Small Firm CEOs and Outside Directorships:

Tenure, Demonstration and Synergy Effect

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Abstract

We investigate the determinants of the number of outside directorships held by CEOs of small, unquoted companies. CEOs of growth orientated firm's hold more outside directorships, as do CEOs of more complex firms. This reflects the need to acquire external resources and develop internal human capital. The evidence also supports CEO life-cycle theories in that longer tenured CEOs hold more outside directorships. It is also likely that once a CEO has crossed the threshold of taking her first outside directorship (and many never do) then this sends a signal to other boards that the individual is now in the market for other directorships and of the requisite quality. Synergy effects were also evident in particular industries. On balance there was little evidence of perquisite consumption and some evidence that boards do have a disciplining role.

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1 Introduction

The question of ownership and control of firms has attracted the attention of economists for a long period of time (see for example Berle and Means,1932; Baumol, 1959; Marris, 1964; Williamson, 1964). Arising from this body of literature is the possibility that directors and managers (agents) can behave in an opportunistic manner to the detriment of shareholders (principals). This situation arises in large firms, with a large number of shareholders, who subsequently experience difficulties in ensuring that agents' objectives are aligned with theirs. In short, there is 'the potential for the firms' senior executives to pursue non-profit objectives, although there is typically assumed to be a minimum performance level below which the management are dismissed' (Cowling, 2001,p.44). Yet as Daily et al. (2003) point out, 'there is little consistency in relationships between ownership and firm processes or outcomes.' (p.152).

The Daily et al. (2003) work is important as they explicitly point out that objective functions differ according to type of ownership and that this exerts a strong influence on firms' processes and outcomes. A specific example they use is variation in attitudes to risk depending on whether ownership is internalised (as it commonly is in smaller firms), or external (see also Gray and Canella, 1997). They also raise the issue of family ownership, and its potential impact on opportunistic behaviour. We explicitly test for potential family ownership influences in our empirical estimation. Building on from this, recent studies (Arthur, 2001; Mak and Li, 2001) have pointed out the potential endogeneity of board characteristics as these may be determined by organisational outcomes. This is important for this study as outcomes, or performance, may influence the decision of the CEO to take on external directorships.

Our study is grounded in agency and upper echelon research in the sense that business performance is, to a large degree, dependent on the quality of top executives in terms of defining strategy and seizing opportunity. From this, external ties, particularly outside directorships, are critical in terms of increasing information flows and building external relationships (Filatotchev and Bishop, 20002, p.942). This is particularly important for this study where the focus is on smaller firms who face greater uncertainty in their environments. In the context of IPOs, Filatotchev and Bishop *op cit* find that outside directorships reduce the extent of under-pricing. This finding is generally supportive of the information and experience theory of outside directorships.

More recently, a related body of literature has emerged which focuses on various aspects of corporate boards. Yet even on this Conyon and Peck (1998) argue 'that there remains a dearth of evidence on how corporate governance mechanisms contribute to firm performance' (p.291). One such study, Yermack (1996), who studies Fortune 500 firms, finds a negative relationship between board size and firm value. This is attributed to increasing communication and co-ordination problems. Yet this implicitly questions why firms do not adjust their board sizes accordingly. Jensen (1993) contends that this does not happen due to a strengthening of the CEOs control in larger boards. Rosenstein and Wyatt (1990) show that shareholder wealth increases with the proportion of outsiders on the board.

However, Eisenberg, Sundgren and Wells (1998), in a study of 900 small Finnish firms between 1992 and 1994, argue that whilst excess managerial control might be an appropriate explanation for large firm behaviour, this is less plausible in small firms where there is little separation of ownership and control. They provide a third alternative for the observed negative board size-performance relationship, that of board composition. Here the authors refer to the proportion of outside directors as a positive function of board size. Typically outsiders, with small equity stakes, will have less to gain from increased value, but a severe reputational loss if the firm performs poorly. But with larger boards, the costs of poor decision-making are spread across a larger group, thus reducing the individual effect. Alternatively, they also suggest that sub-optimal board size might be a choice made by control averse founders and/or owner managers.

Other literature has focused on the role of outside directors in removing poorly performing CEOs (Weisbach, 1988), and in improving 'market' responses to managerial control actions (Byrd and Hickman,1992; Brickley, Coles and Terry,1994). Yet the factors governing the probability of a CEO holding an outside directorship, much less the number of outside directorships, is a hugely under-researched area. On the former, the most notable studies are those by Kaplan and Reishus (1990) and Gilson (1990), both of whom find that CEOs of high performing firms are more likely to take on outside directorships. The latter issue was the focus of a study by Booth and Deli (1996). In their study, they empirically estimate the determinants of the number of outside directorships held by a CEO as a function of their own firm characteristics. The key findings were that growth opportunities within the firm reduce the number of outside directorships and that longer tenured CEOs will tend to hold more outside directorships. They conclude that there is little evidence that outside directorships are viewed as a means of perquisite consumption.

We examine the determinants of the number of outside directorships held by CEOs of independently owned UK firms. Thus our work builds upon, and complements, the pathbreaking US work of Booth and Deli (1996) who tackled the same question using a sample of larger, US firms. The value added of our work is that the nature of agency costs in smaller, often family owned, closely-held businesses is very different to those in larger firms with diverse shareholdings. Thus, *a priori*, we would expect to identify different empirical relationships. Yet to maintain consistency, and facilitate comparisons, with Booth and Deli (1996) we adopt the same empirical procedure, although we expand on this at a later stage.

We find that the number of outside directorships held by CEOs is positively related to growth opportunities, CEO tenure and size of own firm. In addition, we note that CEOs of family businesses hold significantly fewer outside directorships. Higher levels of board shareholdings also reduce the number of outside directorships. Yet monitoring by outside board members plays no significant role.

These findings have several interpretations. Firstly, the positive growth effect is more supportive of the CEO quality rationale. Here, CEOs of small businesses with growth opportunities signal their quality to the market and hence receive more offers of outside directorships. It is conceivable that their marginal products, given the small scale of our sample businesses, are so high that their own firm does not suffer unduly from time-

consuming outside directorships. This is supported by the findings of Westhead and Wright (1998), who document the relatively high incidence of 'portfolio' business ownership amongst entrepreneurs.

The finding that CEO tenure increases outside directorships is consistent with the notion that more authority is delegated by CEOs as the years pass, thus freeing up more time for incumbent CEOs (Vancil,1987). This empirical observation is consistent with that reported by Booth and Deli (1996). The fact that CEOs of family businesses hold fewer outside directorships is consistent with the higher relative importance to all members of the family (including the CEO) of the business. To divert attention away from the business that the family depends on for its livelihood and income and employment for future generations is too risky and might provoke family censure.

Regarding costs of perquisite consumption in the form of board shareholdings, the negative and significant relationship identified suggests that in many small firms, these costs are perceived by CEOs and boards to be too high, and detrimental to their income streams. Paradoxically, external monitoring played no role. This might imply that the disciplinary effect of insider board members is equally strong (or weak) as that of outsiders.

We also tested for industry and geographical effects. On the former, we observed that CEOs of firms in the financial services sector, and to a lesser extent retailing and construction, hold significantly more outside directorships. In the case of financial services, the results are consistent with mutually beneficial linkages at board level across a very fragmented industry at the small firm level. This type of collaborative arrangement may help small firms with individually small product/ service portfolios to compete more effectively with the larger institutions offering a full range of services in the industry. Much the same rationale can be put forward for construction where small firms tend to be fragmented on trade lines i.e. a plastering or carpentry business.

By contrast there was only one identifiable geographical effect. Here we observe that CEOs in East Anglia, a low population density region, hold more outside directorships than CEOs in the rest of the UK. The only argument we can put forward is that the supply of outside directors is so constrained in this region that all CEOs have a higher probability of being invited to join other boards.

In their totality, our results suggest that smaller firm CEOs are more likely to be offered outside directorships if they can signal their quality to other firms or when mutually beneficial linkages within industries can be made. Yet the decision, or willingness, to accept outside directorships is much more difficult in this size of firm where loyalties to families and other board members extend well beyond those in large firms. Yet high quality, entrepreneurial, CEOs of smaller, growing businesses appear to feel very confident in their own ability to 'juggle' several businesses at once.

The rest of the paper is organised in this way. In section 2 we examine factors that are likely to help determine the number of outside directorships held by a CEO. Section 3 describes the data and presents the empirical results. Conclusions are then drawn in Section 4.

2. Potential determinants of number of outside directorships held

Here we discuss those factors that might, *a priori*, be expected to influence the number of outside directorships held by CEOs. These factors are subsequently subjected to empirical investigation in Section 3.

2.1 Firm variation

There are two main issues that arise from previous literature, namely; learning-by-doing, and; intangible assets (or human capital). Clearly the two are not mutually exclusive. The former relates specifically to the enhancement of a CEOs personal ability by serving as an outside director. This in turn makes them more efficient in the context of their own firm. Bacon and Brown (1974) outline five key advantages. These are (i) benchmarking of own firm with others, (ii) exposure to innovation (iii) information gathering (iv) exposure to alternative management systems, and (v) a source of counsel.

On the latter, arguably, the CEO in a small firm is the most valuable intangible asset. In the words of Reid (1993,p.66), 'she is the fixed factor that cannot be made variable, even in the long-run'. Thus the CEO (usually the founding entrepreneur) can easily be viewed as the ultimate scarce resource. Following on from this, outside directorships that divert the CEOs attention away from her own firm will have a disproportionately high cost to that firm. These associated costs are particularly large where the firm has significant growth opportunities that require the full attention of the CEO.

H1: Where the firm has growth opportunities, the incidence of outside directorships will be reduced.

2.2 CEO tenure

Although the evidence consistently shows that smaller firm CEOs have longer tenures than large firm CEOs, the issue of succession is even more important, particularly in family owned businesses (Beckhard and Dyer, 1983; Churchill and Hatten, 1987; Ward, 1987; Donnelly, 1964). From Vancil (1987), who puts forward a model of CEO succession akin to a relay race, we might expect a transferral of power period during which the nominated successor gradually acquires the relevant skills and/or firm specific knowledge. This model finds empirical support from Brickley *et al.* (1993) and Booth and Deli (1996). Implicit in such a model is that the increasing transfer of power frees up current CEOs time that can then be put to other uses such as outside directorships. The counterpart to this is provided by Conyon and Read (2001), who contend that CEOs with less experience should be encouraged to take on outside directorships.

Kim and Ryu (1998) add two interesting twists with their empirical findings that shorter tenured CEOs are more likely to remain in post when firm performance is good, whereas longer tenured CEOs are more likely to be 'turned' over if firm performance is bad. In addition, Brickley *et al.* (1999) find that high quality CEOs are often invited back onto their own boards post-retirement.

H2: The longer the tenure of the CEO, the more likely they are to hold outside directorships.

2.3 The market for outside directors

The prevailing view (see for example, Bacon and Brown,1974; Lorsch and MacIver,1989) is that the market for outside directors is driven by a combination of non-pecuniary and firm level pecuniary reasons. On the former, the issue of status and prestige featured highly. Interestingly, this accords with the goals stated by CEOs of small businesses reported in Cowling (2001). Regarding the latter, it is not the direct pecuniary returns to the CEO of holding outside directorships that motivates CEOs, but the potential to develop mutually beneficial linkages to their own firms. This implies that the decision is a long-term strategic one on the part of the CEO.

2.4 Perquisite consumption

For large firms the debate focuses very explicitly on principal-agent problems between shareholders and managers. In small firms, where ownership and effective control go hand-in-hand (Watson,1991), this is less of an issue. Following on from this, the costs and benefits of a CEO taking on outside directorships directly impact on the CEO as a significant shareholder in their own firm. Aside from this, the costs and benefits attributable to holding outside directorships are the same. The major cost is time spent away from their own firm and the benefits are increased managerial ability and the opportunity to build business relationships.

In the smaller firm, however, where the CEO holds large blocks of shares, the investment in personal human capital is not separable from the contribution to the firms stock of human capital. On balance, the incidence of perquisite consumption is less of an issue in closely held small firms as the CEO benefits from an increase in shareholder returns if the own firm performance is enhanced by holding outside directorships or if the CEO devotes full attention to their own firm.

H3a: The greater the proportion of total shares held by the board, the lower the incidence of outside directorships as the board exerts a disciplining effect.

H3b: The greater the proportion of total shares held by the board, the higher the incidence of outside directorships as the board benefits from increased shareholder returns.

2.5 Control variables

Here we discuss the nature of our control variables and how they might impact on outside directorships. The four basic control types are; firm size, board size, industry and geography.

2.5.1 Firm size

For our purposes firm size proxies for the complexity of the environment facing the firm (Fama and Jensen,1983). This can plausibly have two effects on outside directorships. For example, in larger firms one could argue that the potential gains from holding outside directorships are much larger given the scale of contracting relationships. Equally, one could argue that smaller firms face a more uncertain environment and have a greater need to build relationships with other firms to reduce this uncertainty. Yet clearly smaller firms are more susceptible to the 'homeostasis' effect under which a firm with a small management team suffers disproportionately when one member is away (Cowling ,2001).

H4: The larger the size of firm, the greater likelihood that CEOs will hold outside directorships.

2.5.2 Own board size

The issues concerning own board size are similar to those relating to firm size. In particular, the costs of time spent away from the CEOs own board fall disproportionately with board size. This is the same as the 'homeostasis' effect identified previously. But in family firms the reverse may be true. Here, even if the family CEO is away on external board duty, other members of the family will ensure that family interests are represented. Yet the disciplining effect of the family may mitigate against this, particularly if the CEO is the founder of the firm.

H5: The larger the board size, the greater the likelihood that CEOs will hold outside directorships.

H6: Boards with non-executive directors are more likely to have CEOs with outside directorships.

2.5.3 Industry

In the work of Booth and Deli (1996), industry effects were tested for to capture the regulatory environment. For small firms this is unlikely to be an issue, as the combined market power of two (or more) small firms has no anti-competitive implications. Yet industry effects may still be important. For example, it is likely that in certain industries building networks is far more important than in others. Take the case of a small manufacturing firm in a supply chain. Equally, in industries where small firms specialise in horizontal niches (Bradburd and Ross,1990) that renders them incapable of bidding for, and carrying out complete contracts (for example in construction).

2.5.4 Geography

There is a wide disparity across regions of the UK in the business stock per head of population (Gavron *et al*,1998). This can, potentially, have two opposing effects on the market for outside directorships. Firstly, demand and supply might be low such that the

number of outside directorships 'traded' is disproportionately low. This would hold weight if there is some sort of threshold or demonstration effect whereby the probability of holding outside directorships increases exponentially once a CEO has committed to her first post. Alternatively, it might be the case that all CEOs have to work harder (ie take more outside directorships) to ensure that boards have adequate external representation.

3. Data and Empirical Estimation

In this section, we first describe the data and then proceed to empirically test the hypothesised determinants of the number of outside directorships held by CEOs.

3.1 Data description

Our sample is drawn for a survey of CEOs of UK, independently owned i.e. unquoted companies conducted in 1995. Thus we encompass not only the small business sector per se, but larger companies who have retained control of their stock without recourse to public offerings of equity and the subsequent dilution of ownership that this entails. Given the need for multiple measures of comparative performance, data was collected in order to explore linkages between strategy, governance and performance. The sample was drawn to reflect the population of UK companies according to industry and geographical distributions. In total 427 valid responses were received, after multiple recall, from a starting sampling frame of 1,000. We drew our original sampling frame from the Dun & Bradstreet companies database, the largest of its kind in the UK. The advantage of using such a database was both the nature of the information held on each firm which facilitated further sample stratification, and the speed and ease of the process in which the customer receives mailing lists and company information. The sample was originally stratified using the UK VAT register on the basis of standard geographical regions (11 in total) and broad industrial sector defined by SIC (1980) codes. All company names were verified using the FAME and ONESOURCE company financial on-line data sources. From the survey responses, the following variables can be defined:

Definition of variables

Dirs	number of outside directorships held by a CEO
Size	book value of fixed assets
BODCom	percentage of common stock owned by directors
NumDir	number of directors on the CEOs own board
Out	number of outsiders on the CEOs own board
CEOyear	number of years the CEO has held this position
SIC	nine binary [1,0] 1-digit SIC codes
Regional	eleven binary [1,0] standard UK region codes
Growth	binary variable coded 1 if CEO is growth orientated
Profit	binary variable coded 1 if CEO is profit orientated
Family	binary variable coded 1 if family firm

The '*growth*' and '*profit*' orientation variables are proxies for future growth and profit opportunities in the sense that CEOs orientated towards these objectives will actively seek out new opportunities and strategies to realise them. *Out* and *BODCom* proxy for the cost of perquisite consumption. *CEOyears* is a proxy for the firm's costs of its CEO assuming outside directorships. Implicit in this proxy is that the longer the CEO has held this position the greater the opportunity for the heir apparent to be groomed for succession and knowledge transferred (Booth and Deli, 1996, p.90). Regional dummies allow for potential differences in the market for directors across geographical regions. Family allows for differences between family businesses and non-family businesses in the way firms are run, their objectives and any psychological attachment that family's as a social unit may have to their businesses (Westhead and Cowling, 1998).

3.2 Descriptive statistics

Table 1 presents the descriptive statistics for our sample firms. The mean number of outside directorships is 1.0, the median is zero. This compares to 1.87 and 2.0 in the US, S&P 500, sample drawn by Booth and Deli (1996). Rather surprisingly the maximum number of outside directorships in our sample is higher than Booth and Deli at twelve compared to their eight. At the 75th percentile, CEOs hold only two outside directorships.

Firm size is highly skewed with a mean value of £1.18 million and a median of only £0.15 million. At the 75th percentile, firm value is less than half a million pounds. At the 25th percentile it is only fifty thousand pounds. Stock ownership by boards is very high, reflecting the small size of our sample firms. Hence, the average proportion of common stock held by boards is 87% with a median of 100%. Outside representation is also very low with an average of only 0.33 outsiders on the board. Boards are also very small, averaging only 2.93, although the maximum is 15. The interesting feature is that the difference in board size between large firms and small is very substantial, 12 to 3 comparing Booth and Deli's study to ours. Yet the means for outside directors across studies of different size classes of firms is relatively compressed. For example, Yermack (1994) and Booth and Deli (1996) report means of 0.59, whilst Byrd and Hickman (1992) and Brickley, Coles and Terry (1994) report means of 0.39 and 0.38, both close to our figure of 0.33.

Table 1: Descriptive Statistics for 1995

	Mean	Median	Std. Dev	Maximum	75th percentile	25th percentile	Minimum
Dirs	1.00	0.00	1.51	12.0	2.0	0.0	0.0
Firm value (£million)	1.18	0.15	7.50	110.1	0.46	0.05	0.01
Common owned by board	0.87	1.00	0.25	1.00	1.00	0.82	0.00
Size of own board	2.93	2.00	1.49	15.0	4.0	2.0	1.0
Out	0.33	0.00	0.83	7.0	0.0	0.0	0.0
CEO years	14.68	13.00	9.17	50.0	20.0	8.0	0.0
Growth	0.60	-	-	1.0	-	-	0.0
Profit	0.18	-	-	1.0	-	-	0.0
Family	0.63	-	-	1.0	-	-	0.0

The average CEO tenure is 14.68 years. This is much higher than that reported in larger firm studies (Booth and Deli, 1996; Conyon, 1994). In total 60% of CEOs have an explicit growth orientation. This presumably reflects the need to grow to exhaust all economies of scale given the relatively small scale of the majority of our sample firms. Only 18% had an explicit profit orientation. This is consistent with the closely held nature of our sample firms and the reduced threat of shareholder action if the business performs poorly. Implicit in this assumption is that no easily accessible market exists in the UK for the sale of common stocks in unquoted companies. Finally, we observe that 63% of our sample firms are family businesses. On this, we hypothesise that family ownership entails a greater loyalty to the firm than might be the case for non-family firms.

3.3 Regression Analysis

Given the number of outside directorships held by CEO, Dirs, is left censored i.e. zero is the lowest possible number, we elect to estimate our models using a Tobit procedure. Table 2 reports Tobit estimates of the determinants of the number of outside directorships held by CEOs.

We estimate three models which are all reported in Table 2. The first model is close to those reported in Booth and Deli (1996) in that it includes governance characteristics and allows for variation across industries. In this model we observe that firm value is positively, and significantly, related to the number of outside directorships held by a CEO. This finding is robust across all our models, and is consistent with Booth and Deli's findings for larger firms. This finding is generally supportive of the complexity hypothesis in that the more complex the firms contractual arrangements, the greater the need to develop external relationships. We also observe that CEOs whose boards hold higher proportions of stock have fewer outside directorships. For example, the CEO of a board holding 100% of common stock would hold 0.5 fewer outside directorships than a CEO whose board only held 50% of common stock.

Table 2: Tobit estimates of the determinants of the number of outside directorships held by CEOs

	Model 1		Model 2		Model 3	
Variable	**Coefficient**	**t-stat**	**Coefficient**	**t-stat**	**Coefficient**	**t-stat**
Intercept	-0.20	-0.16	-0.33	-0.26	-0.47	-0.36
Size	0.0001***	4.60	0.0001***	4.39	0.0001***	4.42
BODCom	-0.01**	-2.02	-0.01**	-2.08	-0.01*	-1.79
NumDir	0.02	0.14	0.08	0.74	0.08	0.67
Out	0.07	0.26	0.06	0.23	0.09	0.34
CEO years	0.04*	1.94	0.04**	1.97	0.04**	2.06
SIC						
Agriculture	-0.77	-0.75	-1.05	-0.99	-1.17	-1.11
Construction	1.59*	1.86	1.83**	2.15	1.90**	2.24
Retail	1.46**	1.99	1.57**	2.15	1.64**	2.28
Trans & comms	1.63	1.59	1.75*	1.72	1.65	1.64
Finance	2.89***	3.77	3.00***	3.96	3.01***	4.02

Other services	1.86	1.34	1.90	1.41	1.49	1.13
Region						
East Anglia			1.24*	1.87	1.28*	1.97
East Midlands			-0.78	-1.20	-0.74	-1.16
North			0.09	0.11	0.09	0.11
North West			-0.00	-0.00	0.03	0.04
South West			0.57	0.82	0.59	0.87
West Midlands			0.89	1.27	0.69	1.00
Yorks & Humber			-0.20	-0.31	-0.19	-0.31
Scotland			-0.36	-0.46	-0.33	-0.42
Wales			0.66	0.81	0.71	0.88
Growth					0.57*	1.63
Profit					0.31	0.75
Family					-0.63*	-1.74
-2 LL	-302.20		-296.46		-292.78	
Pseudo R^2	0.08		0.09		0.11	

This suggests that the costs associated with taking outside directorships are perceived to be non-value maximising behaviour by boards in which ownership is concentrated. Yet there is no evidence that external directors play a disciplinary role.

Given our previous finding that firm size is positively, and significantly, related to number of outside directorships held, it is initially surprising to observe that no similar relationship exists with respect to board size. Further investigation of the data suggests that changes in board size are only tenuously linked to changes in firm size. For example, the median firm size and board size is £0.15m and 2.0. The respective means are £1.18m and 2.9. This may imply that board size is unrelated to the complexity of the firms' external environment and more related to other factors, such as family linkages.

Equally, it may well be the case that boards in very small firms have excess human capital which is only fully utilised after growth has been achieved. This is consistent with a Jovanovic (1982) learning-by-doing model. It also provides evidence against the perquisite consumption theory. For, as board size increases, the personal costs to a CEO of taking outside directorships falls. Yet the empirics refute this, even though, presumably, the opportunity existed for many CEOs.

CEO tenure is significantly related to number of outside directorships. This is consistent with Vancil's model of CEO succession and the large firm empirical findings of Booth and Deli (1996). In our study a CEO at the 25th percentile of tenure would hold 0.2 outside directorships compared to 0.8 for a CEO tenured at the 75th percentile. This reflects a simultaneous transferral of decision rights to the nominated successor, and an equivalent reduction in the costs of a current CEO taking outside directorships. As noted above, the tenure effect is substantial.

Focusing on the market for outside directorships, we observe some important industry effects. On this we note that CEOs of firms in financial services in particular, and to a lesser degree construction and retailing hold significantly more outside directorships. The magnitude of these effects is very large. For example, CEOs in the financial services industry are likely to hold three more outside directorships than CEOs in manufacturing (our base category). The equivalent numbers for CEOs in construction and retailing are 1.9 and 1.6 respectively (compared to manufacturing). It is noticeable that very small firms particularly dominate these three industry sectors. The respective shares of micro firms (less than ten employees) is 98.5% in construction, 92.5% in financial services and 92.2% in retailing (DTI Statistical Bulletin,1997). What our findings might imply is that small firms, in these industries in particular, have more to benefit from in developing, and maintaining, external relationships with other firms. Synergy effects may also be important in terms of allowing groups of small firms to gain from economies of scale and scope, perhaps in bidding for contracts, joint marketing of services, passing business on etc. By contrast, only one regional effect, for East Anglia, was apparent. Here we observe that CEOs in this region were likely to hold 1.3 more outside directorships than CEOs in all other regions.

Regarding growth and profit opportunities, we note that CEOs of firms with explicit growth objectives held more outside directorships than non-growth orientated CEOs. No significant differences were apparent for profit / non-profit orientated CEOs. The former finding implies that there are greater benefits to be gained from holding outside directorships in terms of developing human capital and business relationships than costs. It follows that CEOs of growth orientated firms feel a much greater need to acquire the necessary internal and external resources to manage and realise own firm growth. For large firms the opposite was true (Booth and Deli,1996, p.95). Together these two findings suggest that growth is more of an issue in small firms than profit. This is consistent with the empirical findings of Cowling (2001), who noted that, in a sample of small firms, around 80% had not exhausted all potential economies of scale. The implication being that failure to grow significantly reduces the probability of business survival (Phillips and Kirchoff,1989).

Finally, we note that CEOs of family businesses held significantly fewer outside directorships. This may well indicate that the linkage between the family as a social unit and an economic unit through their businesses are so strong that CEOs are under enormous pressure to be seen to be devoting all their attention to the family business.

Having observed from the distribution of outside directorships held by CEOs that the median CEO holds none, we now move on to estimate a heckman selection model. We choose this methodology to explicitly test for two things; firstly, whether or not the same factors that influence a CEO to become an outside director in the first instance subsequently help determine how many he or she holds. Secondly, whether the reason a CEO chooses to take on his or her first outside directorship is systematically related to their willingness / desire / ability to accumulate more. This is consistent with a signalling or demonstration effect. The two-stage procedure is ideally suited to this task.

Step 1 takes the form of a binary probit coded 1 if the CEO holds an outside directorship and zero otherwise. This step can be expressed thus:

CEO holds outside directorship [yes,no] = *f* (size BODCom, NumDir, Out, CEO Years, industry, growth, profit, family, region)

The second equation estimates the number of outside directorships held, conditional on the CEO holding at least one. This second step can be expressed thus;

Number of Outside Directorships = *f* (size BODCom, NumDir, Out, CEO Years, industry, growth, profit, family)

Formally we can express the regression relationship thus:

$$Y_i = x_j\beta + u_{1j} \qquad \text{[regression equation]}$$

Here, the dependent variable (number of outside directorships held) is only observed for observation *j* if:

$$z_j\gamma + u_{2j} > 0 \qquad \text{[selection equation]}$$

where:

$$u_1 \sim N(0, \sigma)$$

$$u_2 \sim N(0, 1)$$

$$\text{corr}(u_1, u_2) = \rho$$

In cases where $\rho \neq 0$, standard estimation techniques will yield biased results. The critical issue is whether CEOs choose to take outside directorships randomly. From the literature and our initial results, we are drawn to the conclusion that the decision is non-random. Table 3 reports the heckman selection estimates of the determinants of the number of outside directorships held by CEOs.

3.4.1 Selection equation

Table 3: Heckman selection estimates of the number of outside directorships held by CEOs

	Selection equation		Regression equation	
Variable	**Coefficient**	**z-stat**	**Coefficient**	**z-stat**
Intercept	-0.26	-0.42	0.45	0.51
Size	0.0002***	3.14	0.0001***	6.54
BODCom	-0.002	-0.40	-0.01**	-2.52
NumDir	-0.03	-0.42	0.07	0.87
Out	0.16	1.28	-0.19	-1.05
CEO years	0.008	0.69	0.04***	2.80
SIC				
Agriculture	-0.82	-1.57	0.37	0.49
Construction	0.88**	2.00	0.35	0.55
Retail	0.95**	2.52	0.07	0.12
Trans & comms	0.59	1.17	0.31	0.42
Finance	1.66***	4.35	1.16**	2.04
Other services	0.91	1.39	0.27	0.28

Region				
East Anglia	-0.32**	-2.15		
East Midlands	-0.16	-1.15		
North	-0.14	-0.73		
North West	-0.14	-0.65		
South West	-0.24**	-1.98		
West Midlands	0.35**	1.71		
Yorks & Humber	-0.05	-1.07		
Scotland	-0.08	-0.44		
Wales	-0.30	-1.56		
Growth	0.27	1.53	0.46*	1.89
Profit	0.14	0.67	0.41	1.36
Family	-0.27	-1.54	-0.40	-1.63
Selection term			0.37***	5.35
-2 LL	249.73			
Prob > $\chi 2$	0.00001			

Here we observe that own firm size is positively, and significantly, related to holding an outside directorship. This is consistent with our tobit estimates, although the magnitude of the effect is larger. However, no further governance or strategic variables were significant. Industry effects were identical to those reported previously, but of the order of half of their original scale. Yet more regional effects were apparent. Here, in addition to the negative East Anglia effect, we also observe a negative effect for the South West and a positive effect for the West Midlands.

3.4.2 Regression equation

Once again we observe a positive own firm size effect on the number of outside directorships held. We also identify a negative relationship between board shareholdings and outside directorships. CEO tenure also exerted a positive effect. These results are identical to those reported in our original tobit estimates. However, the construction industry and retailing effects dropped out, leaving only a positive effect in financial services. The results also show that growth orientated CEOs also hold greater numbers of outside directorships. Lastly, but very importantly, the selection term was found to be highly significant. This implies that the decision to take on an outside directorship is a non-random one which is associated with a given CEOs ability or willingness to assume multiple directorships. This finding is consistent with a signalling effect on the part of CEOs in the sense that taking on the first external directorship signals both quality (someone wants you) and willingness to hold similar positions in the future.

The differences between the selection and regression equations also highlight some important features. For example, boards with high levels of shareholdings do not appear to be unduly concerned with their CEO holding a single outside directorship, but do become concerned when the CEO becomes a multiple director. This is consistent with

boards of this kind perceiving that CEOs with larger numbers of outside directorships are increasingly more likely to be non-value maximising in the context of their own firm.

A similar result was identified on CEO tenure. Here, tenure has no effect on the initial decision to take an outside directorship, but once the CEO has taken that step, tenure increases the number held. This suggests that there might be two types of older CEOs. Those who want to wind down their responsibilities as they approach retirement, and those who need to find alternative outlets for their energies. The latter type of CEO may behave in a Jovanovician way by taking on more directorships as his or her abilities to fulfil such roles is revealed over time.

In addition, the growth effect is quite intriguing. Here we observe that having a growth orientation has no effect on the initial decision by a CEO to take an outside directorship, but a significant, and positive, effect on the number held thereafter. This result is consistent with a demonstration effect whereby CEOs with a growth orientation, having taken that first outside directorship, realise that there are significant own firm benefits to be gained from building up a wider network and array of business relationships and developing own expertise.

Finally, we recap on our various empirical findings and set them alongside the large firm results in Booth and Deli (1996). These are presented in Table 4.

Table 4: Determinants of outside directorships held by CEOs

Study	Method	Variables					
		Size	BODCom	NumDir	Out	CEO years	Growth
Hypotheses		+	+/-	+	+	+	+/-
Cowling	Tobit	+++	-	0	0	++	+
(2004)	Heckman: Step 1	+++	0	0	0	0	0
	Step 2	+++	--	0	0	+++	+
Booth & Deli	Tobit	++	0	0	0	++	--
(1996)	Tobit	+++	0	0	0	+++	---

In terms of the two strongest findings, our two studies are consistent. Firm size and CEO tenure are both positively associated with holding more outside directorships. We might thus conclude that complexity and CEO life-cycle theories are supported by the data. Equally, neither study found significant effects from board size or external representation on own boards.

Where differences are apparent, namely on board shareholdings and growth, these can be largely explained by more general differences between small and large firms. In a small firm, for example, growth requires the acquisition of external resources as well as internal resources much more so than in large firms with professional management teams and stable customer bases. In a similar vein, the relationship between the CEO and board in a small firm is much more personal and also typically longer established. This means that even the appearance of perquisite consumption would strain such relationships unduly in a small firm.

4. Conclusion

CEOs and corporate boards have been the focus of a considerable amount of attention in the media, academia and amongst public policy-makers over the last decade. Yet for the most part these debates have focused on large, publicly owned companies. In this paper we seek to redress this imbalance by investigating the factors that influence the number of outside directorships held by CEOs of smaller, independently owned, often entrepreneurial firms. In doing so, we draw inspiration from an earlier paper, that of Booth and Deli (1996), which focused on the same issues but used a sample of larger firms.

A common feature that runs through much of the literature on CEOs and outside directorships is that this represents perquisite consumption by CEOs. More importantly is the fact that their own boards take no disciplinary action to prevent it. Our results do not appear consistent with this on either count.

Firstly, we find that CEOs of more substantial and complex firms hold more outside directorships, as do CEOs with growth orientations. We suggest that in small firms this reflects the need to acquire external resources (eg management skills, inter-firm relationships) and develop own skills / human capital rather than perquisite consumption. Yet there is a disciplining effect when boards hold large blocks of shares. The issue appears not to be whether outside directorships can add value to the firm, but that there are diminishing returns to holding more outside directorships. The longevity and closeness of CEO – board relationships in small firms also acts as a constraint on opportunistic behaviour, as does the fact that CEOs are typically the founders of the company and large shareholders themselves. This is exacerbated in family firms where the fortunes of the business and the family are inextricably linked.

We also find strong empirical evidence in support of the CEO life-cycle theory. Here as decision-making rights are increasingly handed over to the nominated successor, CEOs have more time on their hands. For active CEOs, this is a period of time when they become increasingly willing to take on outside directorships. This probably is a combination of signalling and (quality) demonstration effects.

There were also some important industry effects. In financial services, for example, CEOs are likely to hold three more outside directorships than in manufacturing. These findings imply that in this industry in particular, small firms have more to benefit from in developing, and maintaining, external relationships with other firms. One interpretation is the opportunity to gain from synergy effects.

To summarise, our work can be viewed as a first attempt to test theories developed to explain the behaviour of CEOs and boards in larger firms against a sample of small firms. As such it can be viewed as building upon, and complementary to, the US based, large firm study of Booth and Deli (1996). The value added is that we use a sample of small firms, it is UK based, and it adopts alternative estimation techniques. Future work on samples of small firms might usefully consider the particular relationships of family members both within and outside the firm.

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