Original Article

The impact of company size and multiple directorships on corporate governance effectiveness

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ABSTRACT **Prior research provides two opposing theories as to whether having corporate directors that serve on multiple boards is beneficial or harmful to governance effectiveness. One line of prior research tests the 'Busyness Hypothesis', which states that as directors accept additional outside directorships, they become overcommitted or distracted, resulting in a decrease in governance effectiveness. Alternatively, the 'Experience Hypothesis' predicts that as directors accept additional directorships, they gain valuable experience which results in an increase in governance effectiveness. But past research has provided conflicting results regarding the above two hypotheses. In this article, we predict that both effects may occur simultaneously, but that governance effectiveness will be enhanced for directors who gain what we label 'beneficial experience' from outside board service. We maintain that directors may gain beneficial experience by serving on outside boards of companies that are comparatively larger. We further argue that this beneficial experience will be stronger for directors of small companies. Using a company's reported internal control weaknesses as our proxy for corporate governance effectiveness, we find that governance effectiveness may be enhanced by encouraging directors to serve on outside boards of companies that are comparatively larger. In addition, we find that this increase in governance effectiveness is more pronounced for directors of small companies than for directors of large companies. Such information should be useful to board members, management, investors, or other stakeholders that have an**

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interest in whether members of a board of directors should pursue additional outside board memberships.

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INTRODUCTION

Both the Council of Institutional Investors (1998) and the National Association of Corporate Directors (1996) have warned about the possible negative effects of corporate directors serving on multiple boards. Both organizations provide recommendations that are intended to reduce the problems caused by the practice of 'overboarding'. Specifically, the National Association of Corporate Directors (1996) proposes that corporate executives should limit their outside board memberships and that corporate directors should allocate at least four 40-hour weeks of service per board assignment. In addition, the Council of Institutional Investors (1998) asserts that directors who are employed full-time should generally be limited to two outside directorships.

The question we address in this article is whether this concern for the negative effects of directors serving on outside boards is warranted. Previous empirical findings are mixed, and therefore inconclusive regarding whether outside directorships decrease corporate governance effectiveness. Most prior research examines one of two competing hypotheses in an effort to understand the relationship between corporate governance effectiveness and multiple directorships. In particular, one line of prior research tests the 'Busyness Hypothesis', which predicts that serving on outside boards results in overcommitted and/or distracted directors, which in turn decreases corporate governance effectiveness. This Busyness Hypothesis reflects the negative impacts of overboarding. Alternatively, the 'Experience Hypothesis' postulates that serving on outside boards results in directors gaining a wide range of valuable experiences, which leads to an increase in governance effectiveness.

The majority of past research has tested the Busyness Hypothesis and the Experience Hypothesis as separate, competing hypotheses. In essence, most prior researchers have assumed that their empirical results would support either one or the other of these two hypotheses. However, a third strand of research has recently emerged that predicts that the busyness effect and the experience effect are not mutually exclusive, but in fact occur simultaneously, and that depending on the circumstances, one effect will dominate the other. In this article, we follow this third line of inquiry. In our empirical analysis, we control for the effects of the Busyness Hypothesis in order to focus on the experience effects of multiple directorships. Specifically, we hypothesize that corporate governance effectiveness will be enhanced for those directors who acquire what we label 'beneficial experience' from serving on outside boards. We argue that one way that a director may gain such beneficial experience is by serving on the board of a comparatively larger company.

We further hypothesize that serving on outside boards of larger companies will aid directors of small companies more than directors of large companies. In essence, we propose that the beneficial experience gained by serving on the board of a comparatively larger company will be greater for directors of small companies, since these directors are typically less experienced than directors of large corporations, and they would therefore have more to gain from the outside experience. Thus, we predict that the relationship between beneficial experience and governance

effectiveness will be more positive for directors of smaller firms than for directors of larger firms.

In our empirical tests, we use the reported number of material weaknesses in internal control as a proxy for corporate governance effectiveness. We then use regression analysis to statistically measure the degree of association between governance effectiveness and the relative size of the outside companies on whose board the director sits. In the analysis, we attempt to control for other relevant determinants of a board's ability to govern effectively. Our results provide empirical support for our hypothesized relationships. In particular, we find that governance effectiveness increases when board members serve on outside boards of companies that are larger than the company in question. This result is consistent with the notion that board members gain valuable experience by serving on the boards of comparatively larger outside companies. Also, as hypothesized, we find that this beneficial experience of serving on comparatively larger company boards is stronger for directors of small firms than for directors of large firms. We therefore conclude that corporate governance may be enhanced by allowing, and even encouraging, board members to sit on the boards of other companies, provided that those other companies are larger than the company in question. This enhanced governance effect especially holds true for directors of smaller companies.

PRIOR LITERATURE

Numerous prior research studies have examined the relationship between multiple directorships and corporate governance effectiveness. Previous research has examined both the potential negative consequences and the potential benefits from allowing directors to serve on multiple outside boards. We will first review the prior literature that explains and tests the Busyness Hypothesis and the Experience Hypothesis. We will then examine a recent line of research that explores the possibility that both an experience effect and a busyness effect may simultaneously be present when directors serve on multiple boards. This article falls in this third strand of research.

The busyness hypothesis

The Busyness Hypothesis proposes that serving on multiple boards results in directors who are overcommitted and/or distracted. This hypothesis further maintains that corporate governance effectiveness suffers as a result of these overcommitted/distracted directors. A prime example of research that explores the Busyness Hypothesis is Ferris *et al* (2003), who examine whether directors who hold multiple directorships are effective in their attempts to monitor management. They empirically test what they label the 'Busyness Hypothesis', which asserts that:

> serving on multiple boards overcommits an individual. As a consequence, such individuals shirk their responsibilities as directors. For example, overcommitted directors might serve less frequently on important board committees such as the audit or the compensation committees. If boards play an important role in firm performance, the implication of the Busyness Hypothesis is that the presence of multiple directors on a firm's board reduces oversight of management and, as a result, the firm's market value. Additionally, reduced monitoring by these busy directors might exacerbate other forms of agency costs, such as increased litigation exposure for the firm.(Ferris *et al*, 2003, p. 1088)

Ahn *et al*'s (2010) results support the Busyness Hypothesis. They find that directors who serve on multiple boards have reduced attention capacities and time constraints that potentially affect their ability to provide sound counsel. These time constraints and reduced attention capacities might adversely affect their ability to contribute effectively to board discussions

concerning major strategic decisions. In a similar fashion, Jiraporn *et al* (2009b) explore whether sitting on multiple boards reduces a director's ability to effectively monitor management activities. Their results reveal that directors that hold multiple directorships tend to serve on fewer board committees, including the compensation and audit committees.

Fich and Shivdasani (2006) also provide empirical support for the Busyness Hypothesis. They discover that firms with busy boards, which they define as those where a majority of the outside directors hold at least three directorships, are associated with various measures that signify weak corporate governance. They report that companies with busy boards have lower (1) profitability, (2) market-to-book ratios, and (3) sensitivity of CEO turnover to firm performance. They also discover that when directors acquire additional outside board memberships, the other companies for which they serve as board members tend to experience negative abnormal returns.

Jiraporn *et al* (2009a) document that directors who sit on multiple boards have an increased tendency to miss board meetings. This finding reveals the potential for decreased corporate governance effectiveness because prior research has illustrated that effective board meetings are correlated with firm performance (Vafeas, 1999). In addition, prior research has also reported the potential for multiple directorships to reduce directors' corporate monitoring effectiveness (for example, Core *et al*, 1999; Shivdasani and Yermack, 1999).

The experience hypothesis

Fama and Jensen (1983), along with other early proponents of the Experience (or Reputational Capital) Hypothesis, argue that holding multiple directorships signals director quality. Later authors (for example, Gilson, 1990, Kaplan and Reishus, 1990, Vafeas, 1999) maintain that the number of boards that a director sits on is associated with the director's reputational capital level. They assert that only high-quality directors are asked to serve on multiple boards, and that these high-quality board members are more effective in their corporate governance activities. An important aspect of the Experience Hypothesis is the notion that holding multiple directorships provides corporate directors valuable experiences across numerous industries and/or regulatory environments. Proponents of the Experience Hypothesis assert that directors who possess such wide-ranging experiences will be more effective in corporate governance tasks such as the monitoring of management.

Carpenter and Westphal (2001), Booth and Deli (1996), and Bacon and Brown (1974) each provide empirical support for the Experience Hypothesis. Each study's findings support the notion that the decision by a corporate executive to accept an outside board position tends to increase shareholder value of his/her primary employer if that employee acquires information concerning differing strategies and/or management styles utilized by other companies. Similarly, Sarkar and Sarkar (2009) discover that multiple directorships held by independent directors are positively associated with firm value. They report that independent directors who hold multiple directorships are likely to attend more board meetings and the company's annual shareholders' meeting. These results provide empirical support for what they refer to as the 'quality hypothesis', which predicts that busy outside directors are better directors. Their findings also support what they label the 'resource dependency hypothesis', which maintains that directors who hold sit on multiple boards are better networked. This in turn aids the company through the ability to generate important connections with various external constituencies.

Additional empirical support for the Experience Hypothesis is provided by Harris and Shimizu (2004), who discover a positive correlation between the percentage of overboarded directors and abnormal security returns. In other words, they document that multiple directorships are associated with increased

abnormal stock returns. Based on their findings, they conclude that companies should recruit directors who already hold multiple directorships since these busy directors tend to add value.

More recent research

It is obvious from the empirical findings previously described that there are conflicting results concerning the relationship between corporate governance effectiveness and multiple directorships. A number of studies provide support for the Busyness Hypothesis, while numerous others support the Experience Hypothesis. Most prior research efforts have viewed the Busyness/Distraction Hypothesis and the Experience/Reputational Capital Hypothesis as competing, and thus mutually exclusive hypotheses. However, a recent line of research has proposed that they are not mutually exclusive hypotheses, but rather that both a busyness effect and an experience effect will be present for directors who hold multiple directorships. For example, as a particular director engages in additional outside board assignments, those additional assignments add a level of busyness and distraction that have the potential to detract from his/her governance effectiveness, yet at the same time, those additional assignments also have the potential to add to the knowledge and experience that could increase governance effectiveness. Recent research has proposed that a busyness effect and an experience effect may occur simultaneously, and that one of the effects will dominate the other, based on certain company-specific characteristics.

For example, Clements *et al* (2013) hypothesize that the busyness effect will dominate the experience effect for directors of small companies. In other words, for directors of small companies, the time constraints and/or distractions caused by an additional board appointment are predicted to outweigh any experience benefits gained by the increased level of board service. The reasoning behind this hypothesis is that directors of small companies would not typically be appointed to the boards of large, more complex organizations where more beneficial experience effects might occur. Clements *et al* (2013) provide empirical support for this hypothesis. Additionally, they hypothesize that the experience effect will dominate the busyness effect for directors of large firms. This hypothesis is also supported by the data.

More recently, Clements *et al* (2014) predict that the experience effect will outweigh the busyness effect for directors who serve on outside boards in related industries and that the busyness effect will dominate for directors who serve on outside boards in unrelated industries. The experience hypothesis discussed earlier argues that outside directorships may provide the director with information and experience that is beneficial to the company. The authors posit that when a director is appointed to the board of a company in a similar industry, he/she has the opportunity to learn different monitoring techniques and/or operational strategies used by a company with a similar operating environment. These new techniques and strategies can potentially be transferred more easily to the other companies for which he/she serves as a director since the companies are similar in nature. It is hypothesized that this will lead to increased governance effectiveness. Clements *et al* (2014) document results generally consistent with these predictions.

This article falls in this recent strand of research in that we acknowledge that both a busyness effect and an experience effect will be present as directors increase their outside board service. However, this article extends the previous work of Clements *et al* (2013, 2014) in the following ways. First, Clements *et al* (2013) simply examine the *number* of outside board memberships held by each director and their statistical analysis includes only the size of the firm in question. In the current study, we extend the examination of factors which might increase governance effectiveness by examining the *size* of the outside companies on which the board member serves, and we use the *relative size* of the outside company as one proxy for the

level of knowledge and experience that can be gained from service on that company's board. In other words, we extend prior research in that we control for the effects of the Busyness Hypothesis (through inclusion of a control variable to control for the *number* of outside board memberships held by each director) in order to identify characteristics that cause the Experience Hypothesis to dominate and therefore increase governance effectiveness.

HYPOTHESIS DEVELOPMENT

We hypothesize that corporate governance effectiveness will be increased for those directors who attain what we refer to as 'beneficial experience' from serving on outside boards. One means for a director to gain such beneficial experience is by serving on the board(s) of comparatively larger companies. We use the 'relative size' (or comparative size) of the companies associated with the outside board memberships as a measure of the beneficial experience gained by the board member. Use of this measure is based on prior research documenting the relevance of 'information flows' that occurs when directors serve on multiple boards.

The Experience Hypothesis described earlier asserts that outside board service may provide a corporate director with new information and experiences that are beneficial to the company. We maintain that to the degree these 'information flows' are relevant to the company in question, the more effective a director will be in his/her corporate governance responsibilities. For instance, Mizruchi (1996) finds that directors from other boards are often able to provide a valuable channel for information flows about business policies and practices. In a similar vein, Haunschild (1993) documents that directors holding outside directorships may acquire information relating to the efficiency and implementation of a variety of business practices through observing the consequences of managerial decisions. Additionally, directors holding multiple directorships may potentially acquire knowledge about numerous corporate policy approaches via communications with other board members in board meetings (Davis, 1991). Prior research also establishes that serving on outside boards also affords opportunities for directors to monitor business relationships, establish networks, and learn differing management strategies and styles (Loderer and Peyer (2002); Carpenter and Westphal (2001); and Booth and Deli (1996)).

We maintain that the previously described 'information flows' result in a director acquiring beneficial experience when his/her outside directorships provide experiences that are particularly useful to the company in question. Such a situation may occur when a board member serves on an outside board of a company that is larger than the company being benefitted. The opportunity to serve on the board of a larger company may afford a level of experience and information acquisition not possible in smaller organizations since larger companies are typically more complex and would have more opportunities for relevant information flows. Thus, the knowledge provided by exposure to numerous corporate policy approaches, as discussed by Davis (1991), and the knowledge provided by exposure to the efficiency and implementation of a variety of business practices, as discussed by Haunschild (1993), would likely be both broader and more in depth for larger companies.

Therefore, we hypothesize that when a director accepts an appointment to the board of a relatively larger company, he/she has opportunities to learn differing operational strategies and/or monitoring techniques used by a larger, more complex company. These new strategies and techniques may then be transferred to the other companies for which he/she serves as a director.

In our empirical tests, we employ a company's number of reported material internal control weaknesses as a proxy for directors' corporate governance effectiveness. We utilize this governance effectiveness proxy for two reasons. First, the number of reported internal control weaknesses is a suitable proxy given that the Sarbanes-Oxley Act of 2002 holds

corporate directors responsible for a company's effective internal control environment.

Second, prior research findings provide support for our proxy of corporate governance effectiveness. For example, Doyle *et al* (2007, p. 202) assert that they 'expect a well-governed firm to exhibit fewer material weaknesses, all else equal'. Johnstone *et al* (2011, p. 333) support Doyle *et al* 's expectation by stating: 'The limited related research in this area reports a positive association between levels of internal control quality and superior corporate governance'. The findings of Hoitash *et al* (2009), Zhang *et al* (2007), and Krishnan (2005) also provide support, since each study reports that internal control weaknesses are less likely for those companies that have a high-quality audit committee of the board of directors. Additionally, Elbannan (2009) examines disclosures of internal control weaknesses and finds that corporate governance strength is positively associated with internal control quality.

Thus, previous research has documented that the number of material weaknesses in internal control decreases as corporate governance effectiveness increases. We therefore use the number of material weakness in internal control as our measure of governance effectiveness, and we further predict an inverse relationship between the relative size of the companies for which a firm's directors hold outside board memberships and the number of reported internal control weaknesses. Thus, our first hypothesis is stated as:

Hypothesis 1: There will be a negative correlation between the relative size of the companies for which a firm's directors serve as outside directors and the number of reported material weaknesses in internal control.

Our second hypothesis is that the previously predicted positive association between the relative size of the companies for which a firm's directors serve as outside directors and corporate governance effectiveness will be stronger for directors of small companies than for large company directors. The rationale for this prediction is that directors of large companies would typically already have wide-ranging experiences from serving on the board of directors of a large company, and would therefore gain less 'marginal benefit' from serving on other large company boards. On the other hand, directors of small companies would not typically have such a wide range of past experiences, and would be more likely to acquire incremental, beneficial (and potentially transferable) experience by serving on the board of comparatively larger companies. Therefore, our second hypothesis is:

Hypothesis 2: The negative correlation between the relative size of the companies for which a firm's directors serve as outside directors and the number of reported material weaknesses in internal control will be stronger for small firms than for large firms.

Figure 1 graphically displays our predicted relationships. Panel A shows our hypothesized relationship for small companies. For smaller companies, we posit a significant negative correlation between internal control weaknesses and the comparative size of the companies for which a firm's directors serve as outside directors. We are thus predicting a strong beneficial experience effect for small company directors that serve on the boards of comparatively larger companies. Panel B of the table demonstrates our predicted relationship for large firms. For larger companies, we hypothesize a smaller negative association. We are therefore predicting that for large company directors, serving on additional large company boards will only produce a limited incremental beneficial experience effect.

EMPIRICAL RESULTS

Data and descriptive statistics

We collected all required data from the *Audit Analytics* database. We utilized both the Corporate Governance and Audit Data subsets of

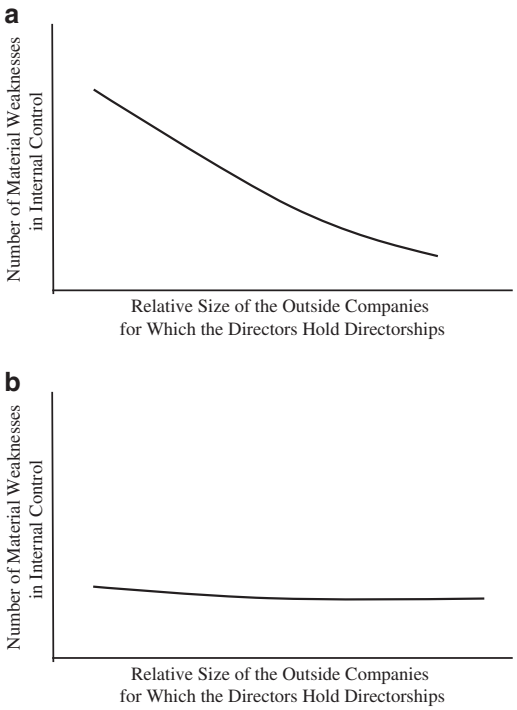

Figure 1: Hypothesized relationship between internal control weaknesses and the 'relative size' of the outside companies for which the board of directors hold directorships. (a) Hypothesized relationship for 'small' firms; (b) Hypothesized relationship for 'large' firms

Audit Analytics for the years 2004-2012. For each company, we gathered the following annual data: the number of material weaknesses in internal control reported in a particular year (MWIC), the total number of board members (MEMBERS), firm size as measured by the natural log of sales (SIZE), the average number of board memberships held by a company's board members (BOARDS), the relative size of the outside companies for which the board members serve as directors (RELSIZE), the stock exchange on which the company's stock is traded (EXCHG), and the name of the company's auditor (AUDITOR). A total of 28 977 firm-year observations were collected.

In our regression models, the dependent variable is labeled MWIC, which indicates a company's number of reported material weaknesses in internal control in a given year. For the 28 977 firm-year observations, the mean number of reported material internal control weaknesses was 0.13 per firm-year, and the range was from zero to 18. Table 1 displays descriptive statistics on our dependent variable, along with descriptive statistics for both our control and independent variables. Table 1, Panel A provides descriptive statistics for the entire sample of firms, while Panels B and C provide descriptive statistics for 'small' firms and 'large' firms, respectively.

Panel A provides details about our independent variable of interest, which we label RELSIZE. This variable is calculated as the ratio of the size of the outside companies for which a firm's directors serve relative to the size of the company under examination. We use the natural log of sales as our size measure. For a given company, we first calculated RELSIZE for each director. If a particular director, on average, served on outside boards of larger companies, then RELSIZE would be greater than one for that director. Conversely, if on average, a director served on outside boards of smaller companies, then RELSIZE would be less than one. In our coding scheme, a particular director's RELSIZE measure would equal one if he/she did not serve on any outside boards, or if on average, the outside companies were the same size as the company in question. We then averaged each individual director's RELSIZE measure to calculate a company's RELSIZE score for a particular year. Panel A of Table 1 shows that the mean of our primary independent variable (RELSIZE) is 1.00, with values ranging from 0.45 to 2.22. Panels B and C reveal that the mean of the relative size variable is also approximately one for both our large company and small company subsamples. The implication of these findings is that, on average, directors of small companies tend to serve on outside boards of other small companies, while large company directors tend to sit on other large company boards.

Table 1: Descriptive statistics for interval regression variables

Variable	*N*	*Mean*	*Std. dev.*	*Median*	*Min*	*Max*
Panel A: Descriptive statistics for full sample						
MWIC	28977	0.13252	0.65229	0.00	0.00	18.00
MEMBERS	28977	8.88815	2.99377	9.00	1.00	54.00
SIZE	28977	19.86950	2.74538	20.00	3.85	31.98
BOARDS	28977	1.44174	0.42947	1.33	1.00	9.50
RELSIZE	28977	1.00276	0.03345	1.00	0.45084	2.21807
Panel B: Descriptive statistics for 'small' firms						
MWIC	14488	0.19319	0.77557	0.00	0.00	17.00
MEMBERS	14488	7.75752	2.64393	7.00	1.00	23.00
SIZE	14488	17.82654	2.02212	18.31	3.85	20.00
BOARDS	14488	1.27428	0.34685	1.17	1.00	9.50
RELSIZE	14488	1.01410	0.03718	1.00	0.45084	2.21807
Panel C: Descriptive statistics for 'large' firms						
MWIC	14489	0.07185	0.49208	0.00	0.00	18.00
MEMBERS	14489	10.01870	2.89464	10.00	1.00	54.00
SIZE	14489	21.91232	1.62435	21.53	20.00	31.98
BOARDS	14489	1.60919	0.43874	1.56	1.00	4.33
RELSIZE	14489	0.99142	0.02447	0.996	0.77417	1.18866

MWIC = number of material weaknesses in internal control; MEMBERS = total number of board members; SIZE = natural log of sales (proxy for firm size); BOARDS = average number of board memberships held by board members; RELSIZE = the relative size of the outside companies for which the Board of Directors hold directorships.

Table 1 also displays information on three variables that we utilize in our regression models to control for the effects of extraneous factors. We employ a company's total number of board members (MEMBERS), the natural log of sales (SIZE), and the average number of board memberships held by the board (BOARDS) as control variables. Our sample companies had a mean board size of approximately nine members. However, board size had a range of 1-54 members. In terms of average board memberships, including outside directorships, Panel A indicates a mean of 1.44 directorships per director, with a range of one to 9.50. We use this average number of board memberships (BOARDS) variable in our regression models as a control for the busyness effect documented in prior research. By controlling for busyness effects, we are able to independently measure the experience effects of multiple directorships in this study.

Table 2 provides descriptive statistics for two categorical variables that we also employ as control variables in our regression models. In our regression models, we control for the effects of both auditor type (AUDITOR) and stock exchange differences (EXCHG) on the relationship between the relative size of the companies for which a firm's directors hold outside directorships and reported material internal control weaknesses. Both a company's exchange listing and auditor may impact the firm's effectiveness in monitoring internal controls, and we therefore utilize these two categorical variables to control for such potential effects. As would be expected, the data reveal that for our sample firms that larger companies tend to be audited by either a 'Big Four' or

Table 2: Descriptive statistics for categorical regression variables (number of observations within each category)

Variable	*Full sample*	*'Small' firms*	*'Large' firms*
EXCHG = 0	3083	2991	92
EXCHG = 1	25 894	11 497	14 397
AUDITOR = 0	7327	6689	638
AUDITOR = 1	21 650	7799	13 851

EXCHG = stock exchange: equals 1 if firm is listed on NYSE, AMEX or NASDAQ, 0 otherwise; AUDITOR = auditor code: equals 1 if the firm's auditor is 'Big Four' audit firm, 0 otherwise.

national auditing firm and are typically listed on a major stock exchange. However, the evidence presented in Table 2 reveals that there appears to be sufficient cross-representation of exchange listings, auditor representation and firm size for our results to be robust.

Empirical model and results

In order to test our hypotheses relating governance effectiveness to the relative size of the companies for which a firm's directors hold outside directorships, we utilize a tobit regression model. Tobit regression is appropriate in situations where the dependent variable is truncated. In this case, the dependent variable (number of reported internal control weaknesses) cannot be less than zero. Our model is as follows:

$$\begin{aligned}\text{MWIC} = {} & \beta_0 + \beta_1\,\text{MEMBERS} + \beta_2\,\text{SIZE} \\ & + \beta_3\,\text{EXCHANGE} + \beta_4\,\text{AUDITOR} \\ & + \beta_5\,\text{BOARDS} + \beta_6\,\text{RELSIZE} + \varepsilon\end{aligned}$$

where MWIC equals the number of reported material internal control weaknesses

MEMBERS is a company's total number of board members
SIZE is the natural log of sales
EXCHG is coded 1 if the firm is listed on the NYSE, AMEX, or NASDAQ and 0 otherwise
AUDITOR is coded 1 if the firm's auditor is a 'Big Four' or National firm and 0 otherwise,
BOARDS is the average number of board memberships held by the company's board members
RELSIZE is the relative size of the companies for which the board holds outside directorships

Table 3 reports our regression results for the entire sample of 28 977 firm-year observations. The results provided in Panel A are reported as a comparison to previous research that does not predict differences based on the relative size of the companies for which a firm's directors hold outside directorships. Panel A demonstrates a significant negative correlation between the average number of board memberships held by a company's board (BOARDS) and reported material internal control weaknesses (MWIC). These results are consistent with the hypothesis that corporate governance effectiveness increases as outside directorships increase. Therefore, these results support the Experience Hypothesis as tested in previous research, but do not test for the 'relative size' effect predicted in this article.

In Table 3, Panel B, we report the results of our examination of the relationship between the relative size of the companies for which a firm's board hold outside directorships and reported material internal control weaknesses. However, we do not control for the average number of board memberships held by the company's board (BOARDS) in Panel B. The results reveal a highly significant negative correlation between the relative size of the companies for which a firm's board hold outside directorships and internal control weaknesses. These results support our Hypothesis 1. However, the results shown in Panel B do not control for the overall experience effect found in Panel A and in prior research.

Panel C of Table 3 provides the results of the estimation of our complete model, which controls for the average number of board

Table 3: Regression results examining the relationship between internal control weaknesses and the 'relative size' of the outside companies for which the board of directors hold directorships

Variable	*Coefficient*	*Std. error*	*z-value*	*P>| z |*
Panel A: Results examining quantity of outside board memberships ('BOARDS'):				
MEMBERS	−0.25675	0.02111	−12.16	0.000
SIZE	−0.11863	0.02380	−4.98	0.000
EXCHG	−1.05242	0.15305	−6.88	0.000
AUDITOR	−0.64792	0.12529	−5.17	0.000
BOARDS	−0.90533	0.14107	−6.42	0.000
Panel B: Results: Results examining relative size of outside board memberships ('RELSIZE'):				
MEMBERS	−0.25172	0.02126	−11.84	0.000
SIZE	−0.19205	0.02552	−7.53	0.000
EXCHG	−1.00223	0.15445	−6.49	0.000
AUDITOR	−0.75920	0.12371	−6.14	0.000
RELSIZE	−7.70850	1.57684	−4.89	0.000
Panel C: Results examining relative size of outside board memberships after controlling for the quantity of outside memberships:				
MEMBERS	−0.25193	0.02109	−11.94	0.000
SIZE	−0.15718	0.02589	−6.07	0.000
EXCHG	−1.00249	0.15372	−6.52	0.000
AUDITOR	−0.60606	0.12575	−4.82	0.000
BOARDS	−0.80848	0.14212	−5.69	0.000
RELSIZE	−6.27680	1.62451	−3.86	0.000

$MWIC = \beta_0 + \beta n$ (MEMBERS, SIZE, EXCHG, AUDITOR, BOARDS, RELSIZE)
where:
MWIC = number of material weaknesses in internal control; MEMBERS = total number of board members; SIZE = natural log of sales (proxy for firm size); EXCHG = stock exchange: equals 1 if firm is listed on NYSE, AMEX or NASDAQ, 0 otherwise; AUDITOR = auditor code: equals 1 if the firm's auditor is 'Big Four', 0 otherwise; BOARDS = average number of board memberships held by board members; RELSIZE = the relative size of the outside companies for which the Board of Directors hold directorships.

memberships held by a company's board. The results reveal a significant negative correlation between the relative size of the companies for which a firm's directors hold outside directorships (the RELSIZE variable) and reported material internal control weaknesses. Therefore, the relative size effect (RELSIZE) remains statistically significant even after controlling for the overall experience effect (BOARDS) reported in Panel A. These results support Hypothesis 1 and are consistent with the notion that corporate governance effectiveness may be enhanced by allowing directors to serve on outside boards of relatively larger companies.

Table 4 provides the results of our test of Hypothesis 2. That hypothesis predicts that the relationship between the relative size of the companies for which a firm's directors hold outside directorships and corporate governance effectiveness will be stronger for small companies than for large companies. In Table 4, we divide our sample at the median of the SIZE variable and estimate the tobit regression model separately for those observations less than the

Table 4: Regression results examining the relationship between internal control weaknesses and the 'relative size' of the outside companies for which the board of directors hold directorships (small versus large firms)

Variables	*Coefficient*	*Std. error*	*z-value*	*P>| z |*
Panel A: Results for 'small' firms:				
MEMBERS	−0.31161	0.02616	−11.91	0.000
SIZE	−0.15252	0.03164	−4.82	0.000
EXCHG	−0.73814	0.15691	−4.70	0.000
AUDITOR	−0.62468	0.13252	−4.71	0.000
BOARDS	−0.46726	0.20425	−2.29	0.022
RELSIZE	−7.44139	1.85514	−4.01	0.000
Panel A: Results for 'large' firms:				
MEMBERS	−0.14193	0.03761	−3.77	0.000
SIZE	−0.17563	0.07100	−2.47	0.013
EXCHG	−3.86573	0.69768	−5.54	0.000
AUDITOR	−0.49585	0.38321	−1.29	0.196
BOARDS	−1.30360	0.23926	−5.45	0.000
RELSIZE	−6.09438	4.29135	−1.42	0.156

$MWIC = \beta_0 + \beta n$ (MEMBERS, SIZE, EXCHG, AUDITOR, BOARDS, RELSIZE)
where:
MWIC = number of material weaknesses in internal control; MEMBERS = total number of board members; SIZE = natural log of sales (proxy for firm size); EXCHG = stock exchange: equals 1 if firm is listed on NYSE, AMEX or NASDAQ, 0 otherwise; AUDITOR = auditor code: equals 1 if the firm's auditor is 'Big Four', 0 otherwise; BOARDS = average number of board memberships held by board members; RELSIZE = the relative size of the outside companies for which the Board of Directors hold directorships

median value ('small' companies) and for those greater than the median value ('large' companies). Panel A provides the results for small companies. Consistent with Hypothesis 2, we discover a highly significant negative correlation between the relative size of the companies for which a firm's director's hold outside directorships (RELSIZE) and reported internal control weaknesses. In Panel B, we provide the results for large companies. While the RELSIZE variable also has a negative coefficient for our large company subsample, it is not statistically significant.

The results reported in Table 4 therefore support our prediction that serving on the board of a relatively larger company provides greater benefits for directors of small companies than it does for large company directors. These results are consistent with the view that small company directors attain more 'beneficial experience' than large company directors by serving on the board of a relatively larger company.

In Table 5, we report the results of a supplemental analysis that represents an alternative approach to test Hypothesis 2. This alternative approach is intended to shed additional light on the Table 4 results, namely that the 'relative size' effect documented here is stronger for small companies than large companies. In Panel A of Table 5, we divide our small company subsample into two partitions based on whether the RELSIZE variable is less than or greater than one. We then estimate regression models separately for small companies whose directors serve on outside boards of relatively smaller (RELSIZE<1) or relatively larger (RELSIZE>1) companies. Panel A reveals that the RELSIZE variable is only significant for those small companies whose

Table 5: Regression results examining the relationship between internal control weaknesses and the 'relative size' of the outside companies for which the board of directors hold directorships (small versus large firms)

Variable	*Coefficient*	*Std. error*	*z-value*	*P>| z |*
Panel A: Results for 'small' firms:				
Panel A1: Firms for which RELSIZE<1				
MEMBERS	−0.31988	0.03012	−10.62	0.000
SIZE	−0.12780	0.03475	−3.68	0.000
EXCHG	−0.86815	0.18145	−4.78	0.000
AUDITOR	−0.75282	0.16923	−4.45	0.000
BOARDS	−0.19916	0.38887	−0.51	0.609
RELSIZE	7.16896	6.53123	1.10	0.272
Panel A2: Firms for which RELSIZE >= 1				
MEMBERS	−0.32366	0.02777	−11.65	0.000
SIZE	−0.15586	0.03282	−4.75	0.000
EXCHG	−0.87049	0.16430	−5.30	0.000
AUDITOR	−0.53135	0.14421	−3.68	0.000
BOARDS	−0.23983	0.24315	−0.99	0.324
RELSIZE	−10.10085	2.38793	−4.23	0.000
Panel B: Results for 'large' firms:				
Panel B1: Firms for which RELSIZE<1				
MEMBERS	−0.14627	0.04529	−3.23	0.001
SIZE	−0.16174	0.07786	−2.08	0.038
EXCHG	−4.16549	0.83589	−4.98	0.000
AUDITOR	−0.52823	0.44977	−1.17	0.240
BOARDS	−1.45038	0.31618	−4.59	0.000
RELSIZE	−2.84487	6.60368	−0.43	0.667
Panel B2: Firms for which RELSIZE>=1				
MEMBERS	−0.12105	0.05111	−2.37	0.018
SIZE	−0.09845	0.08590	−1.15	0.252
EXCHG	−1.49791	1.03386	−1.45	0.147
AUDITOR	−0.75456	0.47676	−1.58	0.114
BOARDS	−1.12334	0.39748	−2.83	0.005
RELSIZE	−21.39664	13.21065	−1.62	0.105

directors serve on relatively larger company boards. This result is consistent with the previously reported results in that serving on larger company boards tends to enhance corporate governance effectiveness for small company directors. However, for small company directors, serving on a relatively smaller company board does not provide the same benefits.

In Panel B of Table 5, we report the results of a similar test for our large company subsample. In Panel B, we again divide the sample based on the value of the RELSIZE variable and separately estimate regression models for large companies whose directors serve on relatively smaller (RELSIZE<1) and relatively larger (RELSIZE>1) company boards. The Panel B results indicate an insignificant relationship between RELSIZE and material internal control weaknesses for large companies in both cases. In other words, these results are consistent

with the idea that large company directors do not attain incremental beneficial experience by outside board service, even when the board service is for another large company.

The results provided in Table 5 indicate that our previously reported results are largely driven by the small companies in our sample, particularly small companies whose board members serve on outside boards of relatively larger companies. Table 5 results therefore also support our Hypothesis 2 that the positive relationship between the relative size of the companies for which a director holds outside directorships and corporate governance effectiveness is stronger for small company directors than large company directors.

Taken as a whole, our empirical results support the idea that corporate governance effectiveness may be enhanced by allowing directors to accept additional board memberships, provided the new assignment is on a relatively larger company board. We also document that this result is stronger for directors of small companies than for large company directors. We thus find a strong beneficial experience effect when serving on relatively larger company outside boards, and that this result holds true to a greater degree for directors of small companies than for large company directors.

Sensitivity analysis

In the previous section, we discuss regression results relating governance effectiveness to the relative size of the companies for which a firm's directors hold outside directorships. Several aspects of that statistical analysis, however, require further examination in order to strengthen the reliability of the conclusions. This additional examination is in the form of sensitivity analysis and is discussed below.

First, we examine whether there are possible timing differences between a board member's outside board memberships and corporate governance effectiveness. The current results in Tables 3-5 were produced from a yearly cross-sectional analysis of the data. In other words, in Tables 3-5, board member's outside board memberships for each company in a given year are regressed against the number of material internal control weaknesses in that same year in order to measure the relationship between beneficial experience and corporate governance effectiveness. However, it is possible that there is a time lag between experience and its effect on governance effectiveness. In order to test whether any possible time lag affected our results, the regression models from Tables 3-5 were also run under two different scenarios: (i) a one-year lag between the board member's outside board experience and governance effectiveness, and (ii) a two-year lag. Results of these regressions are generally consistent with the results in Tables 3-5. The one exception is the RELSIZE variable in Table 5, Panel B2. In the original results presented in Table 5, Panel B2, the RELSIZE variable was insignificant. Conclusions, discussed earlier, were that these results are consistent with the idea that directors of large companies do not attain incremental beneficial experience by outside board service, even when the outside board service is for a larger company. Results from the lagged regression models (both one-year lag and two-year lag), however, although not presented, show a negative and significant relationship; as the relative size of outside board memberships increases, material internal control weaknesses decrease. This would be consistent with the conclusion that when a one-year or a two-year lagged effect on governance effectiveness is assumed, directors of large companies do attain incremental beneficial experience by outside board service when the board service is for a larger company. Sensitivity analysis using lagged variables, however, does not change the results in Table 5, Panels A1 and B1; that directors of both small companies and large companies do not attain incremental beneficial experience by outside board service when the outside board service is for a *smaller* company.

Second, we examine whether the results in Tables 3-5 are affected by outliers in the data.

As seen from the descriptive statistics in Table 1, certain of the variables exhibit possible extreme values. To determine whether our results are affected by the presence of possible outliers, the regression models in Tables 3-5 were also run using winsorized variables, which involve the transformation of the relevant variables in order to reduce the effect of possibly spurious outliers. Winsorization of the relevant variables was performed at both the 90 and 95 per cent levels. The results of these regressions are not presented, but are consistent with the results in Tables 3-5. None of the significance levels changed for any of the variables under examination. Thus, results did not seem to be affected by the existence of any possible outliers.

Finally, we performed sensitivity analysis on the level of 'RELSIZE' sufficient to provide beneficial experience necessary to significantly affect governance effectiveness. Again, RELSIZE is a 'relative size' variable, and measures the size of the outside company on whose board a board members sits, relative to the size of the company at hand. For example, a RELSIZE variable of 1.05 would indicate that the board member sits on an outside board for a company that is 5 per cent larger than the company being examined. In order to test whether sitting on outside boards of 'larger' companies increased governance effectiveness, we compared results for firms with RELSIZE<1 versus firms with RELSIZE $\geqslant$1. These results are presented in Table 5, and as discussed earlier, indicate that for smaller firms, governance effectiveness was significantly increased when board members sat on outside boards for larger companies (that is, when RELSIZE was greater than or equal to one). However, we also performed sensitivity analysis to determine if a RELSIZE of *one* was the cutoff for significant improvement, or whether it was actually some level of RELSIZE somewhat greater than one that was needed before significant improvement in governance effectiveness was observed. Therefore, we performed sensitivity analysis using subsamples of firms consisting of various cases of RELSIZE. Results indicated that governance effectiveness significantly increased for measures of RELSIZE greater than 1.0. In other words, as long as the outside board membership was for a company even slightly larger, an increase in governance effectiveness was observed. As RELSIZE increased, governance effectiveness continued to increase. And consistent with our results in Table 5, sensitivity analysis again showed that outside board memberships for smaller companies (that is, RELSIZE<1) provided no beneficial experience that was measured by an increase in governance effectiveness.

CONCLUSIONS AND FUTURE RESEARCH

This article explores the relationship between governance effectiveness and the relative size of the companies for which a firm's directors hold outside directorships. The majority of previous research has examined two seemingly competing hypotheses in an attempt to determine whether directors holding multiple directorships are detrimental or beneficial to a company. The Busyness Hypothesis posits that as directors accept additional outside board positions, they become overcommitted and/or distracted, which in turn results in decreased corporate governance effectiveness. Alternatively, the Experience Hypothesis predicts that as directors accept additional outside board memberships, they attain valuable experiences in varied operating and/or regulatory environments, which results in increased governance effectiveness.

In this article, we follow a recent line of research that contends that these are not competing hypotheses, but rather that both an experience effect and a busyness effect are present when directors serve on multiple boards. We hypothesize that corporate governance effectiveness will be increased for companies whose directors gain 'beneficial experience' by serving on the board of companies that are comparatively larger. We also posit that this beneficial experience will be stronger for directors of small companies than for directors of

large companies, as directors of small companies will have more marginal benefit that can be gained from this outside experience.

We find a significant and positive relationship between the relative size of the companies for which a firm's directors hold outside directorships and corporate governance effectiveness (as measured by reported material internal control weaknesses). This result is consistent with the hypothesis that corporate governance effectiveness may be enhanced by allowing (or even encouraging) directors to serve on outside boards of companies that are comparatively larger. As predicted, we also discover that this 'relative size' effect is stronger for directors of small companies than for directors of large companies. In other words, we find that the beneficial experience acquired by serving on the outside board of a comparatively larger company is greater for small company directors, who typically are less experienced than large company directors. Our results therefore suggest that corporate governance effectiveness may be enhanced when corporate directors serve on outside boards of companies that are comparatively larger, and that this is particularly true for directors of small companies.

There are a number of future research avenues related to this overall issue on the association between corporate governance effectiveness and multiple directorships. In this article, we examine whether holding multiple directorships in relatively larger companies diminishes or enhances governance effectiveness. Future research could explore other firm-specific characteristics that might affect the relationship between multiple directorships and corporate governance effectiveness. Examples could include technology exposure differences and life-cycle maturity differences, among others. Additionally, future research could explore whether the relationships reported in this article would be affected by whether a company's board of directors consist of mainly company insider directors or outside (independent) board members.

Finally, although not addressed in this article because of data limitations, another area for future research could involve examining the effect of director tenure on governance effectiveness. In the current study we found that for smaller companies, serving on the outside board of larger companies increased governance effectiveness. However, a future research question would be the length of time, if any, required for that outside board service before enough beneficial experience is obtained in order to increase governance effectiveness. In other words, is the beneficial experience gained relatively quickly, or is there some minimum length of service required before governance effectiveness is increased?

There are also potential limitations of the current study that should be considered. For example, we utilize reported material internal control weaknesses as our proxy for corporate governance effectiveness. Even though this proxy is well-supported by prior research, there are likely other appropriate governance effectiveness proxies. Future research could replicate this study to assess whether the results are consistent if other proxies are used for governance effectiveness. A second potential limitation of this study is that our empirical analysis only includes US companies. Future research could replicate our tests utilizing data from other countries to ascertain whether our results hold in other contexts. Also, in our empirical tests we include variables to control for the potential effects caused by differences in auditor identity, exchange listing, company size and board size, as measured by the number of individual members on the board. Our results potentially could be affected to the extent we did not control for other factors that influence the relationship between multiple directorships and corporate governance effectiveness. Future research could also examine the robustness of our results to these potential limitations. However, our results provide information that should be useful to board members, management, investors, or other stakeholders that have an interest in whether members of a board of directors should

pursue additional outside board memberships, and under what conditions those outside directorships enhance governance effectiveness.

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