Taxation and Payout Policy: A Review

Seung Chul Lee

School of Business, Yonsei University

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Abstract

This paper reviews the existing finance and economics literature on payout policy, with an emphasis on their implications for the relationship between payout and taxation. Treating payout phenomenon as an equilibrium, I separate theoretical implications of how taxation affects supply and demand for payout. Some of the major empirical findings are explained using this framework. I also propose a number of research topics that could be of value to advance this view.

1. Introduction

The relationship between corporate payout policy and taxes has been one of the most popular topics in corporate finance literature. It is also, arguably, among the most important. As one of the most obvious imperfections of the market, taxes are known to alter individuals' motives and behavior. Thus, it is of great interest to find out whether taxation could hinder the efficiency and prosperity of the capital markets. On that note, payout made by a firm is effectively the vehicle of giving back to the economic system that allowed it to exist in the first place. Entrepreneurs, armed with the modern notion of corporation and limited liability, are capable of raising funds from complete strangers to start their business. The shareholders come to the market and governments protect it, expecting to share in a firm's success. In this context, it is important to understand how the two recipients (government and shareholders) are correlated and the ensuing equilibrium formed by the three economic agents. With such knowledge, individuals will be better equipped to predict and evaluate the market outcome of government tax policies. That is, if a dividend tax cut is expected to merely decrease government income without any other clear benefits, policymakers should be advised to decide against it.

This paper reviews the existing finance and economics literature on payout policy, with an emphasis on their implications for the relationship between taxation and payout. An abundance of theories has been proposed about the determinants of a firm's payout policy. Understanding payout as an outcome of an equilibrium formed by three entities, I assume taxation imposed by the government has different effects on corporations and their shareholders. Thus, I separately summarize the theoretical implications for each side and attempt to understand each entity's behavior. Empirical findings are viewed as observations of an equilibrium resulting from the constant conflict and reconciliation of the two market forces.

The reason for this approach is to enrich the understanding of this equilibrium. The current theories in the literature have concentrated on either of the market entities and thus only see one part of the picture. Neoclassical models mainly focus on how a firm's payout decisions are affected by taxation. Investor behavior is reflected only as a constraint in an optimization model. On the other hand, behavioral models deal almost exclusively with investors. Hence, to further our understanding, it would be helpful to integrate what we know about the two sides. Good examples would be Chetty and Saez (2010) and Blouin et al. (2011), who attempt to encompass both sides of the story using an agency cost framework and neoclassical equilibrium model, respectively. More research in this fashion, with different assumptions and ideas, seems necessary.

The rest of the paper is organized as follows: Section 2 surveys research about the impact of taxation to the supply side, Section 3 summarizes works dealing with the effect on the demand side, and Section 4 proposes some interesting topics for new research.

2. Taxation and Dividend Supply

Early discussions about dividend policy has been mostly about its supply. The big question was why firms would choose to pay out when there is a tax disadvantage with dividends compared to retaining corporate earnings. Black (1976) points this out as a mystery, giving rise to the famous "dividend puzzle." Miller and Modigliani (1961) illustrate the unimportance of corporate dividend policies in a perfect market and identify taxation as a factor that can systematically affect investors' preference for payout. They posit the formation of tax clienteles, with different demands for dividend payment. In MM's framework, firms, for whatever reason, set a target clientele and attempt to tailor to their interests by maintaining the

level of dividends demanded. The gist of their explanation is that tax-based market segments exist, which leads to firm behavior such as dividend smoothing identified by Lintner (1956). Early models, such as those conjectured by Auerbach (1979), Miller and Scholes (1978) and Poterba and Summers (1985), incorporate such views into neoclassical equilibrium models. These models consider firms as trying to maximize shareholders' utility, in which dividend (and dividend tax rate) is a key part of the owners' utility function. Jensen (1986) notes that such optimization may not always occur, and that payout can be used to reduce management agency costs. Jensen's model gives a justification of the empirical findings that stock prices rise when dividends are paid, despite tax disadvantages (Easterbrook (1984), Jensen (1986)). If taxes on dividend income are not larger than the combined value of the dividends themselves and the reduction in agency cost, investors will prefer firms that have a high payout ratio. Many models embrace the logic of the agency problems and such models continue to gain immense support. (Farre-Mensah et al. (2014)).

More recent literature has focused more on the relationship between dividends and share repurchases. Comparatively, dividends are still at a tax disadvantage and share repurchases are increasingly serving as a distributive medium. (Dittmar (2000), Skinner (2008)) However, dividends seem to persist (Julio and Ikenberry (2004)), which poses a similar question as the original dividend puzzle. In this regard, even the models suggested in the past can still be of some value in answering the following questions. Do dividends possess a unique, irreplaceable function? If so, how does taxation help or hinder firm behavior with respect to such functions? Moreover, what is the optimal taxation scheme that governments can choose? Each model is visited with these questions in mind.

2-1. Neoclassical Perspective (Old View vs. New View)

The neoclassical models are probably the most discussed model about the payout-taxation relation. This perspective is basically parallel to the valuation models set forth by Miller and Modigliani (1958) and Ruback (2002), both embracing the neoclassical concept of two-fund separation (Fisher (1930)). The underlying assumption is that a firm's value can be represented by the sum of equity value (S) and debt value (B), i.e. V = S + B. The first equality in (1) is MM's model and the second equality is that provided by Ruback. FCF is the firm's unlevered free cash flow; r_S and r_B are required return of shareholders and bondholders, respectively; τ_c and τ_d are corporate tax rate and dividend tax rates, respectively. MM's free cash flow model calculates free cash flow using the unlevered value of the firm and applies tax effects to the discounting factor, while Ruback adjusts the cash flows for taxes and discounts using pre-tax weighted average cost of capital (WACC). The two models are basically equivalent since both provide the same valuation given a firm's cash flows. The neoclassical views regarding dividends and taxes are also equivalent in this sense. They both implicitly assume the two-fund separation theorem and MM's (1961) irrelevance theorem, i.e. had there been no taxes, dividend policy is not a matter of importance. However, the two views have very diverging predictions regarding behavioral responses in the real world.

(1) $V = \frac{FCF}{r_S*\frac{S}{V}+r_B*\frac{B}{V}*(1-\tau_c)} = \frac{FCF+\tau_c*r_B*B}{r_S*\frac{S}{V}+r_B*\frac{B}{V}}$

(2) $V = \frac{FCF}{r_S*(1+\tau_d)*\frac{S}{V}+r_B*\frac{B}{V}*(1-\tau_c)}$ (Old view)

(3) $V = \frac{FCF+\tau_c*r_B*B-\tau_d*D}{r_S*\frac{S}{V}+r_B*\frac{B}{V}}$ (New View)

The old or 'traditional' view, denoted by (2), is comparable to the MM's valuation model, in that they regard dividend tax changes as affecting a firm's WACC. As outlined by Poterba and Summers (1985), investors are assumed to favor firms with higher payout ratios and require less return from them in compensation. That is, a firm enjoys lower discount rate by paying more dividends, which will allow more projects to have positive net present value. Moreover, raising capital through new issues will be facilitated because the market will be willing to pay a higher price for the firm's shares. The key argument with the old view is that taxes reduce the after-tax dividend amount, acting as a hurdle for companies wanting to lower their cost of capital. Thus, when taxes on dividends are cut, such impediments are relaxed, and firms will respond by increasing dividends to decrease their WACC. As a result, overall discount rates will be reduced, triggering more investment. Hence, proponents of the old view argue that dividend taxation leads to deadweight costs and reducing it will increase the total surplus of the economy. (Chetty and Saez (2010)). The argument made is quite clear: taxes harm the efficiency of the market and governments should cut the rates down.

As explained, the traditional view of dividend taxation makes very bold predictions about firm behavior with regard to tax changes and asserts that policy changes will have a lasting effect. Whether such predictions are consistent with empirical findings is still debated. Also, this theory implicitly assumes that a company will try to increase payout as much as possible to reach minimum cost of capital. As the firm spends all available cash to do so, it retains nothing and will resort to new equity issues to finance any new projects undertaken. This last implication is perhaps the most distinct feature of the old view and also a major source of disagreement among scholars.

The strongest empirical evidence supporting the old view seems to be from the Jobs and Growth Tax Relief Reconciliation Act (JGTRRA) undertaken by the Bush administration in 2003. The act instituted a drastic cut on dividend tax rates, almost equating the rates to that applied to capital gains. The natural prediction made by the old view is that firms will increase dividends in response to such changes and corporate investment will increase as the cost of capital is lowered. Chetty and Saez (2005) document that there indeed was a 20% increase in dividend payments following the enactment and a surge in dividend initiations. They also find that firms with higher levels of nontaxable, institutional ownership were less likely to alter their payout policies. One shortcoming of their findings is that share repurchases also rose, contrary to the argument that the reform relieved the tax disadvantage of dividends compared to capital gains. Poterba (2004) offers a similar conclusion about JGTRRA, using an empirical model with a 'tax preference parameter.' Such models seem to be an attempt, however limited and simplified, at incorporating the demand side into the picture. Poterba indicates that, to make the evidence more concrete, one would need to observe that future investment, stock prices and dividends continue to show a positive trend. Further corroborating the argument, Hanlon and Hoopes (2014) test for responses when the cut implemented by the Act, nearing its expiration, was expected to be reversed. They document that there were significant increases in special dividends and shifts in regular dividends in late 2010 and 2012. The former year was the original deadline of the JGTRRA, but Congress reached an unexpected agreement to extend the low rates until 2012. As the feasibility of the extension was unclear, firms seem to have timed their dividend payments; special dividends surged in November and December just prior to the expected reversal, in both 2010 and 2012. The authors note that it is quite fascinating to witness firms responding to an expected, but not realized, fiscal policy change.

The new view, or the 'tax capitalization view,' presents drastically different implications. Auerbach (1979), Bradford (1981) and King (1977) argue that a firm's marginal source of investment does not come from issuing new equity. Rather, consistent with Myers and Majluf (1984), they identify a firm's internal cash as the main source of capital in financing new projects. In this perspective, firms first choose the amount of net income to retain and assign the leftover figure as payout. Since the dividend amount is determined in this fashion, any factor that does not change the investment opportunity faced by a firm cannot change the size of payout. Under this view, changes in taxes do not alter a firm's cost of capital and are reflected immediately in the market capitalization. Other than a lump-sum increase in firm value at the onset of tax changes, any other behavioral response should be completely absent. This is because, no matter how much dividends become favorable, it cannot outweigh the benefits of retention. Furthermore, the new view predicts that even firms that are not paying dividends will also see a rise in value since the market expects them to begin dividends at some point in the future.

Before JGTRRA, the data seemed to have supported the new view. For instance, Fama and French (2001) test for the factors driving a firm's payout. They identify 1) profitability, 2) investment opportunities, and 3) firm size as the key predictors, dismissing taxes as insignificant. However, contradictory evidence from JGTRRA engendered the supporters of this view to supply different explanations for the phenomenon. Auerbach and Hassett (2005) try to account for the contradicting evidence from JGTRRA by claiming that the market is populated by relatively young firms adhering to the old view and older, more established firms that behave according to the new view. Although the new view predicts no increase in dividend payments, it is possible for new view firms to allocate more payout when the tax cut is

perceived to be temporary. That is, firms will time their dividends to take advantage of the lower tax rates. The paper executes an event study on the abnormal stock return due to the tax cut, factoring in the probability of President Bush's reelection. The authors assert that this measures the market's expectation of whether the low rates will be continued in the future. They do establish that even the non-paying firms witnessed increase in stock prices, but also admit that their conclusion may be indecisive due to nontrivial heterogeneity. On the other hand, Julio and Ikenberry (2004) claim that the dividend increases were induced by other factors. For instance, many firms could have transitioned into mature, dividend-paying firms, coinciding with the tax cut. Edgerton (2013) finds that real estate investment trusts (REITs) also increase dividend payment around this period. Since REITs were unaffected by the tax rate changes, he argues that there must have been other causes.

As for the model's prediction that corporate investment will remain unchanged, it has more solid support. Chirinko (1993) and Desai and Goolsbee (2004) document that tax rates seems to have little correlation to corporate investment levels. Yagan (2015) tests the economic significance of the above-mentioned JGTRRA by identifying companies that are exempt from dividend taxes ("S-Corporations") as a control group for confounding factors. Using a difference-in-differences method, he illustrates that the treatment group firms (those subject to dividend taxation) and control group firms exhibit no significant disparity in investment behavior. The author mentions that the percentage increase in dividends following the tax reform was evident. However, he contends that the actual dollar amount may be negligible, casting doubt on the usefulness of implementing such policies. Alstadsaeter et al. (2017) also reveal a similar conclusion using the 2006 dividend tax cut in Sweden. The paper finds only a shift in where the firms invest their capital, but no increase in the overall amount of corporate

investment. Using the 2011 tax reform in Switzerland, Isakov et al. (2019) also find similar results.

Some researchers have chosen to directly ask the managers, amassing some supportive remarks. Brav et al. (2008) carry out a survey of the financial executives in 328 firms, asking whether the tax cut played a role in inducing them to increase payout. According to their results, firm profitability seems to have been the main driver, while taxes appear to be of a minor concern. Only the firms that began dividend payment following JGTRRA replied that the tax rate was of 'moderate' significance. Such results could signal some support for the new view, with other factors possibly responsible for the increase in payout shortly after 2003. However, it is plausible that corporate insiders may have incentives or cognitive biases that could have confounded their answers. That is, CFOs may want to signal confidence in their earnings rather than admit taxes were of key consideration. Also, the news of the tax cut could have caused the financial executives to scrutinize and reconsider the company's current payout policy. Thus, such evidence should be treated with some care.

Overall, the largest appeal in the neoclassical models is that they stem from a familiar economic framework. Both the old and the new views, though using different set of assumptions, interpret firm behavior as solving an optimization problem. They provide some valuable intuition into why firms may choose a certain course of actions. However, as noted above, their discussions are confined mostly to the supply side. The payout demanded by the investors seem to play a minor role, as a mere constraint to the optimization problem. Since the demand side seems to display complex dynamics of its own, the models could be augmented by taking investor behavior into consideration.

2-2. Agency Cost Models

Many scholars have applied the agency cost considerations in explaining corporate payout policies. The theory of agency cost arising between the manager and the shareholders has implications for dividend taxes as well. Like the neoclassical models, these studies are also focused on the supply side and deal mostly with decisions made by the manager. However, the very inclusion of agency costs is an attempt at integrating investor demand to some degree. Indeed, the model proposed by Chetty and Saez (2010) explicitly mentions shareholder behavior: the owners choose a level of monitoring at a certain cost. In detail, their main idea is that managers choose between profitable projects and a 'pet project,' trying to maximize their personal utility derived from the two projects. Given a firm's initial capital (X), profitable project's return function $f(\cdot)$ and the pet project's return function $g(\cdot)$, managers choose the level of investment (I) and dividend payment (D), as in (4). On the other hand, shareholders are only able to choose the level of monitoring (γ), which reduces the manager's utility from the pet project but incurs a cost according to a cost function $c(\cdot)$, as in (5). The constant α is the portion of shares given to executives via stock options or other comparable incentive measures; τ_d and τ_c are the dividend tax rate and corporate tax rate, respectively; r is the appropriate discount rate. In this model, managers will prefer investing in the pet project, or whatever the actual source of agency cost may be, if its return outweighs the utility from her stake in the firm. When dividend taxes are decreased, the company's profits become more valuable to the manager and will engage in more investment and payout. Overall, this theory will benefit from further research uncovering more detailed analytical nature of the utility function, $g(\cdot)$. This knowledge will be key in understanding agency problems, providing practical value in constructing managerial contracts.

(4) $V_{manager}(I, D) = \alpha(1 - \tau_d)\left[D + \frac{(1-\tau_c)*f(I)+X-D}{1+r}\right] + \frac{g(X-I-D)}{(1+r)(1+\gamma)}$

(5) $V_{owner}(\gamma) = (1 - \alpha)(1 - \tau_d)\left[D + \frac{(1-\tau_c)*f(I)+X-D}{1+r}\right] - c(\gamma)$

This model is consistent with the empirical findings that firms with more cash and assets responded more to the tax cut, i.e. a larger value of X. (Chetty and Saez (2005)). The relationship with nontaxable institutional ownership also makes sense since such owners can afford more monitoring. Thus, these firms will face less agency issues in the first place, yielding little incentive to change the payout policy in the face of a tax cut. To add on, the authors also claim that taxing dividends leads to larger managerial penchant for pet projects. In turn, this creates a deadweight loss in the economy. They prescribe the use of corporate taxes to replace the current dividend tax income, predicting this will more effectively drive managers to behave efficiently. In fact, Christie and Nanda (1994) seem to confirm such proclaims. In their study of the Undistributed Profits Tax (UPT) enacted in 1936 by the Roosevelt administration, they find that raising corporate taxes engendered an immediate, massive surge in dividend payments. The research also notes that the share prices rose in response to the new policy, possibly demonstrating the market's belief that agency costs will be reduced.

A rather recent study by Jacob and Michaely (2017) proposes a hybrid theory that bridges the agency model with the old view. They study the tax policy changes in Sweden imposed in 2006, which pulled down the dividend tax rate to a level even below the income tax rate. The Swedish data provides detailed information regarding shareholder structure and which tax bracket each of them belongs to. This unique environment facilitates analysis about the effects of taxation while controlling for agency issues and owners' tax concerns. They find that, when agency costs are held constant, dividend taxes have first order impact on firms'

payout behavior. The authors identify two sources that may have interactive effects, “muting effects” in their terminology, on this relationship: 1) the conflict between the manager and the shareholders, and 2) the conflict arising from heterogeneous interests among the shareholders themselves. The paper argues that the second factor accounts for the mitigation in dividend policies for firms with more disperse ownership.

Jacob and Jacob (2013) take a step further and aggregate dividend data of more than 50,000 firms across 25 countries. This approach of studying a wide range of international data, with many different incidences of tax rate changes, helps to dilute confounding elements that may be specific to a nation or to a certain time period. In their comprehensive investigation, the authors discover a significant relationship between corporate payout policy and dividend tax changes. They also test for interactive effects of corporate governance, and find that firms with simpler, concentrated ownership structure tend to be more responsive in altering dividends. Hence, the effects of agency issues on a company’s dividend policy seems to be a global, pervasive phenomenon.

La Porta et al. (2000) make use of the worldwide cross-sectional evidence to study the effects of agency problem. They split the sample into civil law countries and common law countries. Their claim is that, as demonstrated in their previous papers (La Porta et al. (1997, 1998)), nations with common law system tend to have better investor protection and thus subject to less agency costs. Hence, if agency issues have a material effect on dividends, payout policies should differ according to the country’s legal foundation. In their analysis, a variable for tax disadvantage over capital gains is included to account for the possible effects arising from differences in taxation schemes. The results seem to show that taxes have only a marginal effect, with insignificant regression coefficients. The authors conclude that the effects of taxes

are unclear, asserting that the tax disadvantage of dividends is not very large in the first place. However, it could also be an evidence that agency issues are correlated with taxes. In fact, since taxes are a part of the law, there could exist multicollinearity problems with the legal system.

3. Taxation and Dividend Demand

Despite the fact that dividend taxes are burdened by the shareholders, relatively less work has been done about the nature of the demand side. Perhaps this is because investors have diverse, volatile interests and their actions are more difficult to observe or to keep track. Corporate finance, with keener interest in the behavior of firms, often treats investor demand as a constraining constant. Thus, no rigorous economic models or direct empirical tests have been carried out. The existence of dividend clienteles formed according to tax preferences is hinted at by Miller and Modigliani (1961). Research involving signaling effects, such as Miller and Rock (1985) and Bhattacharya (1979), presumes that investors look for signals to overcome information asymmetry surrounding the firm. Thus, these active traders must be keen to gain more insight into the market. In this view, it is possible to view taxes as an impediment to the signal that a firm wants to send out. Theories rooted in the economic tradition of rational agents may be appropriate for corporate or institutional shareholders. However, evidence from behavioral economics suggest that retail investors may adhere to different set of rules. Understanding individuals as imperfect economic agents, scholars in this tradition argue that personal heuristics may account for the preference of dividends regardless of tax disadvantages or the formation of dividend clienteles. It is also likely that such investors are less capable of addressing managers to resolve agency issues and may respond differently to government actions including tax changes.

Many of the models about dividend supply, by necessity, make assumptions about the demand side. However, if such assumptions were not in accordance with real investor behavior, then the model would have little explanatory value. It is, therefore, essential to understand how taxation may motivate the shareholders. In contrast to the previous section, the following discussion relies more on the possible implications made by each theory about dividend demand. I try to draw meaning from various economic theories that may not have been directly formulated with this application in mind. Hence, this portion may seem vague. Before delving into the literature, I would like to specify that I view the market as two large segments: institutional shareholders and individual shareholders. Relevant work is summarized accordingly to answer the following questions. How much do the two segments differ in their demand for dividends? How do shareholders perceive and respond to dividend taxes? When tax rates are changed, how do their incentives change? Given that they do change, how will they respond with their new preferences?

3-1. Dividend Demand under the Neoclassical Perspective

Under the usual economics setting, shareholders will form portfolios maximizing their utility. Miller and Modigliani (1961) predict taxes will play a key role in shaping individual utility function regarding dividends. When an exogenous shock is introduced, such as a tax cut, the existing optimality conditions will no longer hold. Thus, investors will make appropriate adjustments to their holdings. Miller and Rock (1985) add that, if dividends serve a signaling purpose, management may have incentives to deviate toward suboptimal investment plan to foster investor confidence in the company. Considering the tax penalty of dividends, such endeavors entail substantial unnecessary costs due to information asymmetry. If this view is

correct, cutting dividend taxes will resolve some of the inefficiency and lead investors to regard firms more favorably. Agency issues are a key consideration for the demand side as well (Jensen (1986)). If tax cuts can indeed induce managers to increase payout, share prices should rise following the fiscal policy change. However, there does not seem to be a good measure for agency costs and how factors shape investor behavior. Hence, research relies on rather obvious, qualitative differences to capture agency problems, which may not be sufficient to draw concrete conclusions from.

Using an optimal equilibrium setting, Blouin et al. (2011) studies the 2003 tax reform to concurrently measure the effects on managers and shareholders. They hypothesize that, since the cut only pertained to individual shareholders, retail investors should have undergone a re-optimizing process to profit from the tax change. However, this prediction applied only to individuals with insider knowledge, such as corporate managers and officers. This group appears to have taken advantage by increasing their holdings of their own companies. No comparable actions were taken by outside retail investors. The authors point out that corporate governance could be a key variable in predicting actions following tax changes and more research is required to uncover the relationship between the responses of inside and outside investors. A recent study by Kenchington (2019) shows that JGTRRA was responsible for increasing abnormal returns of foreign firms subject to dividend taxation in America via a tax treaty. This result partially demonstrates that the market considers a larger picture, with investor portfolios becoming more diverse and global. It is also plausible that foreign stocks are more sensitive to such tax changes, since being an overseas firm could pose more agency costs to American shareholders. One factor to point out is that the demand side is more closely linked to the general world economy. Individuals, hedge fund managers or any type of investor can

easily hold a foreign stock, making them a stakeholder in an overseas economy. On the other hand, it requires more meticulous work for a firm to enter a foreign market. Thus, it seems reasonable to conjecture that dividend demand is more assimilated across countries and investors will construct their portfolios from a more globalized pool of securities. However, they are still taxed according to their home country's standards, which should entail some systematic preferences by an investor's origin.

3-2. Dividend Clienteles under the Behavioral Perspective

As presented in Thaler and Shefrin (1981), the fundamental idea within the behavioral models is that individuals are not necessarily maximizing their overall utility. Instead, Thaler and Shefrin propose that there are different, conflicting desires within an individual, modeling an agency problem between a rational "planner" and a shortsighted "doer." The myopic doer tries to maximize the current level of consumption, whereas the planner is interested in executing a consumption plan that optimizes lifetime utility. Since the doer is the one actually carrying out the actions at any given period of time, the planner builds certain constraints to prevent excessive spending to conserve resources for future consumption. One of the ways that the planner can place such restrictions is "mental accounting," a concept popularized by behavioral economics literature. Shefrin and Statman (1984) claim that such heuristic principles could govern investor behavior to dividends. Individuals, hoping to reduce concerns about overconsumption, may employ a rule to consume from dividends and prevent liquidating their stock portfolio to preserve capital gains. Combined with theories about lifetime spending (Shefrin and Thaler (1988)), such an approach is claimed to effectively limit spending during youth. This framework predicts that individuals, as they age, will shift their portfolio

composition to securities with higher dividend yield. This is because people require more spending in later years of their life and subject to less overall tax due to decreased labor income.

Supportive of the behavioral view, Graham and Kumar (2006) check retail investor behavior and find that age effects (risk-averse behavioral disciplining) and tax preference are important factors in determining a person's portfolio dividend yield. This research uncovers that, on an aggregate level, retail investors prefer stocks that do not pay dividends. When studied in more detail, however, the data shows that older investors tend to hold high dividend yield stocks. In addition, individuals with low income also appear to prefer dividend stocks. Such discovery seems consistent with the behavioral incentives described in the previous paragraph. The authors also report that those with preference for dividends buy stocks when dividend payments are expected, strengthening their argument. Furthermore, these investors are documented to increase their holdings of a stock when the firm initiates dividends. Hence, considering all the evidence, dividends seem to serve an important function for small, individual investors. Dividend taxes could have adverse consequences for such vulnerable portion of the market, without ample measures to voice their opinions. Consequently, governments should try to cater to their interests when contemplating fiscal policies. More research about effect of dividend tax cuts on retail investors would be useful.

4. Future Research Proposals

4-1. Dividend Enlargement Tax Reformation Act in South Korea

In 2014, the South Korean administration executed the Dividend Enlargement Tax Reformation Act (DETRA). This reform, lasting from 2015 to 2017, implemented a tax cut for

firms that have been paying dividends significantly above the average payout ratio or firms increasing dividend levels by a certain percentage. The objectives of the policy were 1) to increase overall dividends paid out by Korean firms and, consequently, 2) to vitalize capital markets with more investor wealth. In the sense that a tax cut was introduced to heighten payout levels, DETRA is similar in spirit to JGTRRA. One difference is that firms had to meet certain qualification criteria to attain the tax cut. To be eligible, a company needed to have a record of constant dividend payment in the past years or had to increase their next dividend by a large percentage. A local government report (Lee and Hong (2017)) concludes that the policy generated little increase in dividends, holding the rather arcane standards as accountable. The report also claims the so-called 'trickle-down effect' was not observed, in accordance with Yagan's (2015) assertion that such fiscal policies have little real economic impact. However, even Yagan (2015) qualifies that dividend payout increases with tax cuts. This leaves one to wonder what was so different about DETRA.

Obviously, there are a number of unique characteristics about the Korean economy, most notably the absence of taxes on capital gains and the complex crossholding of shares within the *chaebol* conglomerates. (Mundy (2014)). As claimed by Dewenter and Warther (1998) for Japanese keiretsu firms, such internally related corporate networks should be subject to less information asymmetry and agency issues. They identify that dividend smoothing behavior is much less evident for keiretsu firms as evidence. Korean conglomerates seem to be similar in nature, which leads to the prediction that there are less agency conflicts within such companies. Then, according to Jacob and Michaely (2017), these firms should respond more promptly to tax reductions. The facts are also inconsistent with findings of Blouin et al. (2011), since conglomerates with extensive insider holdings neither increased dividend payment nor

their stakes in the firm. Thus, a more detailed inspection of the Korean case seems necessary to reconcile this conflicting evidence with existing theories.

Though this may not be the only source of mitigating effects, I predict that there are some characteristics on dividend demand in Korea that sets her apart from other countries. It seems plausible that if investors do not perceive the need to push for more dividends, then there may be no corporate response despite tax reforms. There could be many incentives for shareholders to behave this way. First, Korean firms could be subject to outside, societal pressure on shareholders profiting from dividends. The owners of big conglomerates, especially the members of founders' family, tend to be cautious about popular sentiment and firm reputation. They could have perceived that the gains from raising dividends do not offset the negative consequences of a possible backlash by the public. This first idea is linked to behavioral incentives and careful examination of the actions taken by large, major shareholders. Second, due to capital gains being tax-exempt in Korea, the reform may not have been enough to resolve the tax disadvantage. This hypothesis would be more likely if irrelevance theory holds, where dividends do not serve additional functions such as sending signals or relieving agency costs. As aforementioned, large Korean firms possibly face less information asymmetry. Thus, MM's (1961) model incorporating taxes may be a reasonable estimation of reality, more so than other nations. Lastly, consistent with the predictions of Auerbach and Hassett (2005), the Korean market could be dominated by new view firms and shareholders do not play a major role in shaping payout decisions of corporations. In this case, dividend demand is not a determinant of dividends at all.

Devising appropriate empirical models to test the above hypotheses may prove to be a challenging task. It is, in fact, more difficult to explain why an expected phenomenon did not

happen than to list the possible reasons for an unexpected occurrence. One needs to apply ample control measures for country-specific factors to obtain results extendable to general settings. A method I would suggest is separately studying the behavior of chaebol and independent firms, as Dewenter and Warter (1998) did for Japanese firms. A proper test for differences between the two groups should control for size, profitability, betas, Fama-French five factors, past dividend payments, etc., since conglomerates tend to be the more lucrative. Given DETRA's unique feature of requiring certain eligibility conditions, it can provide valuable information as to which firms have more closely aligned interest with their shareholders and thus have larger desires to gain a dividend tax cut. Shareholder behavior, such as shifts in holdings and trade patterns, should simultaneously be considered to factor in the market force of the demand side. It would be of helpful to also divide the demand side into three groups: institutional owners, retail owners, and foreign owners (a group that is said to exert immense influence in the Korean stock market).

In closing, DETRA seems to be a unique opportunity to learn more about corporate payout policy and related investor behavior. I hope to see promising developments once I have a deeper understanding of the underlying theories, more knowledge about recent trends in empirical works, and stronger skills with advanced statistical methods.

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