

The Canadian Idiosyncratic Tax Effect on Cash Distribution: Evidence from Data Analytics and Simulation

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Abstract—Cash distribution of an organization has helped to develop the organizational market position. In the marketplace, the business organizations provide dividend payment to improve organizational performance. Along with that, Canadian business organizations have taken the approach of dividend payment to develop organizational revenue. Moreover, dividend payment of the business organization has provided advantages and disadvantages to the business organization in the marketplace. The advantage of dividend payment is establishing a positive reaction about the business organization in the marketplace. Moreover, dividend payment has helped to make an appropriate framework of ownership in the business firm. On the other hand, the disadvantage of dividend payment in the marketplace is that it negatively affects the management process of the organization. Along with that, this research paper has included theories to analyze the importance of dividend payment in the business organization. Moreover, hypothetical analysis has helped to understand effectiveness of cash flow distribution in a business organization of a Canadian firm. As per the result of this research paper has indicated dividend payment has helped to establish proper ownership of the organization to develop organizational performance.

Index Terms—Ownership structure, Dividend payout, Canadian tax, cash distribution

I. INTRODUCTION

Walter (1956) [17] proposed in his residual theory that the decision to distribute dividends occurs after investment and financing decisions by the firm. Furthermore, the total dividends distributed can vary from one period to another, due to investment opportunities, but without regard to the value of the firm. In 1961 Modigliani and Miller, (hereafter MM), considered within the framework of proper business area, dividend policy did not influence the value of the firm. Only anticipated cash flows are pertinent. The MM model rests on the hypothesis of perfect information, without agency costs, transaction costs, or accounting for the difference between assigning dividends and capital gains. The authors also suppose that the distribution of dividends is independent of the firm's investment budget. If these hypotheses are valid, a rational investor will be indifferent between receiving dividends and capital gains. However, the observation has been made that these empirical studies correspond to a positive market reaction at the announcement of dividends (Charest: 1978 [4],1980; Aharony and Swary:1980 [2]; Adjaoud: 1984 [1]). Additionally, receiving dividends yields a positive response in the financial journals, which leads to an interesting problem of interpretation is the model faulty in some way or is there an announcement effect," discussed below, that can explain this phenomenon?

By relaxing the hypothesis of symmetric information, some authors, such as Miller and Rock [13] in 1985 and Bhattacharya in

1979. Moreover, in 1985 Willams and John [11] represented the policies of diversity. After that, I used private information provided to the market area. Along with that, the dividend has allowed the investors to make a better outline of the market. On the other hand, the evaluation of business organization has helped to establish proper value. Moreover, Miller and Modigliani [12] have analyzed in 1961, market reaction is the most important dividend declaration is due to information value dividend itself is more important. In this regard, dividend payments are one of the most important for future improvement. Along with that, the business firm can provide the liquidity of the firm [5]. In the business organization, dividend increment not only indicates higher level of cash flow it also refers to the necessity of management payment preservation.

The non-dividend neutrality policy has helped to frame agency theory that was provided by Easterbrook [6] in 1974 and in 1982 Rozeff [15]. These researchers have provided the concept of controlling dividend payment to improve the capital market. Along with organizational perspective, extremal economics has helped to manage cash flow of the organization. In this regard, the requirement of firms needs to manage the capital market and dividend payment to monitor market situations. In this regard, in 1986 Jensen [10] argued that dividend payment can decrease efficiency of managers in the business organization [7] that indicate waste of cash flow. Moreover, adaptation of more cash flow provides advantage to the business organization to achieve organizational goals. Another most consequent of dividend payment is decrease organization's costs and that help to establish positive

reaction in the market.

According to interpretation of these theories has helped to predict appropriate economic policy for ownership of the organization. Moreover, these theories indicate equity and dispersion among the ownership of the organization. The main objectives of this analysis are to find a conventional theoretical perspective to establish dividend policy and provide proper structure of the ownership and maintain account of the organization. It has helped to discover the significant dividend policy if there is any relationship between dividend payments and ownership structure, holding other variables constant. It argued, the ownership attention creates better communication between stakeholders and managers of the organization. Moreover, it helps to decrease conflicts and informational fluctuation and asymmetry of information. We hypothesize the non-positive relationship among concentration and payments of dividend. In this regard, if the concentration is related to "company" shareholders, high concentrated firms would pay more dividends also absent of organizational costs and accumulation of information the reason behind that dividend are not included in tax in Canada.

Paper is organized as follows. After a brief conceptual analysis linking ownership structure to dividend payments in section I, section II describes the methodology and data used to test our hypothesis. Analysis and report of section III refresh the empirical results. The IV section derives a simulation model for more generalization of our findings and interprets the results. This research included the conclusion of Section V.

II. METHODS AND ANALYSIS OF DATA

About 600 Canadian organizations were randomly chosen from the bank of data entitled, "Stock-Guide." We eliminated the following: (i) 21 foreign firms; (ii) 18 organizations that had priced only efficient shares (iii) 5 mutual funds. Of the 556 firms remaining, information was manually collected from 3 sources of information, pertaining to the identity and percentage of voting rights held by the 5 largest shareholders:

- i) Financial Post (FP, hereafter) "Survey of Industrials" and "Survey of Mines and Energy Resources" for the years 1989, 1990, 1991.
- ii) The data bank "Stock-Guide," under rubric "Corporate Profile" for the years 1989, 1990, 1991. "Stock-Guide" collects data from proxy circulars.
- iii) "inter corporate Ownership in Canada" (LP, hereafter) from Statistics Canada for the years 1989 and 1991.

The information collected was treated in two stages.

First stage: An observation was kept, if the 3 information sources: i) concurred with the principal shareholder's identity and ii) the size of each block of stocks that he owns or controls (the blocks, hereafter). A 3 % difference among the

sources was tolerated for each of the blocks, and a maximum of 5 % for the group. In each case where the sources had contradictory information on the identity or the size of the block, the observation was treated in a second stage.

Second stage: The objective at this step was to reconcile disagreements among the information sources through additional research. The principle followed was to reverse the process while verifying if the shareholder in question does, in fact, participate in the firm. Three means were used: verification in i) LP, ii) FP and iii) the proper sources of the "contradictory" block-holder.

After the second stage, the number of observations that satisfied our sample criteria was 338 for the year 1989, 365 for 1990 and 348 for 1991. The percentage of rejection corresponds, respectively, to 40, 35, and 37, with the average being 37.

To test our hypothesis, we first employed linear and nonlinear measures of association (measures of Pearson and Spearman). It is important to note that a statistical correlation does not usually signify a causal link. The statistical results used in this study may or may not corroborate a particular hypothesis, but they do not constitute definitive proof. For a more rigorous demonstration of certain results, see Gadhoom (1995) [8]. Secondly, we used a simulation in order to generalize the proof.

III. EMPIRICAL RESULTS

Analysis of Table 2 reveals that there is a high concentration of ownership in Canada. The largest shareholder, exerts the dominant influence on the company, with 41.48% of voting rights. This can be interpreted as good corporate governance of Canadian firms. In effect, the dominant shareholders exercise more efficient supervision than minority shareholders, who are generally badly informed and lacking the necessary economic motivation to exercise control.

However, this obvious presence of a dominant shareholder can lead managers and directors to be more accommodating toward him. The dominant shareholder can have a benefit related to his level of control. This can take the form of a salary, attendance vouchers, or contracts for purchase, sale, rent, loans, or borrowing among companies owned by the same shareholder. The dominant shareholder can act against the interests of the minority shareholders, thereby causing another type of agency cost [9]. As a result, the director's fiduciary duty to act in the interest of all shareholders is jeopardized in a concentrated firm.

Further, it can be noted that in almost all of the cases, the dominant shareholder is a manager or a director. Given the importance of their rights to vote, these individuals can become firmly entrenched in the firm. It becomes difficult to unseat them. For all practical purposes, they are out of reach of the board of director's attempts to reform, buy-out, or takeover.

Table 1 Descriptive statistics of shareholdings

Variable	N	Average	Standard error	Median	Minimum	Maximum
COC	477	53.79	23.56	55.02	0	100
FBH	477	41.48	23.43	40.43	0	100
IBH	476	39.45	29.40	40.95	0	100

COC = The sum of the voting rights of the five largest shareholders
 FBH = The voting rights of the majority shareholders

IBH = Voting rights of the insiders (shareholders who are directors)

Upon examining Table 3, a positive relationship can be seen between the measures regarding ownership structure and those concerning dividend distribution. At first glance, this could be regarded as indicative of good management practices. A high rate of dividend distribution signifies less waste and more frequent appeals to the capital markets for refinancing. This leads directors to divulge privileged information regarding their objectives of capital utilization. However, we can note from Table 2 that the measure of correlation is systematically higher with the variable FBH (the voting rights held by the principal shareholder). The marked influence that the principal shareholder exerts in an effort to receive dividends is therefore intriguing. Our results indicate that in 81% of the sample, the principal shareholder is a firm. In Canada, inter-company dividends are tax deductible for the recipient (Quebec law, art. 738; equivalent to Canadian law, art. 112). It is easy to understand that the principal shareholder would prefer receiving dividends on the capital gains, which is contrary to the preferences of minority shareholders, who are generally individual holders and exert influence to receive more dividends. This leads us to believe that the dominant shareholders influence the distribution of dividends in such a way as to transfer them to those who exercise more control (See Gadhoun (1995) [8] for a more rigorous demonstration). The simulation that follows reinforces this view.

Table 2 Correlations among different measures of dividends and concentration

	DPS		DBV		DPO		DYD							
	N ^a	Signif. (b)	N ^a	Signif. (b)	N ^a	Signif. (b)	N ^a	Signif. (b)						
COC	251	0.12 (0.047)	404	0.18 (0.00)	404	0.09 (0.07)	404	0.16 (0.00)	404	0.06 (0.20)	0.09 (0.04)	404	0.10 (0.04)	0.19 (0.00)
FBH	251	0.17 (0.01)	404	0.23 (0.00)	404	0.14 (0.00)	404	0.17 (0.00)	404	0.10 (0.05)	0.14 (0.01)	404	0.09 (0.05)	0.18 (0.00)
IBH	250	0.14 (0.03)	403	0.09 (0.16)	403	0.07 (0.15)	403	0.11 (0.03)	403	0.04 (0.43)	0.06 (0.25)	403	0.1 (0.02)	0.16 (0.00)

^a = N equals the number of observations
^b = The level of significance is shown in parentheses
 DPS = Dividend per share
 DBV = Dividend per dollar of book value of shares
 DPO = Dividend payout
 DYD = Dividend yield
 COC = The sum of the voting rights of the five largest shareholders
 FBH = The voting rights of the majority shareholders
 IBH = Voting rights of the insiders (shareholders who are directors)

IV. SIMULATION

Note that a Canadian company generally, can reduce from its taxable income the total gross dividends that are already included in the income. The Quebec law, art. 738, which is equivalent to the Canadian law, art 112(1) states (the law text is cited from Royer and Drew (1994, pp.488-9) [14]) :

"A corporation can reduce from its income for a given year, all taxable dividends received during the year from a taxable Canadian corporation or from a corporation controlled in Canada, that is located in Canada, which is not an investment corporation owned by non-residents or is a tax-exempt corporation as deemed by law."

It appears that privileged treatment is being offered to companies receiving dividends. Yet, the objective is to avoid double taxation. In effect, the dividends distributed come from income which has already been taxed.

Suppose that an investor takes out a personal loan to buy stocks in a business. His personal income after taxes will be:

$$RP = [\text{Dividend}] + [\text{Capital gains}] - [\text{Interest on personal loan}] \quad (1)$$

Where:

X = company profit before interest and taxes;

Tep = tax rate of the "parent" company;

Tpd = "personal tax rate on dividends";

TP, = "personal tax rate on capital gains";

d = proportion of the company's profit distributed as dividends. (1 - d) is the proportion retained by the company. This becomes a capital gain in a single time period model.

rP = interest rate on personal loans; D = amount borrowed;

TP = marginal tax rate on income.

As a result, equation (1) can be expressed in the following manner:

$$RP = [d X (1 - T_{ep}) (1 - T_{pd})] + [(1 - d) X (1 - T_{ep}) (1 - T_{pg})] - [D (1 - T_p) r_p] \quad (2)$$

On the other hand, to take into account the specifics of Canadian taxation law where the value of dividends are surcharged, but benefits include a tax credit, it can be shown:

$$T_{pd} = \gamma T_p - \alpha \quad (3)$$

$$T_{pg} = L T_p \quad (4)$$

'Y = (1 + (3)) where (3) is the surcharge of the dividends received, a = the total dividend credit from both federal and provincial taxes, and L = the proportion of capital gains subject to taxes.

Substituting equations (3) and (4) in (2), we obtain:

If the shareholder is a company where the tax rate is Tr, the income RC of this company is:

$$RC = [d X (1 - T_{ep})] + [(1 - d) X (1 - T_{ep}) (1 - LT_{ep})] - [D (1 - T_{ep}) r_p] \quad (6)$$

Where r_e = the interest rate on the company's loans.

Now, if we allow the firm to borrow and to pay interest instead of borrowing from the shareholder, the income of the latter will be equal to:

$$RP^* = [d(X - r_c D)(1 - T_{cp}) + (1 - \alpha - \gamma T_p)] + [(1 - d)(X - r_c D)(1 - T_{cp})(1 - L T_p)] \quad (7)$$

If the shareholder is a company, its income will be:

$$RC^* = [d(X - r_c D)(1 - T_{cp}) + [(1 - d)(X - r_c D)(1 - T_{cp})(1 - L T_{ci})]] \quad (8)$$

The objective of this simulation (drawn from Suret and Gagnon (1989) [16]) is to examine the presence of a fiscal effect within dividend policy. Such an effect can be seen through the income of the "company" shareholder, instead of through that of an "individual," due to the non-taxation of intercompany dividends. This can be seen in the following example.

Example: Mr. Anybody borrows \$5,000 to buy stocks from Fiction, Inc. This results in a pretax profit of \$1,000. This is subject to a 30% tax rate. Suppose the surcharge of the dividends is 0.33, the tax credit for dividends is 0.3325, and the proportion of capital gains subject to taxation is 0.75 (these numbers correspond to the 1987 rates and we hope they can be used effectively for our study). If the interest rate on personal loans is 10% and Mr. Anybody's income is subject to a marginal rate of 30%, then according to equation (5), his personal income after taxes is equal to:

$$RP = 653.45d + 542.5(1 - d) - 350$$

$$RP = 192.5 + 110.95d \quad (9)$$

If Mr. Anybody incorporates through the TryAll, Inc. Company, the income from this company, according to equation (6), if $T = 30\%$, is equal to:

$$RC = 700d + 542.5(1 - d) - 350$$

$$RC = 192.5 + 157.5d \quad (10)$$

We assume a perfect market where $r_e = r_P$.

Equations (9) and (10) clearly show that dividend income from a company is higher than such income from an individual, given that d is nonnegative.

The question that can be asked at this level, is if the shareholder is better off to incorporate, as a last step. The income from this last option is:

$$RP' = RC(1 + a - Y T_p) \quad (11)$$

For this option, two scenarios will be presented for taxation ($T_P = T_{cr} = T =$ (i) 30% and (ii) 50%); two scenarios for dividend policy ($d = 1$ and $d = 0$); and two scenarios for borrowing policy (borrowing by the stockholder and borrowing by the company). The results are presented in the

$$RP = [dX(1 - T_{cp})(1 + \alpha - \gamma T_p)] + [(1 - d)X(1 - T_{cp})(1 - L T_p)] - [D(1 - T_p)r_p] \quad (5)$$

following table:

Table 3. Scenarios for borrowing policy

Taxes	Borrowing by stockholder				Borrowing by the company			
	30%		50%		30%		50%	
Dividends	d = 1	d = 0	d = 1	d = 0	d = 1	d = 0	d = 1	d = 0
RP(\$)	303.45	192.5	83.75	62.5	326.73	271.25	166.80	156.25
RC(\$)	350	192.5	250	62.5	350	271.25	250	156.25
RP'(\$)	326.73	179.70	166.88	41.72	326.71	253.21	166.88	104.30

Examining this table leads to the conclusions that:

- 1) When a firm favors the distribution of dividends over a capital gain, the resulting income for the company is superior to that of the individual, no matter what the fiscal status of the contributor or the structure of capital of the firm. The fiscal effects of dividends correspond to the difference between the two incomes.
- 2) In case of distributions from the firm in the form of capital gains, the fiscal effect can be negated for companies and the resulting income for the last shareholder is reduced.
- 3) The distribution of dividends seems to be more profitable than receiving capital gains for the same individuals, even though it is assumed that the cumulative exoneration on capital gains is exhausted. As a result, it can be seen in certain cases that the tax on dividends can be negative if $T_P < c_{xl-y}$. However, remember that the results in the table are not up to date and represent the upper limits of capital gains.
- 4) The fiscal effect of dividends appears to be lost when the firm, instead of the shareholder, becomes indebted. Perhaps because one does not take notice of the impact on borrowing, due to supplementary income from dividends.

V. CONCLUSION

Two conclusions can be reached and represent the main contribution of this research: (1) the main shareholder exerts a preponderant influence on the dividend policy; and (2) our data clearly supports the hypothesis that a "fiscal effect," not previously studied, dominates two known effects of signaling and agency costs.

Dividend payment has indicated advantages of the organization that help to make a positive reaction about the organization in the marketplace. Moreover, the dividend payment of a business organization has decreased the organizational costs in the business performance. Along with that, this research paper has included several theories to analyze the impact of dividend payment in a business organization. On the other hand, there are some disadvantages also that affect management of the organization negatively. These theoretical analyses have helped to establish appropriate management processes and effective ownership in the business organization.

Despite the abundance of writing about dividends, very few

of the studies have used ownership in the explanation of this phenomenon. The notion of ownership is, however, particularly important because of the concentration of ownership of Canadian firms and the fiscal specificities of processing dividend revenues for companies in Canada. Finally, note that this study teaches us a great deal about Canadian shareholding (which we do not know very well).

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