Dividend tax reform and corporate dividend behavior: evidence from Indonesia

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Abstract

Purpose – The purpose of our study is to investigate the effect of the dividend tax reform established by the Job Creation Act on corporate dividend behavior in a manner that increases firms' dividends. We intend to test whether the rise in dividends following the new tax law is motivated by tax considerations.

Design/methodology/approach – Using the data from the Indonesian Stock Exchange (IDX) database and Bloomberg, we employ the difference-in-difference approach as our main strategy.

Findings – Our results are twofold. First, we find that firms pay higher dividends after the tax reform, despite facing sharp declines in financial performance caused by the pandemic crisis. Therefore, the dividend rise among Indonesian firms after the tax reform cannot be attributed to corporate profitability as suggested by several scholars who studied the effect of the dividend tax reform on corporate dividend behavior in the USA. Second, we find that firms pay dividends more frequently following the dividend tax reform. As a result, we confirm that our results are not driven by a few large payers, and there is a larger number of firms that are initiating or increasing dividends compared to those that are omitting or decreasing dividends.

Research limitations/implications – We face two limitations in our paper. First, we do not separate the dividend payments into regular and special dividends as done by Chetty and Saez (2005) and Julio and Ikenberry (2004). Examining the response of the dividend tax reform separately between regular and special dividends allows for more valid inferences about whether the increase in dividend payments following the tax reform should be attributed to the change in firms' dividend behavior in general or the sole effect of a few large firms that paid one-time and non-recurring dividends that drove the results. Second, we provide evidence that may be particularly unique to developing countries like Indonesia, where controlling shareholders predominantly stir corporate dividend decisions. Consequently, it is challenging to generalize our findings to other contexts where the legal and regulatory environments are distinct.

Practical implications – First, our findings provide evidence that the dividend rise after the tax reform is not attributable to corporate profitability, which has long been claimed by several scholars as a factor that influences the dividend rise post-reform rather than the dividend policy *per se*. Second, our results demonstrate that, despite the fact that controlling shareholders lack marginal incentives to increase dividend payments, the dividend tax reform can serve as a governance mechanism to safeguard minority shareholders in the absence of strong investor protection. Lastly, our findings provide evidence that the dividend tax policy can become the first-order determinant that shapes firms' dividend decisions rather than firm-specific factors such as the pattern of past dividends and stability of earnings.

Originality/value – This is the first study that documents the effects of the reduction in tax penalty on corporate dividend behavior in Indonesia, where the dividend tax exemption is set to be permanently implemented.

Keywords Corporate dividend behavior, Corporate profitability, Dividend tax reform, Tax penalty, The job creation act

Paper type Research paper

1. Introduction

Dividend taxation has been of much longstanding interest and discussion on tax policies in pursuit of larger investment and higher economic growth. Dividend taxes can affect overall output through two conduits (Boissel and Matray, 2022). First, a change in dividend taxes can affect overall investment. Second, a change in dividend taxes can have an impact on the distribution of investment across firms, thereby affecting the efficiency of capital allocation (Alstadsster *et al.*, 2017). Policymakers favoring efficiency will consider cutting or

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eliminating such taxes, albeit at the expense of equity since the tax savings generated by the tax treatment will disproportionately benefit the rich.

One channel through which dividend tax cuts or exemptions can spur investment is the reallocation of capital (Becker *et al.*, 2013), which can be achieved when firms pay a large amount of dividends. A dividend tax cut or exemption policy increases efficiency through a better allocation of capital in the sense that funds retained in mature firms would flow into the market once the tax penalty is reduced. As a result, nascent firms with large growth opportunities would be able to access the capital needed to finance their projects at a lower cost of capital (Alstadsster *et al.*, 2017; Becker *et al.*, 2013), which in turn brings more efficiency to the economy.

As part of the economic reform, the government of Indonesia introduced The Job Creation Act in pursuit of higher efficiency in the economy, which was signed into law on November 2, 2020. Larger investment and higher growth become the main goals behind the bill where a dividend tax reform plays a vital role in delivering such objectives. Later in February 2021, the tax regulation (Government Regulation Number 9/2021) as part of the Job Creation Act was issued. Under this new regulation, dividend income is no longer subject to the 10% final taxes for individual investors if certain conditions are met and becomes fully tax-exempt for corporations with ownership of less than 25%.

The dividend tax reform provided by the Job Creation Act is expected to promote higher dividend payments in an effort to promote efficiency in the economy. However, the change in firms' dividend behavior post-tax reform may not solely be attributed to the dividend tax reform. Other factors might play a role in shaping the dividend decisions such as investor preference for dividends, corporate profitability, or macroeconomic conditions (Edgerton, 2013; Hanlon and Hoopes, 2014). Moreover, researchers have diverged when interpreting the cause of the dividend increase, suggesting that the increase should not solely be attributed to the dividend tax reform.

The most notable setting on this topic is the dividend tax cuts provided by the 2003 Job and Growth Tax Relief Reconciliation Act (JGTRRA) in the US. One of the most important provisions in the bill is the reduction in the dividend tax rate for individuals from 38.1% to 15%. Several scholars have documented that the surge in dividend payments following the JGTRRA is attributable to the dividend tax cuts (Blouin *et al.*, 2011; Chetty and Saez, 2005). However, several other researchers have cast doubt on the notion that the surge in dividends should greatly be attributed to the dividend tax cut. Edgerton (2013) argues that the effect of the tax cut might have been confounded with other contemporaneous events such as the recovery of the U.S. economy that began in early 2003 and a series of accounting scandals during the period 2001–2003. Brown *et al.* (2007) find that the dividend increase occurs due to the shift from repurchasing shares to paying dividends. This can be predicated on the notion that, in the presence of dividend taxation, firms with higher insider ownership are more likely to choose share repurchases as opposed to dividends as their means of disbursing cash (Hsieh and Wang, 2008).

The dividend tax reform provided by the Job Creation Act in Indonesia becomes an ideal setting that enables us to investigate whether the surge in dividends following the enactment of the new tax law is driven by tax considerations. The reasons are threefold. First, the Job Creation Act was signed into law on November 2, 2020, when the COVID-19 pandemic was still haunting the economy. This is different from the JGTRRA that was enacted during the period of economic recovery following the economic downturn caused by the stock market turmoil and a series of accounting scandals. As a result, the increase in dividends cannot be linked to companies' improved profitability, as observed in the US with regard to the 2003 JGTRRA, since the COVID-19 outbreak had negatively impacted business performance in Indonesia.

Second, unlike the dividend tax cuts established by the JGTRRA which was scheduled to expire in several years (on December 31, 2010), the dividend tax reform in Indonesia is set to be permanently implemented. Since dividends tend to be sticky and investors would punish firms for lowering dividends, firms may find it difficult to raise dividends unless the dividend tax cuts are set to be permanent. Lastly, as one of the emerging markets, Indonesia provides a unique opportunity to examine firms' dividend behavior in response to external policy change in an environment where corporate governance is poorly functioning and shareholder ownership is highly concentrated. In other words, one can attribute the rise in dividends to the dividend tax policy since poor corporate governance practices, weak legal systems, and highly concentrated ownership tend to result in lower dividends as a result of controlling shareholders' expropriation of firms' resources (Moin *et al.*, 2020; Mulyani *et al.*, 2016).

The purpose of our study is to investigate the effect of the dividend tax reform established by the Job Creation Act on corporate dividend behavior in a manner that increases firms' dividends. We intend to test whether the rise in dividends following the new tax law is motivated by tax considerations. More specifically, we examine the change in corporate dividend behavior post-tax reform by looking into whether firms raise their dividend payments and whether there are more firms that initiate dividend payments relative to those that terminate them. We view it as important to investigate firms' responses to the dividend tax reform for three reasons. First, previous research on this topic, primarily centered around the 2003 JGTRRA, indicates that firms tend to raise their dividends after the implementation of dividend tax cuts. However, there is disagreement among researchers over the underlying reasons for this increase. The Job Creation Act provides us with a clean setting because the timing of the enactment coincided with the economic downturn caused by the COVID-19 outbreak rather than the economic recovery that preceded the 2003 JGTRRA.

Second, ownership structure plays a decisive role in shaping corporate dividend decisions in Indonesia (Moin *et al.*, 2020; Setiawan *et al.*, 2016). In countries with weak legal regimes and highly concentrated shareholder structures, dividends tend to be low since controlling shareholders may expropriate firms' resources at the expense of minority shareholders (Faccio *et al.*, 2001; La Porta *et al.*, 2000). Our study aims to test whether the dividend tax reform can serve as a mechanism that compensates for the absence of strong investor protection and legal systems in Indonesia. Lastly, the rise in dividends following the dividend tax reform may be driven by a few large firms, which could potentially lead to an overestimation of the tax reform's effect on corporate dividend behavior. To the best of our knowledge, this is the first study that documents the effects of the reduction in tax penalty on corporate dividend behavior in Indonesia where the dividend tax exemption is set to be permanently implemented.

Our results are twofold. First, we find that firms pay higher dividends after the tax reform, despite facing sharp declines in financial performance caused by the pandemic crisis (Athira *et al.*, 2024; Shen *et al.*, 2020). In the second quarter of 2021, right after the tax regulation was enacted, dividend payouts increased by 98.31% on an annual basis (YoY) and there was a 51.02%-increase in dividend-paying firms, demonstrating that firms pay higher dividends in response to the dividend tax policy [1]. Therefore, the dividend rise among Indonesian firms after the tax reform cannot be attributed to corporate profitability as suggested by several scholars who studied the effect of the dividend tax reform on corporate dividend behavior in the US. Second, we find that firms pay dividends more frequently following the dividend tax reform. As a result, we confirm that our results are not driven by a few large payers and there is a larger number of firms that are initiating or increasing dividends compared to those that are omitting or decreasing dividends.

Our findings have several contributions. First, our findings provide evidence that, although ownership structures are highly concentrated in Indonesia, firms respond to external policy changes such as dividend tax reform instead. As a result, the dividend tax reform can serve as a governance mechanism to safeguard minority shareholders in the absence of strong investor protection in emerging markets such as Indonesia. Second, our results demonstrate that minority shareholders can collectively exert their influence and demand higher dividends following the dividend tax reform, though controlling shareholders lack marginal incentives to increase dividend payments due to the tax-exempt treatment imposed on their dividends in the first place. Lastly, the dividend tax reform in Indonesia coincides with the economic crisis caused by the COVID-19 pandemic rather than the economic recovery coincided with the enactment of the 2003 JGTRRA in the US. Therefore, the rise in dividends should not be associated with corporate profitability as proposed by Edgerton (2013) when the dividend tax reform comes into play.

We face two limitations in our paper. First, we do not separate the dividend payments into regular and special dividends as done by Chetty and Saez (2005) and Julio and Ikenberry (2004). Examining the response of the dividend tax reform separately between regular and special dividends allows for more valid inferences about whether the increase in dividend payments following the tax reform should be attributed to the change in firms' dividend behavior in general or the sole effect of a few large firms that paid one-time and non-recurring dividends that drove the results. Second, we provide evidence that may be particularly unique to developing countries like Indonesia where controlling shareholders predominantly stir corporate dividend decisions. Consequently, it is challenging to generalize our findings to other contexts where the legal and regulatory environments are distinct.

2. Institutional background

The Government of Indonesia introduced the Job Creation Act in pursuit of better economic efficiency, which was passed into law in October 2020. Larger investment and faster growth were the primary goals of the measure, with tax reform playing an important part in achieving such goals. Later, in February 2021, a tax rule (Government Rule Number 9/2021) was released as part of the Job Creation Act. Dividend income becomes totally tax-exempt for corporate shareholders regardless of the portion of shareholdings and is no longer subject to individual shareholders' 10% withholding taxes if certain requirements are met. To meet such requirements, individual shareholders need to: (1) reinvest the dividend income at certain instruments in Indonesia, (2) hold each of the instruments for a minimum of three years, and (3) submit an annual report on reinvestment realization every year for the three years.

The change in the tax provisions suggested that dividend taxation in Indonesia has shifted from a double-taxation to a single-taxation regime. Prior to this regulation, dividend income was tax-exempt only for (1) dividends distributed from retained earnings and (2) dividends received by private or state-owned firms with a minimum ownership of 25%. Furthermore, before the tax reform, corporate profits were subject to double taxation, which meant that profit before being paid as dividends was taxed at the corporate level and then taxed again as dividend income at the shareholder level.

Prior to the new legislation, the tax exemption for dividends earned by domestic corporate shareholders in Indonesia who own at least 25% of domestic dividend-paying corporations had been in existence since December 31, 1983. Corporate shareholders with less than 25% ownership, on the other hand, obtain a tax credit for taxes paid by domestic dividend-paying firms in which they invest, which can be used to offset their own tax liability. The tax regime in Indonesia did not specifically regulate the dividend taxation of individual shareholders until February 2009. Since then, dividends received by individual shareholders have been subject to a 10% withholding tax, which cannot be used to reduce their personal tax burden.

In other words, the tax regime in Indonesia has started to partially adopt the classical system since 2009, which leads to double taxation for individual shareholders. However, the tax on which such shareholders are imposed is not subject to the personal marginal tax rate that reaches 30% for the top marginal personal tax rate before the tax reform. Instead, it is taxed at a 10% withholding tax rate. The tax disadvantage placed on individual shareholders has drawn the attention to policymakers, who are now aware of their vital roles in deepening the capital market in Indonesia. However, instead of shifting to the imputation system, the tax regime in Indonesia has subsequently provided a tax exemption for dividends received by individual shareholders only if they meet certain requirements. With dividends now tax-exempted and zero capital gain tax still in place, companies are expected to pay more dividends to cater to individual shareholders who have grown at an exponential rate in recent years.

3. Literature review and hypotheses development

Miller and Modigliani (1961) in their seminal work posit that in a tax-free world of perfect capital markets, firms' dividend policy is irrelevant to their shareholders since one dollar dividends paid is equivalent to one dollar capital gain reduced. In the real world, most countries impose taxes on dividends, which puts dividends at a disadvantage as opposed to share repurchases or retained earnings. However, firms, at a certain point, choose to pay dividends to their shareholders, which sparks a debate over why firms pay dividends.

The choice between dividend and capital gain has long been studied extensively in corporate finance literature under the substitution theory, also known as a "dividend puzzle" (Christie, 1990; Lam, 2014). Scholars propose several reasons why firms pay dividends. For example, Bhattacharya (1979) argues that firms pay dividends to signal private information about their future firm performance. Jensen (1986) proposes the free cash flow hypothesis, demonstrating that dividends are used to prevent managers from using their cash flow for purposes that do not enhance shareholder value. Allen *et al*. (2000) predicate their findings on the "ownership clientele" effects in that firms pay dividends to attract institutional shareholders who are relatively tax-advantaged. In addition, due to their monitoring capacity, attracting institutional shareholders may result in higher firm value because they have a greater capacity to monitor managers than individuals.

These findings give rise to the tax clientele effect that sheds light on shareholders' preferences over the choice between dividends and capital gain, though dividends face the tax penalty. For example, corporate investors whose dividend income is taxed at a lower effective rate than capital gains will favor receiving dividends to maximize their net after-tax returns. Individual shareholders might prefer capital gains and thus invest in firms that buy back their shares or retain their earnings due to the tax penalty imposed on their dividend income. Meanwhile, other investors such as tax-exempt entities will be indifferent between receiving dividends or capital gains due to the same tax treatment provided to them.

The choice of dividends over share repurchases or retained earnings in the face of the dividend tax penalty demonstrates that receiving dividends is still worthwhile for certain types of shareholders. As a result, one can predict that when the dividend tax is cut or eliminated, taxable investors will rebalance their portfolio by overweighting their holdings on dividend-paying firms, thereby driving up their stock prices. Hence, managers would be inclined to move toward paying dividends as a means of distributing profits to fulfill investors' tax preferences and maximize their firm value. In short, after the tax penalty is reduced to a certain point, firms become more motivated to raise dividends in an effort to satisfy shareholders who are now facing a tax advantage when receiving dividends.

Based on the theory above, the hypothesis that can be established is:

H1. Firms increase their dividend payments following the dividend tax reform.

In addition to the increase in dividend payments, we also predict that the reduction in the dividend tax penalty will lead to an increase in the dividend frequencies. Using the dividend frequency as a measure allows us to account for the initiation and omission of dividends following the dividend tax reform. Looking at a firm's decision to omit or initiate dividend payments rather than the amounts paid also helps us reduce the influence of large dividend payers (Chetty and Saez, 2005). As a result, the dividend tax reform not only induces firms to pay more dividends but also encourages them to pay dividends more frequently.

Based on the theory above, the hypothesis that can be established is:

H2. Firms pay dividends more frequently following the dividend tax reform.

4. Methodology

4.1 Sample selection

We obtain our data from the Indonesian Stock Exchange (IDX) database and Bloomberg. We selected the initial sample from 853 listed firms as of March 31, 2023. We arrange a set of criteria to select our sample. We exclude (a) firms without dividend payments during the observation period, (b) financial firms due to their highly regulatory constraints in making payout decisions, and (c) firms that are listed during the observation period.

We restrict our sample to firms that paid dividends during our observation period spanning from Q1-2019 to Q1-2023. The observation period of Q1-2019 to Q1-2023 allows us to isolate the effects of the 2021 dividend tax exemption due to the relatively narrow window (Campbell *et al*., 2013). This paper excludes the enactment quarter (Q1-2021) because, in that quarter, managers were still undecisive on whether to adjust their payout policy until it was legislated (Blouin *et al*., 2011). In addition, this paper also isolates the bias effect that may result from "entry and exit" due to the listing or de-listing activity by excluding firms that were listed during the observation period, as suggested by Chetty and Saez (2005).

We test the effect of the dividend tax reform on corporate dividend behavior by comparing eight quarters before the tax reform (Q1-2019 to Q4-2020) and eight quarters after the tax reform (Q2-2021 to Q1-2023). Therefore, each firm must have at least one observation for the eight quarters prior to the tax reform or one observation for the eight quarters after the tax reform. Simply put, each firm must have at least one dividend payment before or after the tax reform. As this selection process provides us with 250 sample firms and 16 quarters, we finally obtain 4,000 observations. For more details, see Appendix A.

4.2 Research model

We use the difference-in-difference (DiD) approach as our main strategy to test the effect of the dividend tax reform on corporate dividend behavior. Past studies such as Perez-Gonzalez (2005), Chetty and Saez (2005), and Blouin *et al*. (2004) classify firms owned by large institutional shareholders into control groups. Such firms are unaffected by the tax reform because institutional shareholders' dividend income was non-taxable prior to the tax reform.

However, we cannot apply the same approach in our paper because, prior to the dividend tax reform, institutional shareholders were already taxable. As a result, we construct our treatment and control groups in a manner that accounts for the different nature of ownership structure between government- and privately-owned firms [2]. We take into account the ownership structure by dichotomizing the ownership types into government- and privately-owned firms on the notion that the higher degree of state ownership is associated with lower dividend payment, less desire to increase dividends, and higher probability to decrease dividends (Ben-Nasr, 2015). This may be the case because government- and privately-owned firms differ in many ways, such as corporate missions, management systems, financial resources, and operating efficiencies (Ren *et al*., 2019). Therefore, we classify the privately-owned firms into the treatment group and the government-owned firms into the control group. We predict that firms that fall into this control group will be unaffected by the dividend tax reform relative to those in the treatment group since, not only has their dividend income been tax-exempt in the first place, but also their dividend policies are stickier in response to the change in external policies due to the political constraints.

We construct the following regression equation to test our first hypothesis:

$$\begin{aligned}\ln\left(\text{DivPayments}\right)_{i,t} = \alpha &+ \beta_1 \text{Post}_{it} + \beta_2 \text{Treat}_{it} + \beta_3 \text{Post}_{it} * \text{Treat}_{it} + \beta_4 \text{Growth}_{it} \\ &+ \beta_5 \text{CashHoldings}_{it} + \beta_6 \text{Profit}_{it} + \beta_7 \text{Mcap}_{it} + \beta_8 \text{Size}_{it} + \beta_9 \text{Lev}_{it} \\ &+ \beta_{10} \text{Year Dummy}_{it} + \beta_{11} \text{Industry Dummy}_{it} + \varepsilon_{it}\end{aligned} \tag{M1}$$

We use the logarithmic value of dividend payments as the dependent variable, consistent with Edgerton (2013). It is of great importance to choose the appropriate dependent variable to test the corporate dividend after the tax reform in the face of a crisis. In this regard, the choice of dividend payout ratio or dividend yield during the crisis caused by the COVID-19 pandemic may fail to capture the sole effect of the dividend tax reform on corporate dividend behavior due to fluctuating profitability or stock market volatility. For example, the use of dividend yield may not be an ideal tool of valuation because the historically low level of dividend yield can be an indication of stock market overvaluation (Grullon and Michaely, 2002), and vice versa.

Our variables of interest include *Post*, *Treat*, and the interaction term between them (*Post*Treat*). *Post* is a dummy variable that takes value 1 for quarters after the tax reform (Q2-2021 to Q1-2023) and 0 otherwise. *Treat* is also a dummy variable that refers to the treatment group, which takes a value of 1 if firms are owned by private entities and 0 if firms are owned by the government. We then interact between the two variables (*Post*Treat*) to test the effect of the dividend tax reform on corporate dividend behavior.

We use a set of control variables in this paper. First, we use growth opportunities (*Growth*) to proxy for firms' capacity to expand their businesses, measured as the difference between fixed assets in year *t* minus the prior year's fixed assets plus the prior year's depreciation, scaled by the prior year's fixed assets. Second, we use cash holdings (*CashHoldings*) to proxy for the availability of internal sources to fund operations and investments, measured as cash and short-term investments scaled by total assets. Third, we use profitability (*Profit*) to proxy for firms' capacity to distribute their earnings to shareholders, measured as operating income scaled by total assets.

Fourth, we use market capitalization (*Mcap*) because firms with high market value tend to pay higher dividends to maintain their share price in the market, measured as market capitalization scaled by total book value. Fifth, we account for firm size (*Size*) because larger firms tend to pay more dividends, measured as the logarithmic value of total assets. Lastly, we account for leverage (*Lev*) because creditors may influence firms' dividend decisions, measured as total debt scaled by total assets. For more details, seeAppendix B.

Lowering the tax penalty on dividends in order to encourage more efficient allocation of capital in the market leads to a decrease in state income. Hence, the primary focus when examining the effect of dividend tax reform on corporate dividend decisions lies in the analysis of dividends in nominal terms (He *et al*., 2012). However, using dividend payments as the dependent variable gives rise to the fragility of the estimate of the tax response as it is likely that the rise in dividends is concentrated among large dividend payers (Chetty and Saez, 2005). Therefore, we also examine whether firms pay dividends more frequently following the dividend tax reform. It is essential to test the change in dividend frequencies because more frequent dividend payments will deluge the market with abundant capital to provide more liquidity. In addition, using the dividend frequency as a measure also allows us to account for the initiation and omission of dividends following the dividend tax reform. Therefore, we can obtain convincing results that the rise in dividends is not driven by a few large payers.

We construct the following regression equation to test our third hypothesis:

$$\begin{aligned}\text{DivFrequency}_{\text{i,t}} = {} & \alpha + \beta_1\text{Post}_{\text{it}} + \beta_2\text{Treat}_{\text{it}} + \beta_3\text{Post} * \text{Treat}_{\text{it}} + \beta_4\text{Growth}_{\text{it}} \\ & + \beta_5\text{CashHoldings}_{\text{it}} + \beta_6\text{Profit}_{\text{it}} + \beta_7\text{Mcap}_{\text{it}} + \beta_8\text{Size}_{\text{it}} + \beta_9\text{Lev}_{\text{it}} \\ & + \beta_{10}\text{Year Dummy}_{\text{it}} + \beta_{11}\text{Industry Dummy}_{\text{it}} + \varepsilon_{\text{it}}\end{aligned} \tag{M2}$$

We use the logistic regression for equation (M2) since the dependent variable is a binary outcome that takes the value 1 if a firm pays dividends in a given quarter within the observation period and 0 otherwise. This study expects the interaction term (*Post*Treat*) to be positive and statistically significant at α value of 0.05. In short, we expect that the dividend tax reform not only induces firms to pay more dividends, but also encourages them to pay dividends more frequently.

5. Results

5.1 Descriptive statistics

We present the descriptive statistics of key variables used in our paper as shown in Table 1. It is worth noting that firms on average paid dividends 0.215 times over the observation period, indicating that firms in general paid dividends annually. When a large number of firms pay dividends annually, there will be excess zero value in most of the quarters during the observation period. Therefore, we need to exclude zero value from dividend payments to see the actual mean value of dividends, which later gives us only 852 observations. Using such an approach, we obtain the average logarithmic value of dividend payments of 25.270. After being retransformed to their original value, we find that firms paid dividends of IDR94.323 billion on average during the observation period.

The average value of *Treat* is 0.92, meaning that 92% of our sample firms fall into the treatment group. Firms in our observation generate growth opportunities by 4.2% on average, demonstrating a moderate rise in firms' assets over the years. Firms in our observation hold cash and marketable securities in their balance sheets for an average of 13.3% of total assets. Firms in our observation generate profit for an average of 2.1% of total assets. Firms have market capitalization of an average of 218% of their book value, suggesting that firms are priced more than their net assets. Firms in the sample have an average total asset (size) of 29.24 or IDR 5.01 trillion after being retransformed to its original value. Lastly, firms in the sample have leverage for an average of 27.2% of total equity, showing that firms overall finance their businesses using equity relative to debt.

5.2 Discussion

We conduct a univariate analysis as reported in Table 2. We find that firms in the control group decreased their dividend payments after the dividend tax reform compared to the period preceding the tax reform. The decrease is statistically significant at a 5% level. The decrease in dividends can be ascribed to financial challenges where the government as the majority shareholder may prioritize averting bankruptcy above addressing the minority shareholders' requests for increased dividends. We argue that dividend policy in government-owned firms is stickier due to their political constraints, which makes it less likely for minority shareholders to demand higher dividends amid the crisis (Ben-Nasr, 2015).

Consistent with our expectation, firms in the treatment group increased their dividend payments following the dividend tax reform relative to those in the control group, which is statistically significant at a 1% level in all model specifications. These results remain the same when control variables are taken into account. In sum, we find that privately-owned firms

Table 1. Descriptive statistics

Variables	Obs	Mean	Std. Dev	Median	Min	Max
ln(DivPayment)	852	25.270	2.011	25.231	17.773	30.443
DivFrequency	4,000	0.215	0.418	0	0	2
Post	4,000	0.5	0.500	0.5	0	1
Treat	4,000	0.92	0.271	1	0	1
Growth	4,000	0.042	0.788	0.010	−0.986	35.622
CashHoldings	4,000	0.133	0.130	0.092	0.000	1.062
Profit	4,000	0.021	0.049	0.014	−0.908	0.605
Mcap	4,000	2.189	4.840	1.146	−102.859	81.211
Size	4,000	29.244	1.554	29.177	24.055	33.701
Lev	4,000	0.272	1.023	0.213	0	29.821

Source(s): Authors' own work

Table 2. Univariate analysis between firms in the control and treatment groups following the dividend tax reform

	Before	After	Difference
ln(DivPayment)			
Control	6.046	3.594	2.451** (1.132)
Treatment	5.171	5.691	−0.520* (0.343)
Difference	0.874 (0.845)	−2.096*** (0.866)	2.971*** (0.811)
DiD Estimate with Covariates			2.938*** (0.816)
DivFrequency			
Control	0.231	0.137	0.093** (0.043)
Treatment	0.207	0.229	−0.021* (0.013)
Difference	0.023 (0.033)	−0.091*** (0.035)	0.115*** (0.032)
DiD Estimate with Covariates			0.114*** (0.032)

Note(s): Table 2 presents the univariate analysis of the effect of the dividend tax reform on corporate dividend behavior. The dependent variables are the logarithmic value of dividend payments and the binary outcome which takes a value of 1 if firms pay dividends in a given quarter and 0 otherwise. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively
Source(s): Authors' own work

increased their dividend payments following the dividend tax reform in comparison to government-owned firms due to the tax advantage provided to the latter in the first place.

In this paper, we attempt to test whether the rise in dividends following the 2020 Job Creation Act is attributable to the tax policy that exempts dividends from taxation, especially those received by individual shareholders (if certain conditions are satisfied) and corporate shareholders.

As reported in Table 3, we find that firms increase their dividend payments following the dividend tax reform. The variable of interest in our paper is the interaction term *Post* × *Treat*. The coefficient of *Post* × *Treat* is 2.784, which is positive and statistically significant at a 1% level. Therefore, the results are consistent with H1 that firms increase their dividend payments following the dividend tax reform.

Past studies such as Baker and Powell (2012) and Tinungki *et al*. (2022) conclude that firm-specific factors such as the pattern of past dividends, stability of earnings, and the current level of current and expected earnings appear to be first-order determinants that shape dividend policy in Indonesia. However, our findings demonstrate that firms raise their dividend payments following the dividend tax reform, despite facing financial difficulties caused by the pandemic crisis. Therefore, instead of firm-specific factors, we support the notion that the dividend tax policy is the first-order determinant that shapes corporate dividend decisions (Alstadsster *et al*., 2017; Chetty and Saez, 2010).

Ownership structure also plays a vital role in Indonesia's dividend decisions. For example, Mulyani *et al*. (2016) found that, compared to non-family firms, family firms tend to maintain a lower level of dividend payments. At more extreme, Moin *et al*. (2020) found that firms with a high level of family, foreign, state, and institutional ownership tend to pay lower dividends. Mulyani *et al*. (2016) and Moin *et al*. (2020) attributed their findings to the expropriation hypothesis where the majority shareholders expropriate firms' wealth and divert it to their private benefit at the expense of minority shareholders. In contrast, our findings show that firms keep raising their dividends in response to the dividend tax policy, though their majority shareholders have no marginal incentive to receive higher dividends due to the tax-exempt treatment imposed on their dividend income before the tax reform. Hence, the dividend tax policy can be set in place as a mechanism that protects minority shareholders from expropriation by the majority shareholders, which commonly applies in countries with poorly functioning corporate governance and highly concentrated ownership structures like Indonesia (Moin *et al*., 2020).

We predicate these findings on three notions. First, we attribute our findings to the notion that minority shareholders can use their bargaining power and collectively exert their influence

Table 3. Regression results

	(M1)	(M2)
Post	−2.244*** (0.787)	0.230 (0.881)
Treat	−0.238 (0.528)	−0.084 (0.151)
Post × Treat	2.784*** (0.795)	0.900*** (0.273)
Growth	−0.237*** (0.049)	−0.146 (0.143)
Cashholdings	2.024* (1.299)	−0.299 (0.417)
Profit	20.140*** (5.067)	4.738*** (1.344)
Mcap	0.092** (0.041)	0.018*** (0.007)
Size	0.492*** (0.126)	0.143*** (0.037)
Lev	0.028 (0.108)	−1.453*** (0.356)
Constant	−14.815*** (3.950)	−8.909*** (1.236)
Observations	4,000	4,000
Control Variables	Yes	Yes
Industry Dummies	Yes	Yes
Time Dummies	Yes	Yes
R^2	0.187	
Adjusted R^2	0.179	
Pseudo R^2		0.203

Note(s): Table 3 presents the regression results of the effect of the dividend tax reform on corporate dividend behavior. The sample consists of 4,000 observations between Q1-2019 and Q1-2023. The dependent variables are the logarithmic value of dividend payments and the binary outcome which takes a value of 1 if firms pay dividends in a given quarter and 0 otherwise. In equation (M1), we use the OLS regression with the logarithmic value of the dependent variable. In equation (M2), we use the logistic regression due to the binary outcome in our dependent variable. *Post* is a dummy variable that takes the value 1 for the period after the implementation of the dividend tax reform (Q2-2021 to Q1-2023) and 0 for the period before the tax reform (Q1-2019 to Q4-2020). Following Blouin *et al.* (2004), we exclude the period of Q1-2021 from our observation because, during that period, the dividend tax reform was implemented. *Treat* is a dummy variable that takes the value 1 if the sample falls into the treatment group and 0 otherwise. The robust standard errors clustered at the firm level are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively
Source(s): Authors' own work

on firms' dividend decisions (Li *et al.*, 2017; Yu *et al.*, 2021). Second, our findings demonstrate that dividend policy can be viewed as a positive signal to investors that improved firms' share prices amid the pandemic crisis (Tinungki *et al.*, 2022). We support these two notions since majority shareholders possessing above 25% ownership lack marginal incentives to raise their dividends due to their tax-exempt treatment in the first place [3]. In other words, higher dividends after the tax reform do not result from majority shareholders' appetite for higher dividends. Lastly, our findings support the idea that dividend policy in government-owned firms is stickier due to their political constraints, which makes it difficult for minority shareholders to demand higher dividends amid the crisis (Ben-Nasr, 2015). In sum, the rise in dividends after the tax reform is mainly driven by privately-owned firms.

Furthermore, we test H2 that firms pay dividends more frequently following the dividend tax reform. In Table 3, we use logistic regression with the binary outcome as the dependent variable which takes the value of 1 if firms pay dividends in a given quarter and 0 otherwise. Using this approach enables us to see whether firms are more likely to initiate or increase dividends compared to omitting or decreasing dividends following the tax reform. The coefficient of *Post* × *Treat* is 0.900, which is positive and statistically significant at a 1% level. We confirm that our results are not driven by a few large payers and there is a larger number of firms that are initiating or increasing dividends compared to those that are omitting or decreasing dividends. Therefore, the results are consistent with our H2. Based on the results, we find that the dividend tax reform not only induces firms to raise dividend payments, but also encourages them to pay dividends more frequently.

6. Robustness tests

6.1 Alternative proxies for dividend payouts

Prior studies that examine the effect of the dividend tax reform on corporate dividend behavior mostly use metrics such as dividend-to-asset ratio, dividend yield, and dividend payout ratio as their dependent variables. While we have explained the rationale behind our decisions to select dividends in nominal terms as the dependent variable, it is still necessary to confirm the results using alternative dependent variables that are frequently used in the extant literature on a similar topic.

We report the results in Table 4. First, consistent with Jacob and Michaely (2017), we use the dividend-to-asset ratio as our first alternative dependent variable, measured as cash dividends scaled by total assets in the previous fiscal year. The coefficient of *Post* × *Treat* is 0.001, which is positive and statistically significant at a 5% level. Second, consistent with Chetty and Saez (2010) and Li *et al*. (2017), we choose dividend yield as our second alternative dependent variable, measured as cash dividends scaled by market capitalization in the previous fiscal year. The coefficient of *Post* × *Treat* is 0.002, which is positive and statistically significant at a 1% level.

Lastly, consistent with Yu *et al*. (2021), we use the dividend payout ratio, measured as dividends scaled by net income in the previous fiscal year, as our third dependent variable. The coefficient of *Post* × *Treat* is 0.105, which is positive and statistically significant at a 1% level. These results confirm that the effects of the dividend tax reform on corporate dividend behavior remain the same even when we use different dependent variables.

Table 4. Regression results for alternative dependent variables

	Divtoassets	Dyield	DivtoNI
Post	0.000 (0.001)	−0.002** (0.001)	−0.096*** (0.040)
Treat	−0.000 (0.001)	0.000 (0.001)	−0.014 (0.037)
Post × Treat	0.001** (0.001)	0.002** (0.001)	0.105*** (0.041)
Growth	−0.000*** (0.000)	−0.000 (0.000)	−0.004 (0.006)
Cashholdings	0.018*** (0.007)	0.009*** (0.003)	0.292** (0.160)
Profit	0.132*** (0.031)	0.051*** (0.014)	−0.081 (0.327)
Mcap	0.001*** (0.000)	−0.000** (0.000)	0.002 (0.002)
Size	−0.000 (0.000)	0.000 (0.000)	0.011 (0.014)
Lev	0.001*** (0.000)	0.000 (0.000)	−0.013 (0.011)
Constant	−0.004 (0.010)	−0.011 (0.009)	−0.343 (0.436)
Observations	4,000	4,000	4,000
Control Variables	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes
R^2	0.181	0.083	0.018
Adjusted R^2	0.175	0.076	0.010

Note(s): Table 4 presents the robustness analysis of the effect of the dividend tax reform on corporate dividend behavior. The sample consists of 4,000 observations between Q1-2019 and Q1-2023. In this analysis, we use three alternative dependent variables: dividend-to-asset ratio (*Divtoasset*), measured as cash dividends scaled by prior-year total assets, dividend yield (*Dyield*), measured as cash dividends scaled by prior-year market capitalization, and dividend payout ratio (*DivtoNI*), measured as cash dividends scaled by prior-year net income. In this analysis, we use the OLS regression since our alternative dependent variables are not in the logarithmic forms. *Post* is a dummy variable that takes the value 1 for the period after the implementation of the dividend tax reform (Q2-2021 to Q1-2023) and 0 for the period before the tax reform (Q1-2019 to Q4-2020). Following Blouin *et al*. (2004), we exclude the period of Q1-2021 from our observation because, in that period, the dividend tax reform was implemented. *Treat* is a dummy variable that takes the value 1 if the sample falls into the treatment group and 0 otherwise. The robust standard errors clustered at the firm level are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively
Source(s): Authors' own work

6.2 Using the Tobit estimation

The Tobit estimation has been frequently used in corporate finance research, especially concerning dividend issues (Athari, 2021; Komrattanapanya and Suntraruk, 2014; Nizar Al-Malkawi, 2007; Singhania and Gupta, 2012). In our case, firms do not pay dividends every quarter, which leads to excess zero value in the dependent variables in most quarters across our observation period. While it may not cause major problems to the magnitudes, the zero values can affect the probability value, thus leading to Type I error. Put simply, our results may indicate that firms strongly respond to the dividend tax reform, while the fact shows otherwise; i.e. there is no significant response.

To address such issues, we also use the Tobit estimation to make our inferences robust. Under this model, we exclude (censor) the zero-value data in the dependent variables from the observations (Amore and Murtinu, 2021). We apply the Tobit estimation to equation (M1). As reported in Table 5, our results show that the coefficient of *Post* × *Treat* is positive and statistically significant at a 1% level.

7. Conclusion

In this paper, we investigate the effects of the dividend tax reform provided by the 2020 Job Creation Act in Indonesia on corporate dividend behavior. It is crucial to test such effects because prior studies, mostly focusing on the 2003 JGTRRA in the US, have come to conflicting conclusions as to whether the rise in dividends following a dividend tax reform is indeed tax-motivated. In addition, as one of the emerging markets, Indonesia provides a unique opportunity to examine the extent to which the dividend tax reform shapes corporate dividend

Table 5. The results of the Tobit estimation

	Tobit	Marginal effects
Post	−1.409 (10.493)	
Treat	0.207 (2.468)	
Post × Treat	14.907*** (4.331)	3.427*** (0.987)
Growth	−2.686 (3.663)	−0.617 (0.841)
Cashholdings	−5.012 (6.540)	−1.152 (1.504)
Profit	79.883*** (19.826)	18.364*** (4.593)
Mcap	0.288*** (0.096)	0.066*** (0.022)
Size	2.844*** (0.586)	0.653*** (0.137)
Lev	−24.715*** (5.676)	−5.681*** (1.317)
Constant	−153.337*** (17.930)	
Observations	852	852
Control Variables	Yes	Yes
Industry Dummies	Yes	Yes
Time Dummies	Yes	Yes
Pseudo R^2	0.081	

Note(s): Table 5 presents the robustness analysis of the effect of the dividend tax reform on corporate dividend behavior. The sample consists of 4,000 observations between Q1-2019 and Q1-2023. The dependent variables are the logarithmic value of dividend payments and the binary outcome which takes a value of 1 if firms pay dividends in a given quarter and 0 otherwise. In this analysis, we use the Tobit estimation to address the potential issue arising from the excess zero values of the dependent variable in equation (M1), consistent with Amore and Murtinu (2021). *Post* is a dummy variable that takes the value 1 for the period after the implementation of the dividend tax reform (Q2-2021 to Q1-2023) and 0 for the period before the tax reform (Q1-2019 to Q4-2020). Following Blouin *et al*. (2004), we exclude the period of Q1-2021 from our observation because, in that period, the dividend tax reform was implemented. *Treat* is a dummy variable that takes the value 1 if the sample falls into the treatment group and 0 otherwise. The robust standard errors clustered at the firm level are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively
Source(s): Authors' own work

decisions in an environment where corporate governance is poorly enforced and shareholder structure is highly concentrated. Furthermore, the dividend tax reform in Indonesia is expected to be applied permanently, unlike the temporary implementation that occurred in the US. This might potentially result in a more pronounced response across firms.

Our findings demonstrate that firms increase their dividends following the dividend tax reform. We argue that the increase should be attributed to tax considerations for three reasons. First, the dividend tax reform was implemented amid the economic crisis caused by the COVID-19 outbreak. Hence, there is no justification for attributing the increase to improved corporate profitability, as has been argued by numerous scholars on this subject. Second, in the absence of dividend tax reform, firms tend to pay lower dividends in countries with weak investor protection and highly concentrated ownership in pursuit of private benefits, which results from short-term maximizing behavior (Boonlert-U-Thai and Sen, 2019). However, when the dividend tax reform comes into play, firms raise their dividend payments, suggesting that either firms give a positive signal to investors or minority shareholders use their bargaining power and collectively demand higher dividends. Third, we find that firms pay dividends more frequently after the tax reform, suggesting that there is a higher number of firms that are initiating or increasing dividend payments compared to those that are omitting or decreasing dividends.

Therefore, we argue that rather than firm-specific factors such as the pattern of past dividends and stability of earnings, the dividend tax policy can in a large part be the first-order determinant that influences firms' dividend decisions in Indonesia. Our findings also demonstrate that dividend tax policy can serve as a mechanism that protects minority shareholders from expropriation by the majority shareholders, which commonly applies to firms with higher concentrations in a weak legal system like Indonesia. As a result, the increase in dividends post-tax reform is driven by tax considerations; without the reform, companies may lower their payouts to mitigate financial challenges stemming from the pandemic crisis.

Future research could explore the agency issues that have been extensively discussed in the literature regarding this topic. We presume that the response across firms varies given that some types of shareholders have already been exempt from dividend taxation prior to the implementation of the dividend tax reform. Scholars could also examine the long-term effects of the dividend tax reform on corporate investment behavior, testing whether the rise in dividends leads to better capital allocation in the market. Finally, future research could further investigate the extent to which corporate governance influences corporate dividend decisions in a crisis. Extant literature has documented that firms with well-functioning governance are likely to reduce their dividends amid the crisis. Nevertheless, this is in stark contrast to our findings that firms increased their dividends during the economic crisis caused by the COVID-19 outbreak. As a result, a further investigation into the role of corporate governance on firms' dividend decisions when the dividend tax reform comes into play is still required.

Notes

1. In the second quarter of 2021, publicly listed companies in Indonesia distributed total dividends amounting to IDR212.69 trillion, an increase from IDR107.25 trillion in the second quarter of 2020. In Q2-2021, 148 firms distributed dividends, compared to only 98 firms in Q2-2020.
2. We take into account the level of state ownership as firms with a high degree of state ownership are politically constrained, which makes it less likely for minority shareholders to demand higher dividends from them. Building on these assumptions, we classify privately owned firms into the treatment group and government-owned firms into the control group.
3. This is pertaining to the Income Tax Law Article 4 (3) where dividend income is exempt from taxation for corporate shareholders, including government- and privately-owned firms, who hold at least 25% of the share ownership in the dividend-paying firms. Dividends are less likely to rise in firms whose majority shareholders hold more than 25% share ownership since their dividend income from such firms have been tax exempt even before the tax reform.

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Appendix A

Table A1. Sample selection

Descriptions	No. of obs
Listing firms in the IDX as of March 31, 2023	13,648
Less. Firms without dividend payments during the observation period	(7,840)
Less. Firms in the financial industry	(800)
Less. firms that are listed in the IDX during the observation period	(1,008)
Final sample for the analysis	4,000

Source(s): Authors' own work

Appendix B

Table B1. Definitions of the variables

Variable	Definition
ln (DivNominal)	The logarithmic value of dividend payments
DivFrequency	A dummy variable that takes value 1 if a firm pays dividends in a given quarter within the observation period and 0 otherwise
Divtoassets	Cash dividends scaled by prior-year total assets
Dyield	Cash dividends scaled by prior-year market capitalization
DivtoNI	Cash dividends scaled by prior-year net income
Post	A dummy variable that takes value 1 for quarters after the tax reform (Q2-2021 to Q1-2023) and 0 for those before the tax reform (Q1-2019 to Q4-2020)
Treat	A dummy variable that refers to the treatment group, which takes value of 1 if firms are owned by private entities and 0 if firms are owned by the government (also known as state-owned enterprises)
Growth	The difference between fixed assets in year *t* minus the prior year's fixed assets plus the prior year's depreciation, scaled by the prior year's fixed assets
Cashholdings	Cash and short-term investments scaled by total assets
Profit	Operating income scaled by total assets
Mcap	Market capitalization scaled by total book value
Size	The logarithmic value of total assets
Lev	Total debt scaled by total assets

Source(s): Authors' own work

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