

Tax Director Characteristics and Market Reactions: Does Legal Education and Network Size Matter?

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ABSTRACT

This study analyses whether there is a correlation between market reactions to tax director departure announcements and the legal education and network size of directors. Unfavourable market reactions to the departure announcements of tax directors with law degrees (i.e. J.D. or LL.M.) were found in a sample of 346 US departure announcements. The findings suggest that companies with departing tax directors with larger network experience negative cumulative abnormal returns. This has implications for practitioners in their selection of tax directors.

Keywords: *Tax director departure; market reactions; legal education; network*

JEL codes: *M51; G14*

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Introduction

The relationship between the characteristics of legal education and network size of directors and market reactions to departure announcements is examined in this study. Due to the complexity of tax preparation and the necessity to navigate legal loopholes as a means of minimising tax burdens (such as tax havens, transfer pricing, multinational corporations, etc.), legal education may play an important role in maximising tax savings and minimising legal risks. Regarding social networks, the application of diffusion theory suggests that executive social networks can provide tax shelter and shared knowledge, which facilitates tax burden reduction through executive interlocking between low-tax enterprises (Brown and Drake, 2014; Brown, 2011, Hanlon and Heizman, 2010). It is also suggested in management literature that managers form both formal and informal social connections for sharing knowledge and resources to control risks (Westphal, Boivie and Chng, 2006). In addition, previous literature suggests that companies have a tendency to have higher tax rates when their CEOs are socially connected with companies with higher tax rates and vice versa (Lismonta, Cardinaelsb, Bruynseelsb, Grooteb, Baesensa, Lemahieua and Vanthienen, 2018). Tax directors have responsibility for the management of corporate tax-related affairs and the market generally regards their departure announcements as positive (Liu and Ma, 2023). However, a limited amount of literature has explored tax director-related issues and very few studies have investigated this area (Armstrong, Blouin, and Larcker, 2012; Schulman, 2020; Liu and Ma, 2023). This study is believed to be the first to investigate the association between the legal education and social networks of tax directors and market reaction to their departure announcements.

Literature Review and Hypotheses Development

Executive education can serve to enhance perceived ability, thereby increasing shareholder confidence. For example, Urquhart and Zhang (2022) found there to be a positive association between CEOs with PhD degrees and improved company performance. Vafaes (2010) highlighted the preference of the market for controllers with an educational background in accounting. Tax preparation is an essential corporate function with significant risks and responsibilities. Tax avoidance often involves the exploitation of tax law loopholes and the use of tax avoidance strategies, such as operating in low-tax regions (tax havens) or transferring profits from high-tax rate to low-tax rate locations (transfer pricing). If there is no careful planning, businesses may end up facing tax evasion litigations. However, tax preparation is not always transparent to investors and it can involve myopic decision-making (Minnick and Noga, 2010). Due to the association of tax preparation with the legal exploitation of legal loopholes, tax directors often have legal training and act as general counsels as a means of ensuring compliance and avoiding fines and lawsuits. The legal education of tax directors is essential for investors as it ensures proper tax filing, optimises savings and limits legal obligations, which influences the perceptions of investors regarding their competence and reliability. As a consequence, tax directors with law degrees may experience unfavourable market reactions to their resignation announcements. The following research question is therefore proposed:

RQ1: *Does the market react more negatively to departure announcements of tax directors with law degrees?*

Previous literature on executive networks has shown mixed results (El-Khatib, Fogel and Jandik, 2012). The private information hypothesis suggests that executive networks have improved knowledge and information sharing as a result, which strengthens the decision-making capabilities of executives. However, managerial entrenchment theory indicates that socially connected managers may have greater power and less discipline, which can impose heavier costs on

shareholders. The social connections of tax directors may create a knowledge spillover effect among tax directors, which improves efficiency and lowers tax preparation expenses. Similarly, earlier tax avoidance research on diffusion theory implies that CEO networks play a key part in tax evasion enterprises due to shared knowledge and experiences (Brown and Drake, 2014; Brown, 2011). More specifically, companies have a tendency to have higher tax rates when their CEOs are socially connected with firms with higher tax rates and they tend to have lower tax rates when the network companies of CEOs have lower tax rates (Lismonta, Cardinaelsb, Bruynseelsb, Grooteb, Baesensa, Lemahieua and Vanthienen, 2018). Tax directors can enhance tax avoidance and cost reductions through the leveraging of shared tax avoidance knowledge among tax directors in low-tax companies. Therefore, tax directors with larger social networks may be perceived as being more valuable by the market, thereby triggering more negative market reactions when their departure announcements are made.

Therefore, negative market reactions are predicted for companies that experience the departure of socially connected tax directors, so the following research question is proposed:

RQ2: Does the market react more negatively to departure announcements of tax directors with larger network sizes?

Data

The sample period is from 2007 to 2021 and the data was collected from *BoardEx*, including information on tax director turnovers, legal education and network size¹. Observations with multiple announcements on the same event date were excluded in order to avoid the issue of confounding factors. Market and financial data was obtained from *CRSP* and *Compustat*. Following the removal of missing data, the final sample consisted of 346 tax director resignation announcements from a variety of US corporations. Continuous variables were winsorized at the top and bottom 1 percentile.

Research Design

The cumulative abnormal returns (CARs) around the departure announcements were calculated using a similar methodology to previous studies as a means of investigating the research questions (Pandey and Kumari, 2021; Rai and Kumari, 2022; Rai, Yadav, Mallik, and Gupta, 2022; Kumari, Kumar, and Pandey, 2023). The expected returns were first estimated using the market model, with an estimation period of between 310 and 60 days prior to the event date. The daily abnormal returns (AR) were then calculated by subtracting expected returns from actual returns. The CAR was then obtained by summing the daily ARs in the event window. To ensure robustness, two event windows were used: an 11-day [-5, 5] window and an eight-day [-5,2] window. The CARs were accumulated between five days prior to the date of the announcement of the tax director turnover and five (two) days after the event date. The ordinary least squares regression model was applied for examining *RQ1* and *RQ2*, based on Singhvi et al. (2013).

$$CAR_{i,t} = \alpha_0 + \alpha_1 Education_{i,t} + \alpha_2 NetworkSize + \alpha_3 Male + \alpha_4 LnSize_{i,t} + \alpha_5 DA_{i,t} + \alpha_6 MB_{i,t} + \alpha_7 ROA_{i,t} + IndustryD + YearD + \varepsilon$$

The principal variable of interest for *RQ1* was *Education*, which was recorded as 1 if the tax director possessed a Juristic Doctor (JD) or Master of Laws (LLM) degree and was 0 otherwise. *NetworkSize* was the variable of interest for *RQ2*, denoting the network size of directors as defined in BoardEx. Detailed definitions of the control variables that were used in the study can be found in the Appendix.

Results

The descriptive statistics presented in Table 1 show that the mean values of $CAR_{[-5,5]}$ and $CAR_{[-5,2]}$ are 0.004 and 0.002, respectively. These results support Liu and Ma's (2023) conclusion that the market reactions to the departure of tax directors are positive. The mean value of *Education* is 0.526, indicating that 52.6 percent of the tax directors in our sample hold a law degree. The average network size (*NetworkSize*) is 2.78. Consistent with Liu and Ma (2023), 71.4 percent of tax directors in our sample are males (*Male*).

Table 1
Descriptive Statistics

	<u>Mean</u>	<u>STD</u>	<u>Q1</u>	<u>Median</u>	<u>Q3</u>
<i>CAR</i> [-5,5]	0.004	0.090	-0.039	0.002	0.039
<i>CAR</i> [-5,2]	0.002	0.078	-0.036	-0.002	0.033

¹ The title of the position of tax director varies. Following Schulman (2020), common titles including tax accountant, tax director, tax manager, legal counsel and general counsel are included.

Education	0.526	0.500	0.000	1.000	1.000
NetworkSize	2.780	3.613	0.566	1.376	3.321
Male	0.714	0.453	0.000	1.000	1.000
Size (Raw)	8,708	24,927	367	1,203	4,883
LnSize	7.191	1.954	5.905	7.093	8.494
DA	0.286	0.307	0.051	0.237	0.396
MB	3.023	5.828	1.295	2.298	4.035
ROA	0.011	0.235	-0.020	0.067	0.130

Table 2 presents the results of the OLS regression analysis. We find negative and significant coefficients for Education at the one-tailed level ($CAR_{[-5,5]}$: coefficient = -0.015, t-stat = -1.63; $CAR_{[-5,2]}$: coefficient = -0.011, t-stat = -1.28), indicating that the market penalizes firms with lower CARs for the departure of tax directors holding law degrees. The coefficient's economic impact indicates an average decrease of \$130.62 million for companies with departing tax directors holding a J.D. or LL.M degree. These findings answer RQ1 and suggest that investors value the legal expertise of tax directors for tax compliance, consistent with prior research on tax risk. Compliance is one of the six main components (Brühne and Schanz, 2022) because the ambiguity in tax law may cause uncertainties in its interpretation and application of tax laws (De Simone, Sansing, and Seidman, 2013; Chen, Yang, Zhang, and Zhou, 2020; Jacob and Schütt, 2020). The lower CARs could be attributed to the market's concern over the departure of capable and knowledgeable directors. Furthermore, *NetworkSize* is found to be negatively and significantly associated with CAR ($CAR_{[-5,5]}$: coefficient = -0.003, t-stat = -2.02; $CAR_{[-5,2]}$: coefficient = -0.002, t-stat = -1.83), indicating that firms whose departing tax directors have a greater network size experience more negative market reactions. The coefficient's economic significance implies an average decrease of \$26.124 million when the network size of departing tax directors increases by 1 unit in thousands. The results are consistent with our prediction of RQ2 and support the argument that a network of tax directors may benefit firms through shared knowledge and experiences of tax avoidance and cost reductions. In conclusion, these findings suggest that investors have negative reactions towards the turnover of tax directors with legal education and socially connected networks.

Table 2: OLS Regression Analysis Results

Variable	CAR [-5,+5]			CAR [-5,+2]		
	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
Intercept	-0.016	-0.380	0.705	-0.008	-0.26	0.796
Education	-0.015†	-1.630	0.105	-0.011†	-1.28	0.200
NetworkSize	0.000**	-2.020	0.044	-0.000*	-1.83	0.068
Male	0.021*	1.660	0.098	0.018*	1.65	0.100
LnMV	-0.002	-0.490	0.628	0.000	-0.03	0.980
DA	-0.016	-0.700	0.484	-0.021	-1.12	0.262
MB	0.002*	1.660	0.098	0.002*	1.86	0.064
ROA	-0.028	-0.740	0.460	-0.037	-1.10	0.270
Industry_FE	Yes			Yes		
Year_FE	Yes			Yes		
Adj. R-Square	-0.014			0.002		
N	346			346		

The notations *, **, and *** indicate two-tailed significance levels of 10%, 5%, and 1%, respectively. The notation † indicates a one-tailed significance level of 10%.

Conclusion

This study has examined the relationship between market reactions to the resignation announcements of tax directors and their legal education and networks. The findings show that tax directors with law degrees experience negative market reactions when announcing their departures. In addition, it was observed that market reactions are low towards the departures of tax directors with larger network sizes.

Several contributions are made by this study. Firstly, it is the first study that has explored the relationship between the legal education and network sizes of tax directors and market reactions to their departure announcements. The study shows

these factors to have an impact on market reactions. The findings of this study also have implications for practitioners. Managers who are involved in the selection of tax directors may consider favouring candidates with legal degrees and large networks. Investors should note the characteristics of tax directors as there can be economic consequences to their legal backgrounds and network sizes. Finally, this study suggests that tax directors could benefit from strengthening their legal expertise and expanding their networks. This could be beneficial to companies, shareholders and the government due to the fact that tax compliance and shared knowledge are of great importance during the tax planning process.

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Appendix Variable Definitions

Variable	Definition
$CAR_{[-5,5]}$	= the average cumulative abnormal return (CAR) covering the eleven-day event window [-5,5] surrounding the announcement of a tax director turnover;
$CAR_{[-5,2]}$	= the average cumulative abnormal return (CAR) covering the eight-day event window [-5,2] surrounding the announcement of a tax director turnover;
<i>Education</i>	= 1 if the tax director holds a Juristic Doctor (J.D.) or Master of Laws (LL.M) degree, and 0 otherwise;
<i>NetworkSize</i>	= the network size of the tax director as defined in <i>BoardEx</i> directors' network size as defined in BoardEx. The value is divided by 1,000;
<i>Male</i>	= 1 if the departing tax director is male, and 0 otherwise;
<i>LnSize</i>	= the logged firm's market value;
<i>DA</i>	= the ratio of the debt to total assets;
<i>MB</i>	= the ratio of market value to book value;
<i>ROA</i>	= the return on assets.