitization process through its website, the greater the increase in firm value; the provision of data and analysis that improves company performance ([Björkdahl, 2020](#)); providing clearer information to decision makers and providing a foundation for highly advanced analytical capabilities and modern digital services ([Manita et al., 2020](#)) and increasing total factor productivity, research and development intensity, and human resources in the company ([Sui et al., 2024](#)). Very few research report the results of online business process disclosure that has no effect on value relevance, except for research from [Santosa & Salma \(2023\)](#) whose results show that information digitization has no effect on firm value.

Corporate investment in increasingly digitalized business processes provides opportunities for advancing the company through new communication methods that can increase analytical effectiveness and speed up decision-making according to customer needs, followed by a faster service response. Insight into customer needs encourages companies to innovate products, thereby enhancing the company's image and reputation and potentially improving its financial performance. Business processes that are increasingly digitized reduce operational costs, optimize the use of resources, and increase efficiency, consistency, and quality of service. In addition, the explanation disclosed at the company's website provides fairness and ease of access for potential investors and stakeholders. Disclosure of the level of digitization of business processes is appreciated by investors and provides added value to the company's financial value.

Signaling theory is used to explain the effect of DBPD on the value relevance of corporate earnings. Companies perform the function of sending positive signals to inform investors that the company has a high-value business. According to [Spence \(1973\)](#) the delivery of

information to other groups is a signal to the market that the company maintains confidence in unobserved activities. Signals derived from the existence of information will regulate the reaction of capital market participants to the company ([Cormier et al., 2016](#)). Signals about digitization are disseminated using corporate websites to support rational investment decisions ([Vitolla et al., 2020](#)), and to increase firm value, which impacts decision-making by investors ([Salvi et al., 2020](#)).

CONCLUSION

This research has two objectives, namely to examine whether GAD and DBPD information on company websites has value relevance to financial information. For the first objective, this research found that GAD has no influence on the relevance of financial value. However, for the second objective, DBPD has a significant influence on financial value relevance. This result suggests that DBPD information increases value relevance for investors, as the information in it reinforces the importance of financial information more than the information in GAD. This result implies that every investor wants to see their return on investment increase, so that they will analyze the business prospects of companies that are digitally transforming and ensure that corporate governance mechanisms and accountability are in place, based on information published online by the company. Dissemination of information related to the strategies, processes, and results of the digitalization process implicitly shows that investment in digitalization has received support from the principals because it adds value to business processes.

The implications of these findings suggest that companies in Indonesia need to make changes to GAD information, so that the inside information can reinforce the importance of financial information. Companies need to identify which information components in corporate governance receive more or less attention from investors. Integrating information related to the digitization of business processes into corporate governance accountability reports can help investors ensure that their investment returns are better secured by the governance mechanisms in place. To avoid governance disclosures losing their value relevance in the future, managers need to disclose governance indicators that match changes in increasingly digitized business processes, such structure, board activities, and so on that have strong implications for digital transformation-related practices and capabilities.

This research provides strategies to increase firm value that can be achieved by empowering governance systems and strengthening digitalized business capacity, and then disseminating information through digital means. Managers must make available both financial and non-financial data to offer a comprehensive understanding of the ongoing digitalization process and its effect on firm value; those who understand the importance of providing detailed information in the form of indicators and graphical representations will signal their advanced analytical capabilities. Implementing a comprehensive digitalization strategy remains an effective strategy for companies to increase their value in the long run. This study does not further explore the information components of business process digitization that can be integrated in governance accountability that can increase the value relevance of financial information. Future research can explore the information components of the digitalization of the company's business processes that can be disclosed in governance accountability both on a mandatory and voluntary basis so as to increase the relevance of its value.

Dimension and Indicators
A. Disclosures concerning Board of Directors *
1. Board members *
2. Board structure *
3. Board size **, ***
4. Board independence **, ***
5. Board diversity ***
6. Rules for the organization and functioning of board and its committees *
7. Functions and office of each director *
8. Selection, de-selection and re-election procedures *
9. Conduct rules for directors *
10. Board's responsibility for the information disclosed to the markets *
11. Explicit description of relations between directors and major shareholders *
12. Interests held by directors in share capital *
13. Indication of which directors hold executive powers, which are independent and which are members of supervisory committees *
14. Explicit description of conditions determining the independence of directors
15. Professional qualifications of independent directors *
16. Public disclosure of offices held by any independent director in other companies *
17. Directors' emoluments *
B. Annual General Meeting (AGM) *
18. Board activity **, ***
19. Resolutions adopted at last AGM *
20. Notification of AGM *
21. Disclosure of information regarding agenda *
22. Disclosure of information concerning wording of proposed resolutions *
C. Ownership structure *
23. Breakdown of percentage interests in the firm owned by major shareholders *
24. Disclosure of information regarding agreements entered into by the company with its directors and senior executives, and the extent to which such transactions were carried out under market conditions *
25. Disclosure of significant operations between the company and major shareholders, and the extent to which such transactions were carried out under market conditions *
26. Treasury stock held by the company and significant variations *
D. Other information related to good governance *
27. Content of by-laws *
28. Quarterly reports for the year and annual reports for past two years, together with external auditors' reports *
29. Publication of annual corporate governance report *
30. Company refers to good governance criteria applied and compliance therewith*
31. Audit fees *
32. Fees paid for non-audit services provided by audit firms and/or group undertakings *
33. Disclosure of information contained in presentations made to market operators and significant shareholders *
34. Summary of reports issued by significant analysts, investment banks and rating agencies following the company on an ongoing basis *

35. Disclosure of reports concerning corporate social responsibility (business ethics code, environmental policy and other public political commitments) *
36. Where the company is listed on other markets, disclosure of results and financial situation based on the application of rules prevailing in such markets *

Sources: *, **, *** proposed by [Gandia \(2008\)](#), [Sánchez et al. \(2011\)](#) and [Vitolla et al. \(2019\)](#)

Note: This digital governance disclosure index is used to assess the existence of indicators identified from information disseminated by each company through the company's website.

Appendix II – Content of Digital Business Process Disclosure Index

No.	Dimensions	Indicators
1	Instruments of digital communication	1. Email address (direct link with customers and business partners) 2. Restricted access area 3. Web applications 4. Documents sharing and cloud applications 5. Positioning on search engines 6. Mobile version of website
2	E-commerce	7. On-line product catalogues 8. Shop on-line 9. On-line payments
3	Data management	10. Data protection policy 11. Privacy policy
4	Information about digitalization and relevant activities	12. Inbound logistics 13. Operations 14. Outbound logistics 15. Administration 16. Marketing and sales 17. Post sales services
5	Investments in digitalization and relevant activities	18. Inbound logistics 19. Operations 20. Outbound logistics 21. Administration 22. Marketing and sales 23. Post sales services

Source: Proposed by [Salvi et al. \(2020\)](#)

Note: This digital business process disclosure index is used to assess the existence of indicators identified from the information disseminated by each company through the company website.

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