Open Access | Original Research
Innovation Economics Frontiers, 27(1), 2024 | PP: 38– 55
https://doi.org/10.36923/economa.v27i1.242

Does Peer Matters? How Peer Influence Firm Payout Policies: Evidence from Pakistan

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Abstract: Payout decisions are receiving more interest from an investor's point of view. The purpose of this study is to investigate the effect of peer payout policies on a firm payout policy in Pakistan. This study employs an instrumental variable technique to overcome the endogeneity issue, which is based on peers' idiosyncratic equity shocks. The peers' payout policies have a causal link with a firm payout policy. The effect of peer pressure on firm payout is more evident in companies that compete in a more competitive market and have a good information environment. The firms that are similar in size or resource, especially young and small firms, are more responsive to their industry peers. This study provides channels for managers or policymakers to become more optimistic about formulating the payout policy to attract investors' attention and to compete more fiercely in the market.

Keywords: Peer effect, Dividend payout, idiosyncratic return, Mimicking/Imitation, Market Competition, Firm size, Information environment, financial constraints

Article History:

Received: 15-01-2024
Accepted: 26-03-2024
Publication: 04-04-2024

Cite this article as:

Saleem, S., Asif, A., Usman, M., Khokar, M. H. (2024). Does Peer Matters? How Peer Influence Firm Payout Policies: Evidence from Pakistan. *Innovation Economics Frontiers*, 27(1), 38-55. https://doi.org/10.36923/economa.v27i1.242

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1. Introduction

The financial policies of a firm are made up of three types of interconnected decisions: investment, funding, and payout (Lopez et al., 2012). Payout is one of the company's most important decisions, and the cash dividend is for centuries the primary method of payout. The payout determination has been considered a significant issue for the company because it directly affects the key business indicators; including the company's financial structure, potential growth, and the market price. Depending on the perceived value of this, one of the most important management decisions in finance is analyzed in terms of the payout strategy (Khan and Shamim, 2017; Nadeem, Bashir and Usman, 2018). Whether the company's manager makes the decision; to offer the payout (dividend), raise the payout, and the payout cut in the corporate finance world (Hellstrom & Inagambaev, 2012).

Peer influence refers to the condition in which a company performs a particular behaviour in reaction to its peer group (Anwar and Akhtar, 2018). Peer effect has very important role in designing and determining the financial policies of a firm; for example, Porter (1979) underlined the fact that peer firms have a significant impact on company decisions. Dividend-paying companies are more appealing to investors who prefer to invest in them than nondividend-paying companies (Goldstein et al., 2015). The primary intention behind the dividend is to make the value of the stock simpler by keeping it competitive with bonds. Some businesses offer a dividend even if they do have not enough capital but borrow to pay dividends. As human nature is to follow the path made by others and advance their business through imitation, it is common among individuals to mimic the behaviour in financial decisions. A study analyzes wide research about imitation, which introduces two different concepts on how and why companies mimic one another (Lieberman & Asaba, 2006).

In Pakistan, almost 50% of the 531 listed companies do not give dividend payments to their shareholders. The main reason why directors save money is to support the expansion of current facilities or the start of new initiatives (Dawn, 2019). Information asymmetry prevails in Pakistan's economy, where investors do not have complete information (Khan and Shamim, 2017). In that case, if companies do not give dividend payouts, it will create uncertainty in investors' minds and they will exit the market because the dividend is the only thing that gives certainty about the good performance of firms (Khan et al., 2019). Therefore, it is important to recognize the effect of peer firms on firm dividend payouts and to shed light on how this effect is driven by imitation theories that would benefit firm payouts or under what conditions the peer effect is greater on firm payouts in Pakistan.

Numerous studies have underscored the importance of peer influence in corporate policymaking. For example, Anwar and Akhtar (2018) show the impact of peer invest-

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-ment policies on the investment decisions of corporate firms. By presenting empirical evidence from Pakistan, this research helps to expand the existing collection of information related to the impact of peer companies and the literature on corporate finance. The findings of this study provide valuable information to potential shareholders because if they want to invest in highly competitive industries or in an uncertain environment, they should consider their peers' firms to make better investment decisions. This study provides channels for managers or policymakers to become more optimistic about formulating the payout policy to attract investors' attention and to compete more fiercely in the market. The peer effect assessment of the sum of payout (dividend) is particularly important for practitioners or academics because they consider the dividend payouts as a key metric for comparative valuation (Graham & Kumar, 2006). Furthermore, to facilitate more studies, this study serves as a framework for understanding the fundamental mechanism of mimicking behaviour.

The rest of the study is formulated this way. The literature review of the study is based on Section 2. Section 3 discusses the methodological approach and describes the instruments' construction, relevance, and validity. Section 4 describes the most significant empirical measures such as IV regression. The analysis is concluded in Section 5.

2. Review of the literature

2.1. Peer Influence

The peer effect was described by Patnam (2011) as "a broad variety of externalities that happen whenever the behavior of companies is affected by their chosen reference group company actions or characteristics". The economic factors that compel companies to act as their peer companies may be classified into three mutually exclusive concepts (Manski, 1993). Firstly, if the company wants to announce a dividend in the answer, its peers announce a dividend that is 'endogens'. Second, if a business has sufficient income to announce a payout of its own but announces an "exogenous effect" in reaction to favorable indications from peers' payout announcements. And last form is "correlated effect" in which companies are likely to behave similarly also on premise of same particular traits as well as the same school environment, for example, firms in a specific sector are similarly acting as a result in common shocks (Manski, 1993; Grennan, 2019).

Peer effects are relatively new in financial decisions, but they are getting more popular because of the wide range of intentions, which seem to start driving these impacts. The study of Lieberman and Asaba (2006) presents two schools of thought on mimicking of peer firms and suggests that the results are magnified by such two ways of mimicry (imitation), even if they might contain different consequences. A) When firms follow others who are thought to have more information, it is based on information theory. B) When firms mimic each other in order to preserve competitive parity or reduce rivalry, it is based on rivalry theory.

The rivalry-based firms follow these three conditions;

i. Compete in the same market (or niche)
ii. Be in the same size or resource group.
iii. Less uncertain information environment

When any of the aforementioned requirements are not fulfilled, imitation might be explained by an information theory, which states that companies mimic their more informed peer. For example, young companies can mimic their old peers when they feel that the latter are more informed about the market for products or investors.

2.2. Payout Policies

Companies pay dividends or buy back stocks to their owners and make these important decisions repeatedly. Payout policy is essential for the sum of money invested as well as the repetitiveness of the decision (Allen and Michaely, 2003). For centuries, cash dividends have been the predominant form of payment. In Pakistan, the logic behind the selection of dividend payout is that most of the company pays dividends in the non-financial sector of PSX.

2.2.1. Dividend

Dividend to shareholders is defined by dividend payout. Dividend policy is concerned with achieving a balance between current payouts and growth prospects. Dividend policies fluctuate due to differences in tax rates, interests, or communication between management and shareholders. The contentious dividend policy has been labelled a "puzzle" in corporate finance (Malkawi et al., 2010). According to Bhattacharya (1979), and John and Williams (1985) signalling models, managers know more about the company's actual worth than that of its investors and utilize dividend payouts to communicate information to the market. As a result, these models imply a positive role for asymmetric information and dividend payout. Therefore, a dividend payout decision is the information signalling effect that firms will consider in formulating their policy.

2.3. Peer Firms' Effect on Firm Payout

A vast amount of literature has emphasized the relevance of peer companies' actions for firm managers making decisions for their firms. For example, Leary and Roberts (2014) provided evidence that US companies evaluate the financial decisions of their peers, especially the levels of capital structure when deciding the degree of leverage of their own firms. Chen and Ma (2017), like a previous, Chinese research, look at the influence of peers on the investment decisions of publicly traded Chinese companies. They observe that a one-standard-deviation increase in

peer companies' investment is followed by a 4% rise in a company's corporate assets. In Pakistan, Amin, Hashmi, and Saeed (2016) studied the effect of peer firms on capital structure and Anwar and Akhtar (2018) studied the peer effect on company financial decisions and concluded that the conduct of peer firms has a greater impact than any company or sector-specific characteristics. Anwar and Akhtar (2018) found that peer firms' information and actions play an important role in their own investment decisions.

Finance studies recognize the importance of peer firms in payments, as well as other policies, but the literature has yet to demonstrate that peer firms have a direct influence on firm payments. The idea of 'valuation as a yardstick' suggests that companies control their dividend payouts to help investors evaluate the cash flow stream by making the company similar to its peer firms. As a result, when such companies compete in the capital market, they have significant incentives to respond to one another's payout policy. Signalling motives, on the other hand, provide a realistic explanation for imitating behaviour. As per signalling theory, dividends are direct signs regarding future income delivered to shareholders on purpose by managers due to information asymmetry (Bhattacharya, 1979; John & Williams, 1985).

This study is concerned with empirically scrutinizing the causal impact of peer influence on payout policies in Pakistan. The study is consistent with Adhikari and Agrawal (2018) in providing a more detailed clarification of the theories described above. So, it is hypothesized that a company's decision on whether to begin paying a dividend and how much to pay is affected by its industry peers.

H1*: The firm's payout policies are affected by the payout policies of its peer firms.*

2.4. Influence of Peer Firms' Payouts on Firm Payout: Role of Product Market Competition

This study uses competition in the product market as a first channel between the influence of peer companies on the payout of company dividends. A rivalry theory suggests that the imitation of firms is considered an important mechanism to alleviate competitive pressure. Thus, a company mimics their peers in decision-making to maintain its competitive role or minimize the assertive behaviour of rivals. Such imitation is more likely when companies face each other with identical resources and market positions (Lieberman & Asaba, 2006). A signalling theory suggests that dividend is considered an important signal for managers to maintain competitive parity with their rivals or to compete more fiercely with their competitors (Pham et al., 2020). Grullon, Larkin, and Michaely (2019) discover evidence that companies in highly competitive marketplaces pay higher dividends.

This study is consistent with the rivalry theory of Lieberman and Asaba (2006) & Leary and Robert (2014) study, as it is hypothesized that a company is more likely to imitate the payouts of its peer firms when the competition in the product market is high. This is because when an industry has a large number of participants or more homogeneous goods, competition becomes more intense as product differentiation becomes more difficult. As a result, there is a growing need for companies to imitate dividend payout to communicate their own quality to the capital market.

H2*: Peer firms' influence on firm pay is more pronounced among companies facing greater competition in the market for products.*

2.5. Influence of Peer Firms' Payouts on Firm Payout: Role of Firm Size

The role of firm size is seen as an essential component in the company's dividend decision. This study uses the size of the firm as a second channel between the influence of peer companies on a firm's dividend payout decision. As per the Lieberman and Asaba (2006) study, rivalry theory predicts that companies would imitate the payouts of peer companies who are comparable to them in age, size or easier in evaluation in order to preserve competitive parity with rivals. The information theory, on the other hand, predicts that companies which are young, small or more difficult to value would follow the payouts of big, old, or easier-to-value companies that have better information regarding the products or capital market.

The finance literature has found a significant and positive influence of firm size on dividend payouts (Gul et al., 2020) and suggests that larger companies are more likely to pay dividend payouts (Franc-Dabrowska and Madra, 2020). However, the literature has found that new companies are more likely to mimic their industry peers' decisions (Rashid and Said, 2021). Consistent with Lieberman and Asaba (2006), this study examines which of these theories is supported by the Pakistan Stock Exchange (PSX) firms. As it is hypothesized that;

H3*: The influence of peer firms on firm payout is more pronounced among companies that are similar in size and age.*

2.6. Influence of Peer Firms' Payouts on Firm Payout: Role of Information Environment

This study uses the information environment as a third channel in the effect of peer firms on firm dividend payout. Pham et al. (2020) found evidence that companies use dividends to signify stronger growth in an uncertain information environment.. In an uncertain environment, strong companies are more inclined than small companies to pay large dividends to signal higher company value. According to the information theory of imitation as proposed by Lieberman and Asaba (2006) and dividend signalling theory, collectively, it is hypothesized that companies operating in a highly uncertain information environment tend to imitate peers. Because companies have incomplete

information on decision making the dividend decision of rival firms is considered an important signal for a firm to make its own payout decision.

H4*: The influence of peer firms on firm payout is more pronounced among companies operating in an uncertain information environment*

2.7. Peer effect on payout policy: Role of Financial constraints

This study uses financial constraints as a fourth channel in the influence of peer firms on a firm payout decision in Pakistan. This study anticipates that the effect of the peer on dividend payouts depends on financial constraints. Dividend-payout constraints imposed by financial difficulties and the difficulty in collecting external money to finance projects should outweigh the desire to mimic peers' payouts. As evidenced by Park, Yang, and Yang (2017), more financially constrained firms show a greater dependence on peers' investment decisions. This is especially true for dividend payouts, which signal the firm's increased commitment to the market. The Jiang, Jiang and Kim 2020 study found that financially constrained companies might decide to proceed with dividend payouts, even though their access to external financial resources is restricted because such a decision sends a positive signal to investors.

The significance of financial restriction in dividend imitation is consistent with the findings of Jagannathan, Stephens, and Weisbach (2000), who discovered that companies give dividend payouts from their permanent cash flows. So, it is hypothesizing that;

H5*: The influence of peer firms on firm payout is more pronounced among companies with varying degrees of financial constraints.*

3. Research Methodology

3.1. Population and Sample Selection

The study population consists of the companies listed on the Pakistan Stock Exchange (PSX). There are 559 companies listed there. The nonfinancial sector is included in the research for empirical analysis. The financial sector is excluded because the financial characteristics and capital structure of these firms differ from those of nonfinancial firms. On the PSX, there are 430 nonfinancial companies listed. Data are obtained from published financial reports retrieved from the official websites of the corresponding firms. A two-step system generalized moment dynamic panel estimator technique is utilized to examine the relationship between the variables. For the developed econometric model, the study used the two-stage least squares (2SLS) method, instrumental probit and tobit regression techniques to analyze the relationship between all the variables.

3.2. Variable Measurement

3.2.1. Dependent Variables

3.2.1.1. Dividend payer

A dummy variable with such a value of 1 as in the financial period concerned, the company pays a dividend payout, or 0.

$$Peer\ Firms\ Dividend\ Payer = Proportion\ of\ Peer\ Companies\ in\ the\ business\ year\ of\ the\ industry\ that\ pay\ dividend$$

3.3.1.2. Dividend Initiation

A dummy variable with a value of 1 unless the company pays a dividend payout in the present period, yet at least the last two years did not pay dividend, or else 0.

$$Peer\ Firms\ Initiation = Proportion\ of\ Peer\ Companies\ in\ the\ Business\ year\ that\ initiate\ Dividend$$

3.3.1.3. Dividend payment method

Effects of peer companies on the decision to pay a company about the amount of dividend. In the study, the primary dividend payout variable has been used to scale the annual cash dividend by total assets.

$$\left(\frac{Dividend}{Total\ Assest}\right)$$

Instead of market capitalization or profits, this analysis normalized the amount of dividend by book assets, followed by Allen and Michaely (2003) & Li and Zhao (2008) to make sure that the findings are not influenced by fluctuations in share prices or negative earnings companies.

3.3. Instrumental Variable

To better understand the effect of peer firm payout decisions on firm payouts, this study adopted the approach of Leary and Roberts (2014) to build the instrumental variable. In a certain business period, the peer companies seem to be like all the other firms. Through the idiosyncratic return (annual returns shock) that was used as an instrumental variable, this study defined the shocks to peer firm payout policies. The research followed Leary and Roberts (2014) but also extended the model with book-to-market, size, market return, and momentum factors to examine the company-specific stock price shock (Fama and French, 1993; Carhart, 1997). Collectively, the

coefficients of these monthly return factors and the industry return were defined as the expected return of a firm. After that, this expected return was subtracted from the actual return of the company. The difference between actual and expected returns is called an idiosyncratic return.

This study measured the annual returns shock for each company by taking 'the geometric mean of a monthly idiosyncratic rate of return'. After this, combining these factors in a given year for all companies in the industry, except company *'i',* the study obtained the average of idiosyncratic rate of return for the peers. To predict the payout policies of the other firms (dividend), this study used these averages for the shocks of peer equity as an instrumental variable.

3.5. Moderators

3.5.1. Product Market Competition

To better understand and calculate the competitive position of firms, this study follows Nickell (1996) & Shivaani and Agarwal (2020) methodology;

$$Competitive\ Position = \sqrt{\frac{Market\ Share_{i,t+2}}{Market\ Share_{i,t}} - 1}$$

Where, a positive value indicates higher competition and a negative value implies a decline in the product market competition of an industry.

3.5.2. Similar Size or Resource

The company size was computed as the natural log of total assets (Harakeh, Lee, and Walker, 2019). The study divided the sample by company size into two groups. Group one was considered as the small, young, or less tangible kind of firms, while the other group was considered as the large, old, or more tangible kind of firms.

3.5.3. Information Environment

This study measured price informativeness through variance of company-specific stock returns, which is based on the Roll (1986) model. The variation of a return of stock may be subdivided into 3 distinct parts: a variation related to market, industry, or company-specific. The first two parts, which were based on market and industry variation, measure the systematic variation. The third one accounts for the price non-synchronicity of company-specific variations. It was calculated by 1-R2, where from the following regression, R2 is the R-square;

$$R_{i,j,t} = \beta_{i,0} + \beta_{i,m} r_{m,t} + \beta_{i,j} r_{j,t} + \epsilon_{i,t}$$

Here, $r_{i,j,t}$ is the return of the company *i* in industry *j* at time *t,* rm,tis the return of the market at time t, or $r_{j,t}$ is the return of industry *j* at time *t*. (Roll, 1988)

$$Infor = \log\left[\frac{(1 - R^2)}{R^2}\right]$$

However, if the company's stock price conveys a greater amount of idiosyncratic information, the variance in company returns is greater.

3.5.4. Financial Constraints

Kaplan and Zingales (1997) index evaluated the level to which the companies were financially limited. Financially limited companies became more equity-dependent and reluctant to collect leverage. The KZ index contains regression coefficients and the 5 accounting ratios. Therefore, to measure the degree of financially constrained firms, the equation was calculated as follows:

$$Z_{it} = -1.002 CF/A_{i(t-1)} - 39.368 Div/A_{i(t-1)} - 1.315 C_{it}/A_{i(t-1)} + 3.139 Lev_{it}$$

Where CF at the beginning of the year is earnings before an extraordinary item and amortization or depletion over gross assets, DIV is the dividend, C is cash and short-term investments, and the leverage ratio is total debt to total equity or debt. Companies with high Z scores are believed to be more financially restricted.

Table 1: Variables Description

Variables	Description	Reference
Sales Growth	Take log of (current sales divided by previous year sales)	(Grullon et al., 2011)
Firm size	Log total assets of firm	(Harakeh, Lee and Walker, 2019)
Market to book	Market value of asset divided by book value of asset.	(Grullon et al., 2011)
Cash flow risk	Standard deviation of up to previously 3 years of cash flows to asset ratio.	(Adhikari and Agrawal, 2013)
Profitability	Earnings before taxes divide by the assets.	(Grullon et al., 2011)

The averages of all the variables were used as control variables for peer firms.

3.6. Data Estimation Techniques

This study used probit regression, Tobit regression and 2SLS techniques to analyze the relationship between the variables involved. The probit model is a statistical probability model having two categories in the dependent variable (Uzunoz and Akcay, 2012). The binary dependent variable y has two values: zero and one (Aldrich and Nelson, 1984; Uzunoz and Akcay, 2012). This study employed a discrete choice probit model for binary choice (0, 1) to the dividend-paying preference question. A survey by Guneri and Durmus (2020) states that the Tobit model assumes normality as the probit model does but it is a mixture of discrete and continuous decisions; the probit model decides whether the dependent variable is 0 or 1 (discreet decision). The Tobit model decides, If the dependent variable is 1, then, by how much assuming censoring at 0 (Continuous decision). If the influence of peers increases or decreases the probability of a firm paying dividends, then how much will it have an effect on its amount of payouts? The two-stage least squares (2SLS) regression analysis is a statistical approach used in the study of structural equations. It is utilized when the endogenous variables are associated with the random variables and a least squares issue cannot be solved in each equation. To overcome this difficulty, 2SLS gets a set of variables known as proxy variables (Y) that are close to the endogenous variables.

3.7. Model Specification

3.7.1. Peer-Firms Payout Policies Influence a Firm Payout Policy

The study used the following analytical model of Leary and Roberts (2014) to estimate the effect of peer companies' payout policies on an individual firm's payout policy (dividend):

$$\gamma_{ijt} = \propto + \beta\gamma_{-ijt} + \acute{\gamma}X_{-ijt} + \acute{\lambda}X_{ijt} + \acute{\varphi}v_t + \varepsilon_{ijt}$$

Indices *i, j,* or *t* correspond, respectively, to the company, industry, or year. The calculation of the company *i's* payout policy in industry *j* or year *t* is the outcome variable y_{ijt}. The average dividend policy of the variable of the peer firms is denoted by y_{-ijt} (the averages of all the companies in the industry *j* except the company *i* in year *t*). This study presumes that yijt is endogenous that requires the inclusion of instrumental variables. The concept of the influence of peer firms on company payout is theoretically intuitive and grounded. However, due to the 'reflection problems' outlined in the study of Manski (1993), the empirical test of peer firms' influence was a challenge. In particular, a strong association between the payout policy of a company or even its industry peer policies does not really ensure that peer influence occurs since in reaction to the common industrial shock, companies can adopt similar dividend policies at the same time. Adjustments in investing opportunities and taxes, for instance, can cause all companies inside an industry to adjust their dividend payout policies at the same time.

To solve such an identifying challenge, the 'gold standard' needs to arbitrarily assign peer companies to every candidate company. Unfortunately, with observational evidence in which companies' peers are fixed, this approach is not feasible. The above requires an alternate approach:

I. Identify shocks that influence some peer-related companies and not others.
II. Test how the reactions of influenced companies to the above shocks alter the actions of peer companies that are untouched by all of these shocks. The heart of analytical methodology lies in this approach.

An optimal solution would be to compile events that are related only to the policies of *i's* peer companies but are arbitrary as regards the company's own policy *i.* In order to calculate a company, say company *i, it* is influenced by its peer firms' payout policies. Even so, most of these events are not easily observed but more specifically, it is very hard to determine that such events did not directly impact the company *i.* Fortunately, it is easy to observe changes in the share price of companies that impound information on these events. These changes may be subdivided into systemic components and company-specific shock by using an assets price model including the Fama and French (1993) & Carhart (1997) factor model. That is why the average equity shocks and risks of the peer firms were used in the analysis as instrument variables to predict the dividend payout policies of the peer companies.

Instead of a lagged measure, the study used a contemporaneous y_{-ijt} measure following Leary and Roberts, since peer influence is likely to be very well described when there is inadequate lag time to affect a certain variable. The X_{-ijt} and X_{ijt} vectors, as control variables, include averages of the peer companies and the characteristic of the company, respectively; v_t indicates the effect of fixed years and ε_{ijt} is the company-specific error term that is considered associated with heteroskedasticity within the company. As per the study of Petersen (2009), therefore, all the regression requirements have strong standardized errors of heteroskedasticity clustered within companies. This study, however, revealed the effect of the peer firms on payout policies in two ways: first the influence of the peer firms on the dividend payout propensity, and second, the influence of the peer firms on the sum of payouts as follows;

3.7.2. Peer Influence on Dividend Paying Propensity

The effect of peer company payout policies on dividend payout propensity. The dependent variable is the proportion of peer companies that pay dividend payouts (peer dividend payer), the dividend payer is a dummy variable that takes the value of 1 unless the company pay the dividend payout in the fiscal year given or else 0. Dividend initiation is also a dummy variable that takes the value of 1 unless the company gives a dividend payout in the present year and does not give a dividend payout for at least the last two years, or else 0. A variety of company

characteristics described in the literature as essential predictors of dividend payouts were included in the control variables. The averages of all other control variables of the firms were used as control variables of the other firms.

These equations were calculated as follows:

$$Peer\ Dividend\ Payer = \beta_0 + \beta_1 Idiosyncratic\ return + \gamma Peer\ Firms\ control\ variables + \lambda Firm\ sppecific\ control\ variables \ldots..1.1$$

$$Dividend\ Payer\ Firms = \beta_0 + \beta_1 Peer\ Dividend\ Payer + \gamma Peer\ Firms\ control\ variables + \lambda Firm\ sppecific\ control\ variables \ldots.1.2$$

$$Dividend\ Intiiation = \beta_0 + \beta_1 Peer\ Dividend\ Payer + \gamma Peer\ Firms\ control\ variables + \lambda Firm\ sppecific\ control\ variables \ldots..1.3$$

3.7.3. Peer Influence on Amount of Dividend Payout

The total dividend paid in a year scaled by the total asset (dividend/asset) was also used as a dependent variable. These equations were calculated as the amount of payment:

$$Peer\ Dividend\ Payer = \beta_0 + \beta_1 Idiosyncratic\ return_{t-1} + \gamma Peer\ Firms\ control\ variables + \lambda Firm\ sppecific\ control\ variables \ldots.1.4$$

$$Firms\ Dividend\ Payout = \beta_0 + \beta_1 Peer\ Dividend\ Payouts + \gamma Peer\ Firms\ control\ variables + \lambda Firm\ sppecific\ control\ variables \ldots..1.5$$

3.7.4. Construction of Instruments

The study followed Leary and Roberts (2014) to examine the company-specific stock price shock, but with size and book to market (Fama and French, 1993) and momentum factor (Carhart, 1997), the model was extended as follows.

$$R_{ijt} = a_{ijt} + \beta M_{ijt} * MKT_t + \beta SMB_{ijt} * SMB_t + \beta HML_{ijt} * HML_t + \beta MOM_{ijt} * MOM_t + \beta IND_{ijt}\left(\bar{R}_{-ijt} - RF_t\right) + \eta_{ijt} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.2$$

where R_{ijt} corresponds to the accumulated stock return for the month *t* in industry *j* for company *i.* The excessive market return is MKTt, the size is SMB_t, the book-to-market is HMLt, the momentum is MOM_t, and the excessive market return on a portfolio of an equal-weighted industry is (R_{-ijt}-RF_t) with the exception of the company return *i*. This analysis incorporates the industry return as the fifth factor in the model in order to eliminate some common variances in the stock return throughout the industry.

To estimate the Eq. (2), for every company using historical monthly returns on a rolling annual basis. The study requires at least 24 months of historical data, or an estimation of up to 60 months of data can be used. The analysis first measured Eq. (2) as an example, to acquire, from July 2005 to June 2007 with monthly returns, the expected or idiosyncratic returns for OGDCL in 2007. The estimated coefficients from Eq. (2) were then used and the monthly return factor was defined in the analysis as expected returns from July 2007 to June 2008. After that, this expected return was subtracted from the actual return. This actual and expected return difference is called idiosyncratic return given in Equation 3 as follows:

$$Idiosyncratic\ Return_{ijt} = \hat{\eta}_{ijt} = R_{ijt} - \hat{R}_{ijt} \ldots\ldots\ldots\ldots\ldots.3$$

Obtaining the 'geometric mean of the idiosyncratic return of the month' for each company *i*, the analysis measured annualized return shocks. The return shock $\hat{\eta}_{ijt}$ derived from the above model is the return of the company after removing all identified causes of systemic variance. (That is, market exposure, size factor, momentum factor, and book-to-market factor). Furthermore, the factor models of Fama and French (1993) & Carhart (1997) illustrate the cross-section of stock market return, for any company *i*, the residuals derived from this model must be solely company-specific or uncorrelated to that of every other company. The model goes even further or extends the four-factor model of the excessive returns of the industry average R_{-ijt}-Rf_t to eliminate any residual link between companies in the industry.

Finally, by averaging these variables for all companies in the industry, except company *i* in a given year, the study obtained the average idiosyncratic return for the firms of peer company *i.* As an instrumental variable, the study used the averages of equity shocks for peer companies.

3.7.5. The Relevance and Validity of Instruments for Peer Firms Payout Policies

The outcome of the study was highly dependent on the standard of an instrumental variable, the average of the idiosyncratic return of the peer companies.

This instrument has to follow 2 requirements in order to be valid:

a) It must be intimately correlated with endogenous regressors that were the dividend payout policies of peer companies in this analysis, is the relevance criteria.
b) The instruments do not possess direct influence on the dependent variables that was the dividend payout policy of a specific company in this study, is the exclusion restriction.

3.7.6. Why Does the Instrument Predict the Dividend Payout Decision of Peer Firms?

The instrument is the strong predictor of future profitability of the peer firms, as well as risk of cash flow risk; these two were the most significant determinants of dividend payout. For instance, a study found that the probability to give a dividend payout rise with the profitability of company (Fama and French, 2001). Cash flow volatility, on the other hand, negatively predicts dividend payout decisions (Minton and Schrand, 1999), since cash flow volatility makes the exterior funding expensive. In order to check the relevancy of instrument, the following regression models were run as:

$$Peer\ Profitability + 1 = \beta_0 + \beta_1 Peer\ Idiosyncratic\ return + \beta_2 Peer\ Sales\ growth + \beta_3 Peer\ Profitability + \beta_4 Peer\ Markwt\ to\ Book + \beta_5 Peer\ Size + \beta_6 Sales\ Growth \dots\dots\dots 4$$

$$Peer\ Profitability + 2 = \beta_0 + \beta_1 Peer\ Idiosyncratic\ return + \beta_2 Peer\ Sales\ growth + \beta_3 Peer\ Profitability + \beta_4 Peer\ Markwt\ to\ Book + \beta_5 Peer\ Size + \beta_6 Sales\ Growth \dots\dots\dots 5$$

$$Cashflow\ Volatility + 1 = \beta_0 + \beta_1 Peer\ Idiosyncratic\ return + \beta_2 Peer\ Sales\ growth + \beta_3 Peer\ Profitability + \beta_4 Peer\ Markwt\ to\ Book + \beta_5 Peer\ Size + \beta_6 Sales\ Growth \dots\dots\dots 6$$

$$Cashflow\ Volatility + 2 = \beta_0 + \beta_1 Peer\ Idiosyncratic\ return + \beta_2 Peer\ Sales\ growth + \beta_3 Peer\ Profitability + \beta_4 Peer\ Markwt\ to\ Book + \beta_5 Peer\ Size + \beta_6 Sales\ Growth \dots\dots\dots 7$$

Leary and Roberts (2014) provide a strong justification for exclusion restrictions. The idiosyncratic aspect of stock return was acquired through the models of Fama and French 1993; Carhart, 2017 considered as residuals for the study. The shocks were serially uncorrelated or cross-uncorrelated, indicated that the shock of companies does not anticipate future shocks for themselves or for peer companies. In addition, instruments pass overidentification tests (for example, Hausman's test) that further reinforce the validity of the instruments that have been identified.

3.8. Why do Firms follow their Peer?

As discussed in the literature, there were four reasons why the firm follows the peer firms; product market competition, belonging to similar size or resource, uncertain information environment and financial constraints. Equation 1.5 was run to find the effect of why the firms follow peer firms.

4. Results

4.1. Descriptive statistic

Table I presents a summary of descriptive statistics. The positive average value of firm idiosyncratic return (1.2%) shows the highest return in the listed nonfinancial firms of PSX (Amin, Hashmi, and Saeed, 2016). On average, the amount of dividend a firm pays to its shareholders represents approximately 2% of its assets (Tahir and Mushtaq, 2016). The average value of the cash flow risk of peers is 16% which shows that the cash flows of Pakistani firms have higher volatility (Azmat and Iqbal, 2017). The average value of the profitability of a company is 8%, indicating that on average companies listed in Pakistan are profitable. The average value of a firm size is 7.6023 (standard error is 4.8113), which is almost equivalent to its peers' size is 7.2263 (standard deviation is 1.3581).

The mean value of the firm market-to-book ratio is 0.0886, indicating that the firm on PSX is a high-growth firm (Anwar and Akhtar, 2018). The mean value of the company's sales growth is 0.4039, which indicates that firm sales on Pakistan's stock exchange are increasing at an average rate of 24% per year (Tahir and Mushtaq, 2016). On the other hand, the mean value of peer sales growth is 0.5781 and the variation from its mean is 2.6032. The average value of the sales growth rate of the firm peers is 15% in the PSX (Khan and Shamim, 2017).

Information risk or uncertainty has a mean value of 1.3735 and its standard deviation is 0.8692. The average value of the firm's market model explains the 13% variation in the firm's PSX stock returns. This low average R squared indicates that the predictability power of the market model is low and that it is possible that the company-specific variables can contribute more (or increase) in idiosyncratic returns (Fraz and Hassan, 2017).

The mean value of financial constraints is -0.1959 with a standard deviation of 2.5587 indicating that PSX firms have the lowest need for external financing or are less financially constrained (Giessen, 2017). The mean value of competitive position (market share) is 0.8095 and its standardized value is 2.4621. This average value (80%) indicates the higher competition in the listed nonfinancial firms of the Pakistan stock exchange (Chang and Singh, 2000). On average, expected returns are 0.0520 with a standard error of 0.4481. Capital gains in Pakistani

stocks are obvious, as is the positive average value of the expected return (5%). Investing in the stock market is advantageous to investors (Haque and Sarwar, 2013; Amin, Hashmi, and Saeed, 2016).

Table 2: Descriptive Statistics

Variables	Mean	Standard Deviation	Minimum	Maximum
Peer Idiosyncratic Return	0.1992	1.5570	-0.2008	1.3363
Peer Payout	0.6426	2.3666	-0.7566	0.4163
Peer Cash Flow Risk	0.1692	0.3245	-0.0022	0.3629
Peer Sales Growth	0.5781	2.6032	-0.6134	0.4340
Peer Profitability	0.4035	2.4514	-0.6046	0.7805
Peer Firm Size	7.2263	4.8113	-0.0608	0.2954
Peer B/M Ratio	0.9396	5.1248	-0.9711	0.4981
Sales Growth	0.4039	4.1747	-1.2231	0.5197
Profitability	0.0816	0.5745	-0.6966	0.8486
B/M Ratio	0.0886	4.1827	-1.9703	0.1787
Information Risk	0.8735	0.8692	0.5913	0.9999
Financial Constraints	-0.1959	2.5587	-1.571	0.9047
Firm Size	7.6023	1.3581	4.5843	9.7671
Competition	0.8095	2.4621	-1	0.7381
Expected Return	0.0520	0.4481	-0.6587	0.3984
Dividend Payout	0.0263	0.1627	-0.4588	0.2729
Idiosyncratic Return	0.0128	0.1806	-0.9001	0.7507

Source: Calculated by the author

4.2. Correlation matrix

The correlation among the variables is reported in **Table 3** which shows that the problem of multicollinearity does not exist because the explanatory variables are independent in nature.

4.3. The Relevance of Instrument for the Peers' Dividend

This study offers an analysis that shows how the instrument is connected to the variables that are key dividend determinants. Table III shows the findings of firm-fixed effect regressions of peer firms' average future profitability and cash flow volatility on the idiosyncratic return of peer firms' average (Peers' idiosyncratic equity shocks). After adjusting for a variety of additional factors influencing future profitability, including current profitability in column 1, peers' idiosyncratic return (β=0.1666, p>5%) positively predicts future profitability (Peers' Profitability t + 1) in a highly significant manner. Column 2 shows the instrumental variable (=0.0708, p>10%) that also predicts the profitability of the peer firms up to two years in the future (peer profitability t + 2). Profitability is seen as an essential element in dividend payouts, and companies that are profitable are recommended to pay dividends since it increases shareholder trust in the company (Azmi and Bertuah, 2020).

The dependent variable in column 3 is the future cash flow volatility of peer firms (Peers' cash flows risk, t + 1) and as expected the idiosyncratic return of the peer (Peers' idiosyncratic equity shocks) predicts the future cash flow volatility (β=-0.0106, p>1%) significantly negative. The results in column 4 present the instrumental variable (β=-0.0504, p>5%) that also predicts the future volatility of the peers' cash flows up to two years in the future (peer cash flow risk, t + 2). because cash flow unpredictability makes external financing expensive Furthermore, the penalty for having to lower dividends due to cash flow uncertainty is substantial. The findings show that the idiosyncratic equity shocks of the peer firms contain information on the market estimate of the future profitability of the peer firms and the cash flow risk that are key determinants of dividends. The study provides a compelling case for the use of the variable as an instrument for determining the dividend policies of peers.

4.4. Peer Influence on Payouts: Propensity to Pay Dividend

Table IV shows the findings of regression analyzes that examine whether a company's decision to begin and pay dividends is affected by the payout decisions of its peers.

In column 1 of Table IV, the findings of the first stage of the probit model, the dependent variable is the peer dividend payers, and the instrument is lagged peer idiosyncratic returns (lagged peer idiosyncratic equity shock, β=0.3706, p>5%). The results show, as predicted, that the former (latter) variable predicts peer dividend payouts considerably positive, yet after controlling for a variety of other significant dividend determinants. The column 2, explains the findings of first stage (peer dividend payers) on the second stage of probit model that predicts the decision of company-specific dividend payouts. The coefficient of instrumented peer dividend payers (0.0242, p>5%) is significantly positive in explaining the probability that a company pays dividends. According to the estimates, a company with its entire dividend-paying peer firms has greater likelihood to give dividend payouts than a company with no dividend-paying peer.

Table 3: Correlation Matrix

Table II: Correlation Matrix																
	Peer payout	Peer cash flows	Peer sales growth	Peer profitability	Peer size	Peer Book/Market	Sales growth	Profitability	Book to market	Information	Financial const	Size	Competition	Exp Return	Peer Return	Dividend Payout	Idiosyncratic return
Peer payout	1.0000																
Peer cash flows	-0.0672	1.0000															
Peer sales growth	-0.0326	0.0079	1.0000														
Peer profitability	0.3233	0.0430	0.1420	1.0000													
Peer size	-0.1993	0.0748	-0.0575	0.0081	1.0000												
Peer Book/Market	-0.0249	-0.0222	-0.0062	-0.0070	-0.0420	1.0000											
Sales growth	0.0592	0.1843	0.0310	0.0055	0.0186	-0.0059	1.0000										
Profitability	0.0262	-0.0287	0.0526	0.0307	-0.0170	0.0165	0.0150	1.0000									
Book to market	-0.0725	0.0012	-0.0392	-0.0550	0.2825	-0.0238	-0.0152	-0.0306	1.0000								
Information	-0.0439	0.0923	-0.0362	-0.0621	0.1529	0.0064	-0.0048	-0.1374	0.2134	1.0000							
Financial const	-0.1500	0.0775	-0.1025	-0.1627	0.1506	-0.0379	-0.0230	-0.2480	0.0611	0.2216	1.0000						
Size	-0.1340	-0.0055	-0.0459	-0.0234	0.4136	0.0010	-0.0287	-0.0048	0.4009	0.0740	0.0987	1.0000					
Competition	0.0950	-0.0099	0.0243	0.0532	-0.1128	-0.0188	-0.0514	0.0146	-0.0953	-0.1287	-0.0852	-0.0719	1.0000				
Exp Return	0.0114	0.0108	-0.0056	-0.0161	-0.0461	-0.0043	0.0044	-0.0070	0.0166	0.0404	0.0216	0.0097	-0.0098	1.0000			
Peer Return	-0.0134	0.0516	-0.0297	-0.0094	0.1245	-0.0613	-0.0391	0.0043	0.0115	0.0760	0.0333	0.0475	-0.0451	-0.0009	1.0000		
Dividend Payout	0.1384	-0.0735	0.1001	0.1498	-0.1228	0.0364	0.0126	0.2237	-0.0420	-0.2261	-0.0902	-0.0715	0.0989	-0.0114	-0.0487	1.0000	
Idiosyncratic return	-0.0143	-0.0041	-0.0043	0.0057	0.0141	-0.0004	0.0018	0.0120	-0.0092	-0.0158	0.0087	-0.0156	-0.0049	-0.8024	-0.0095	-0.0222	1.0000

Source: Calculated by the author

Table 4: The Relevancy of Instruments for The Peers' Dividend

Variables	Peers Profitability(t+1)	Peers Profitability(t+2)	Peers Cash Flow Risk(t+1)	Peers Cash Flow Risk(t+2)
Constant	0.2899*	0.3947**	0.0222	-0.1207
	(0.1574)	(0.1606)	(0.0138)	(0.3005)
Peer Idiosyncratic	0.1666**	0.0708*	-0.0106***	-0.0504**
Return	(0.0802)	(0.0813)	(0.0016)	(0.0333)
Peer Firm Size	-0.0014**	0.0004*	0.0062***	0.0405***
	(0.0143)	(0.0153)	(0.0018)	(0.0391)
Peer B/M Ratio	-0.0131*	0.0166*	-0.0004***	0.0100*
	(0.0123)	(0.0121)	(0.0003)	(0.0053)
Peer Profitability	0.1842***	0.2398***	0.0044***	0.0058**
	(0.0286)	(0.0281)	(0.0006)	(0.0120)
Peer Sales Growth	0.1349***	0.1586***	-0.0014**	0.0024**
	(0.0275)	(0.0269)	(0.0006)	(0.0119)
Sales Growth	-0.0532***	-0.0788***	0.0005***	-0.0204
	(0.0639)	(0.0624)	(0.0014)	(0.0302)

Source: Calculated by the author

In column 1 of Table 5, the findings of the first stage of the probit model, the dependent variable is the peer dividend payers, and the instrument is lagged peer idiosyncratic returns (lagged peer idiosyncratic equity shock, β=0.3706, p>5%). The results show, as predicted, that the former (latter) variable predicts peer dividend payouts considerably positively, yet after controlling for a variety of other significant dividend determinants. Column 2, explains the findings of the first stage (peer dividend payers) on the second stage of the probit model that predicts the decision of company-specific dividend payouts. The coefficient of instrumented peer dividend payers (0.0242, p>5%) is significantly positive in explaining the probability that a company pays dividends. According to the estimates, a company with its entire dividend-paying peer firms has a greater likelihood to give dividend payouts than a company with no dividend-paying peer.

Furthermore, the instruments are individually and collectively significant at the 5% level. As a result, the instrument is useful in describing the proportion of peers who give cash dividends every year. The findings lead us to the conclusion that a company's peer dividend policies impact its own dividend-paying decision. The sticky dividend payouts raise the issue if these outcomes are merely a result of persisting payouts, or if either peer firms truly impact the dynamics of a company's dividend payouts. To solve this problem, the study then investigates the impact of a company's decision to begin dividend payouts (Dividend Initiation) on its peers' dividend payout decisions. This study is based on a sample of companies that did not pay dividends in previous years.

Column 3 displays the coefficient of the second stage probit model (lagged peer idiosyncratic return, β=0.0311, p>5%) which is significantly positive in forecasting the company-specific decision of dividend initiation. The finding indicates that companies are more likely to initiate dividend payouts when more of their peers in the industry give dividend payouts. The analysis shows that a company with all dividend-paying industry peers has a greater likelihood to begin dividend payouts than that of no dividend-paying peers. Overall, the results of this analysis are compatible with the findings of Adhikari and Agrawal (2018), which suggest that a company's decision to give dividend payout is significantly influenced by the corresponding policies of its peers.

Table 5: Peer Influence on Payouts (Propensity to Pay Dividend)

Variables	Peer dividend payers (1st stage Probit)	Dividend payer (2nd stage Probit)	Dividend initiation (2nd stage Probit: Full sample)
Constant	7.7166***	0.1727*	0 .0014*
	(2.7352)	(0.1937)	(0.5442)
Peer Firm Averages			
Peer firm size	-0.4772**	0.0085*	-0.0958*
	(0.2118)	(0.0090)	(0.0729)
Peer B/M ratio	-0.0245*	0.0019**	-0.1169**
	(0.0291)	(0.0053)	(0.0410)
Peer profitability	0.0508*	0.0158*	0.0147*
	(0.1296)	(0.0113)	(0.0259)
Peer sales growth	0.2326**	0.0334***	-0.0018**
	(0.9775)	(0.0121)	(0.0198)
Firm-Specific Factors			
Firm size	-0.1405*	0.0185**	-0.0853*
	(0.2035)	(0.0234)	(0.0491)
B/M ratio	-0.0501**	-0.0620***	0.0274*
	(0.0647)	(0.0133)	(0.0242)
Profitability	-0.1008**	0.0807***	-0.0230**

	(0.1976)	(0.0498)	(0.0961)
Sales growth	-0.0961**	0.0095**	-0.0133**
	(0.1965)	(0.0271)	(0.0636)
Idiosyncratic return	0.2138*	0.5358*	0.4053**
	(0.5195)	(0.3936)	(0.8556)
Instrumental Variable			
Peer lagged idiosyncratic	0.3706**	0.0242**	0.0311**
return	(0.5871)	(0.0316)	(0.0606)

Note: Column 1 shows the first stage estimates for peer dividend payers as the Lagged Peer Idiosyncratic Equity Shock. Column 2 shows the estimate of the second stage for firm dividend payers as the Lagged Idiosyncratic Equity Shock. Column 3 shows the second stage full sample estimates on dividend initiation.

4.5. Peer Influence on the Amount of Firm Payouts

This study investigates the significant causal influence of peers on a company's decision to begin dividend payouts. Now, the study analyzes the influence of peers on firm decisions on the amount of dividend. This study used two techniques (instrumental regression and 2SLS) to analyze payout methods. The primary dividend payout variable is calculated by dividing the annual cash dividend by the total asset.

Table 6 displays the regression findings for dividend payouts. The summary analysis contains the whole sample of dividend payers and nonpayers. As previously, the analysis utilizes an instrumental variable approach to determine that peers' payout policies have a causal influence on company policies. The instrumental variable for peer dividends/assets is lagged peer idiosyncratic equity shock, as shown in Table V. Column 1 displays the estimations with the first stage of an instrumental variable model for peers' dividend payouts. As expected, the coefficients of the lagged idiosyncratic equity shock (β=0.0352, p>5%) and the lagged idiosyncratic equity shock (β=0.1038, p>1%) are positive and statistically significant in predicting peer dividend payouts and firm dividend payout.

Consistent with Anwar and Akhtar (2018) & Adhikari and Agrawal (2018), the findings of this study revealed a significant impact of peer firms' payout decisions on firm payout. Column 2 presents the estimations from the second stage of an instrumental variable model for the firm's dividend payout. The coefficient of lagged peer control idiosyncratic equity shock (β=0.0306, p>5%) is also positively significant in explaining a company's dividend payout. The result conveys that the peer firms' dividend payouts have a positive causal link with company-specific dividend payouts. The analysis also indicates that firms mimic the payouts of their peers in the form of dividends.

Table 6: Peer Effect on Amount of Payouts

Variables	Peer Dividend Payout Ratio (Peer Div/Assets) (1st Stage)	Dividend Payout Ratio (Div/Assets) (2nd Stage)
Constant	2.1812***	0.0701**
	(0.4756)	(0.0305)
Peer Firm Size	0.0056*	-0.0013*
	(0.0202)	(0.0012)
Peer B/M Ratio	-0.0147*	0.0009*
	(0.0135)	(0.0008)
Peer Profitability	0.2183***	0.0025*
	(0.0234)	(0.0015)
Peer Sales Growth	-0.0271**	0.00002*
	(0.0220)	(0.0014)
Firm Size	-0.2113***	0.0053*
	(0.0594)	(0.0039)
B/M Ratio	0.0024*	-0.0006*
	(0.0518)	(0.0038)
Profitability	0.1346*	0.0410***
	(0.3010)	(0.0188)
Sales Growth	0.0735**	-0.0006*
	(0.0631)	(0.0039)
Lagged Idiosyncratic Return	0.1038***	0.0018***
	(0.2882)	(0.0179)
Peer Lagged Idiosyncratic Return	0.0352**	0.0306**
	(0.0824)	(0.0048)

Note: Columns 1 show the estimate of lagged peer idiosyncratic equity shock on peer payout ratio. Column 2 shows the estimate of lagged peer idiosyncratic equity shocks on individual firm payout ratios.

4.6. Peer Influence on the Amount of Firm Payouts (2SLS)

Firstly, the study estimates the amount of payouts through an instrumental regression model. Now, for robustness, the study uses the two-stage least squares (2SLS) method to analyze an instrumental variable model. Table 7 shows the second stage of 2SLS regression for the payout variable. The findings obtained by instrumental regression are qualitatively similar to those obtained from the entire dataset. The positive coefficient of the instrumental variable (lagged peer idiosyncratic equity shock (β=0.0105, p>5%) conveys that the instrument is a strong predictor of the peer pay variable. The instrumented peers' payout variable (β=0.0768, p>5%) is also positive and significant in explaining the influence of peers' payout decisions on the payout of a company's dividend.

Furthermore, the analysis utilizes 2SLS, which allows for an overidentification test; the Hausman test is not significant in the model. As a result, the instrument seems to fulfil the exclusion constraint and appears to be valid for dividend analysis. Overall, this research is consistent with Adhikari and Agrawal's (2018) work, which strongly shows that the payouts of peer companies have a causal link with firm payouts. Hypothesis H1 is accepted. The findings clearly imply that a company's decision on how much to pay in dividend payout is highly impacted by the actions of its industry peers.

Table 7: Amount of Payouts (2SLS)

Variables	Dividend Payout Ratio
Constant	0.2553*
	(0.8974)
Instrumented Peer Payout	0.0768**
	(0 .3858)
Peer Firm Size	0.0021*
	(0.0052)
Peer B/M Ratio	0.0002
	(0.0051)
Peer Profitability	0.0196**
	(0.0866)
Peer Sales Growth	-0.0030**
	(0.0129)
Firm Size	-0.0228*
	(0.0851)
B/M Ratio	-0.0005**
	(0.0065)
Profitability	-0.0020**
	(0.0280)
Sales Growth	0.0060**
	(0.0303)
Idiosyncratic Return	0.0959**
	(0.5041)
Lagged Idiosyncratic Return	0.0105**
	(0.0493)

Note: A dividend payout ratio column shows the estimates of instrumented peer payouts on individual firm payout ratios.

4.7. Peer Influence on Firm Payouts: Role of Product Market Competition

Table 8 presents the results of how the competitive position of firms influences the sensitivity of the relationship between the effect of peers and the payout of the firm's dividend. The estimated coefficient of the peer dividend payout ratio is more positive and statistically significant (β=1.0711, p<10%) in highly competitive firms. The result supports the imitation rivalry theory and indicates that the effect of peer on firm payout decisions is greater among companies that compete more fiercely in the market (Adhikari and Agrawal, 2018). A study by Iqbal et al. (2020) also supports the findings that intense competition forces companies to disgorge cash and increases the company's likelihood of giving more dividend payouts.

Table 8: Product Market Competition

Variables	High	Low
Constant	-1.6113*	-0.0297*
	(0.6389)	(0.9312)
Peer Dividend Payout Ratio	1.0711*	0.0484***
	(2.5106)	(0.3465)
Peer Firm Size	0.0050*	-0.0004*
	(0.1359)	(0.0030)
Peer B/M Ratio	0.0202*	0.0034*
	(0.4854)	(0.0082)

Peer Profitability	-0.1397*	-0.0241*
	(3.5232)	(0.1733)
Peer Sales Growth	0.0354*	0.0078*
	(0.8727)	(0.0086)
Firm Size	0.1242***	0.0031*
	(3.1331)	(0.1016)
B/M Ratio	0.0760***	-0.0028*
	(1.9015)	(0.0405)
Profitability	-0.4260**	0.0372**
	(1.4406)	(0.0481)
Sales Growth	-0.1767*	0.0009*
	(4.3082)	(0.0168)
Idiosyncratic Return	2.2665*	0.3639**
	(4.4386)	(0.7338)

Note: The table presents the estimations from the 2nd stage least square (2sls) of Div/Assets regarding product market competition.

4.8. Peer Influence on Firm Payouts: Role of Firm Size

Table 9 presents the results on the extent to which firm size influences peer influence on firm payout decisions. The estimated coefficient of the peer dividend payout ratio is significantly positive in both big (β=0.0098, P>1%) and small (0.1723, P>5%) firms but the magnitude of this impact appears to be greater among small companies. The results indicate that the effect of peers on firm payouts is greater among smaller firms, implying that mimicking the dividend payout decision was significant primarily for younger and smaller firms (Rashid and Said, 2021). However, it is not surprising that most dividend payers are big firms because the big firms appear to be more pressured to mimic major positive adjustments in dividends (Adhikari, 2013).

Table 9: Firm Size

Variables	Big	Small
Constant	-0.5111*	0.1588*
	(8.7469)	(0.0842)
Peer Dividend Payout Ratio	0.0098***	0.1723**
	(3.8179)	(0.0384)
Peer Firm Size	-0.0010*	0.0024**
	(0.0476)	(0.0016)
Peer B/M Ratio	0.0041*	0.0006*
	(0.0647)	(0.0006)
Peer Profitability	-0.0265*	0.0008*
	(0.6054)	(0.0154)
Peer Sales Growth	0.0026*	-0.0013**
	(0.0677)	(0.0027)
Firm Size	0.0577**	-0.0146*
	(0.7870)	(0.0079)
B/M Ratio	-0.0038*	0.0009*
	(0.4674)	(0.0021)
Profitability	0.0139*	0.0471***
	(0.2849)	(0.0091)
Sales Growth	0.0005*	0.0003*
	(0.0102)	(0.0023)
Idiosyncratic Return	0.5925**	0.0037*
	(0.5323)	(0.0733)

Note: This table displays the estimations from the second stage least square (2sls) of Div/Assets on firm size.

4.9. Peer Influence on Firm Payouts: Role of Information Environment

Table 10 presents the results regarding the extent to which the information environment influences the influence of the peer on the firm's payout decision. The coefficients of peer dividend payout (β=0.1557, p>1%) are significantly positive in both high and low information uncertainty, but the magnitude of this ratio seems to be higher in the case of a more uncertain information environment. The effect of peers on firm dividend payout is greater in an uncertain information environment. The result supports the signalling theory's prediction that imitation should be more common among companies where the advantage of signalling should be greater owing to higher asymmetric information (Pham et al., 2020).

Table 10: Information Uncertainty

Variables	Low	High
Constant	0.0486*	-0.3232**
	(0.1177)	(2.9892)
Peer Dividend Payout	0.0002*	0.1557***
	(0.0576)	(1.2641)
Peer Firm Size	0.0006*	0.0023**
	(0.0009)	(0.0222)
Peer B/M Ratio	0.0004*	0.0025*
	(0.0008)	(0.0138)
Peer Profitability	0.0020*	0.0080**
	(0.0152)	(0.0334)
Peer Sales Growth	-0.0009**	-0.0022***
	(0.0026)	(0.0085)
Firm Size	-0.0024***	0.0374**
	(0.0091)	(0.3417)
B/M Ratio	-0.0026***	-0.0067**
	(0.0079)	(0.0797)
Profitability	0.0730***	0.0131***
	(0.0167)	(0.1055)
Sales Growth	-0.0008**	-0.0507***
	(0.0025)	(0.4022)
Idiosyncratic Return	0.0187*	0.2057*
	(0.0475)	(1.3710)

Note: This table presents the estimations from the second stage least square (2sls) of Div/Assets on information risk

4.10. Peer Influence on Firm Payouts: Role of Financial Constraints

Table 11 presents the results regarding the extent to which the degree of financial constraints influences the influence of peers on the firm's payout decision. The estimated coefficient of peers' payout (β=0.1564, p>5%) is positive and statistically significant in explaining the imitation of peer pay decisions in both high and low financial constraints. However, the magnitude of this influence is greater in companies with high financial constraints that have better access to credit. The importance of financial constraints in imitating dividend payouts is consistent with the findings of Jagannathan, Stephens, and Weisbach (2000) and Jiang, Jiang, and Kim (2020) which indicate that financially constrained companies might decide to proceed with dividend payouts, even though their access to external financial resources is restricted because such a decision sends a positive signal to the investor.

Table 11: Financial Constraints (Z-Score)

Variables	High	Low
Constant	-0.0442*	-0.4619**
	(0.1119)	(1.9839)
Peer Payouts	0.5128**	0.1564**
	(2.6107)	(0.6535)
Peer Firm Size	0.0011**	0.0014*
	(0.0055)	(0.0089)
Peer B/M Ratio	0.0065**	0.0025***
	(0.0282)	(0.0101)
Peer Profitability	-0.0005*	0.0501**
	(0.0090)	(0.2103)
Peer Sales Growth	0.0012*	0.0116*
	(0.0250)	(0.0195)
Firm Size	-0.0032***	0.0492***
	(0.0278)	(0.1988)
B/M Ratio	0.0056**	-0.0079**
	(0.0266)	(0.0366)
Profitability	-0.0407*	0.0159***
	(0.0747)	(0.0648)
Sales Growth	0.0077**	-0.0217*
	(0.0380)	(0.0795)
Idiosyncratic Return	-0.0105*	0.5804**
	(0.3247)	(1.8252)

Note: This table displays the estimations from the 2nd stage least square of Div/Asset on financial constraints.

5. Conclusions

This study explored the role of peer payout policies in determining a firm's payout policy. The geometric average of idiosyncratic returns is used as an instrumental variable for the study. The effect of peers on dividend payout aligns with the imitation rivalry theory. Therefore, the study findings are consistent with those of Leary and Roberts (2014) and Adhikari and Agrawal (2018). The peer effect is stronger among companies competing in more intensive product markets and operating in a more uncertain information environment. Additionally, companies, particularly young and small ones, tend to follow peers of comparable size. Due to peer influence, financially constrained firms, whether high or low, tend to pay dividends, with this influence being more pronounced in highly financially constrained companies lacking credit access. This study concludes that peers' payout policies have a causal link with company payouts. A company's decision on dividend amounts is also influenced by its peers' decisions in the industry. The practical implication of this study is that management may not have much discretion in developing corporate policy, as suggested by research on management behaviour. Future research may consider other payout or company policies and incorporate additional aspects that may impact the company's policies.

Acknowledgment statement: The authors would like to thank the reviewers for providing comments in helping this manuscript to completion.

Conflicts of interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Author contribution statements: Author 1 contributed to the Conceptualization, Methodology, and Formal Analysis Investigation, Author 4 Writing – Original Draft, Visualization, Project Administration, and Writing – Review and editing. Author 3 contributed to the Methodology, Formal Analysis Investigation, Author 4, Visualization, Project Administration, and Writing – Review and editing.

Funding: There is no funding.

Data availability statement: Data used in this study are available and provided upon request.

Disclaimer: The views and opinions expressed in this article are those of the author(s) and contributor(s) and do not necessarily reflect Innovation Economics Frontiers 's or editors' official policy or position. All liability for harm done to individuals or property as a result of any ideas, methods, instructions, or products mentioned in the content is expressly disclaimed.

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