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Social Influence and Corporate Behaviour

A Case Study of Interdependent Decision-Making in Sweden's Publicly Traded Firms

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In the course of a few months in 1997, about 20 per cent of Stockholm Stock Exchange's primary-list firms transferred to the Exchange's secondary list due to a new tax policy. Drawing on a theory of social influence, we suggest that the transfer decisions depended both on the firms' social embeddedness with other firms in the population at risk and their economic predisposition to make such transfers. We model such transfer decisions as a continuous stochastic process by utilizing event-history techniques. The analysis is performed on data that are exceptionally good for both network and event-history analysis: they include the whole population of firms at risk in a complete observation window. Our results indicate that the decision to transfer was a function of the firms' economic predisposition and their social embeddedness in terms of board interlocks. The special features of our data in combination with our findings suggest that our results should have a broader application: Ignoring social interdependencies at the micro level when attempting to explain the rationale for strategic decisions at the firm level in a group of firms belonging to the same system is likely to miss some of the most important driving forces behind strategic decision making.

During a few months in mid-1997, a substantial number of firms listed on the Stockholm Stock Exchange applied for, and executed, a transfer from the primary to a secondary list.[1] The origin to these list transfers was a new tax law. On 29 May 1997, the social-democratic government (1994–8) increased the capital levy on capital invested in shares quoted on Stockholm Stock Exchange's primary list. The government now wanted to collect a 1.5 per cent capital levy on 100 per cent instead of on 75 per cent of the market value of the investment. At the same time, the government also declared that it had no intention of collecting a tax on investments in shares quoted on either of the Stockholm Stock Exchange's two secondary lists. This manoeuvre enforced, and made permanent, a tax difference between shares in primary- and secondary-list firms originating from a provisional regulation imposed by the previous government (1991–4) in 1992.[2] Reacting to the proposed tax increase, many shareholders demanded that the primary-list firms transfer to one of the less prestigious, but tax exempt, secondary lists. Their purpose was obvious: a transfer to a secondary list would mean full exemption from the capital levy.

According to inquiries made at the time, it appeared that the boards of directors in primary-list firms took the renewed tax discrimination very seriously because of the demands for transfer put forward by the shareholders. About 40 per cent of the primary-list firms considered abandoning the primary list for one of the secondary lists. Among primary-list firms, 70 per cent had discussed, or were going to discuss, the new tax legislation (*Dagens Nyheter,* Stockholm, 14 June 1997).[3] Between June and late August 1997, 20 out of 117 of the primary-list firms transferred to a secondary list. This unintended and unanticipated consequence of

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the reform led to a decrease in the tax yield. As a result, the minister of taxation and the minister of finance tried on several occasions to stop further list transfers by stating their intention to revise the law. Such statements had no visible effect, however, and the list transfers continued.

On 10 September, at the congress of the Social Democratic party, the tax loophole was finally closed. As one of the large newspapers reported from the congress: '"Tax policy is not to be decided by shrewd tax-dodgers", said the minister of finance . . . when he released the news [about how to stop further list transfers] amid a storm of applause during his speech to the party congress.' The report went on to say that: 'In the budget proposal of 19 September, the government will suggest that shares in all firms registered with the primary list on 29 May are still subject to the capital levy despite their current listing' (*Svenska Dagbladet*, Stockholm, 11 September 1997, our translation). Needless to say, no further transfers occurred after this announcement.

The purpose of this paper is to analyse this striking series of list transfers. Although the object of the present analysis might appear to be an unusual case, our general purpose is to demonstrate how the rationale of a particular class of strategic decisions is influenced both by economic incentives and by the firms' social embeddedness.

Strategic Choice and Social Influence

Besides being an object lesson in the unintended consequences of policy-making, this phenomenon underscores basic problems in strategic decision-making. Every primary-list firm on the Stockholm Stock Exchange faced a simple binary choice – to transfer to a secondary list or to stay on the primary list. It is commonly assumed that one of the main objectives of a business firm is to try to maximize the return of their owners'/stockholders' investment.[4] We have no indication that the motivation behind a list transfer should be any different. In reviewing the public debate at the time of the event, the media, firm executives, and government representatives unanimously treated a list transfer as a natural decision following from economic incentives.

We would thus expect that the decision whether to transfer or stay partly depends on what the board of directors consider to be the most beneficial course of action. If the transfer decision depended solely on the economic benefits related to the transfer, in this case the tax saving, some fraction of the primary-list firms would have applied for transfer and the rest would have remained on the list, and most importantly, those firms that decided to transfer would have come to a decision more or less simultaneously.[5] However, this did not happen. Instead, we observed a series of transfers over a period of several months up until the government acted to forestall what looked like a bandwagon. The fact that all primary-list firms faced the same choice, but that not all firms who decided to transfer did the same thing at approximately the same time, suggests that the firms' propensity to transfer could not have been solely related to economic benefits resulting from the transfer.

Evidence from a growing body of research on the social embeddedness of corporate actors suggests that variation in strategic decisions of the type we focus on could be influenced by communication flows in the firms' social networks (see Fligstein, 1985; Galaskiewicz and Wasserman, 1989; Wade, O'Reilly, and Chandratat, 1990; Davis, 1991; Haverman, 1993; Davis and Greve, 1997 for empirical evidence, and Mizruchi, 1996 for a review). One of the best examples in the recent literature is Davis's (1991) study of Fortune 500 firms during the period 1984–9, which shows that adoption of a 'poison pill' strategy against corporate takeovers was more likely if the firm had a director interlock with a firm that had previously adopted such a strategy.

Taking this into consideration, we will argue that social influence is a crucial aspect for understanding the logic behind the phenomenon, and that there is reason to suspect that some of the variation in transfer probabilities that we observe could be related to the interlocks between the transferees.

However, it is not always clear why and when the interlock argument should apply (see Stinchcombe, 1989; Powell and Smith-Doerr, 1994). For example, when studying the diffusion of a poison pill strategy and the diffusion of golden parachutes, Davis and Greve (1997) found that only the adoption of a poison pill strategy was subject to board-to-board diffusion. Since the adoption of both practices is a

boardroom decision, these findings beg the question as to why only the poison pill decision was influenced by boardroom communication.

We will argue that the ambiguity surrounding the transfer decision is a contributory factor in determining whether boardroom communication is influential in our case. Research on interpersonal influence has shown that in making decisions, a decision-maker is often influenced by individuals in his or her social networks (see e.g. Coleman, Katz, and Menzel, 1966; Granovetter, 1978; Burt, 1987). One reason for this is that individuals obtain their most reliable information through their social networks (Merton, 1968; Boudon, 1984; Brown, 1988). Another reason is that a personal network might be the only source of information for forming a well-considered decision in uncertain, novel, or otherwise ambiguous choice situations (see e.g. Sherif, 1936; Burt, 1987; Hedström, 1998).

One of the most frequently discussed negative aspects of a list transfer was the argument that secondary-list firms are not as easily spotted by potential buyers as primary-list firms. Because of this, one would expect a lower price per share after a transfer (confirmed by the one-day 7.5 per cent fall in the price of H&M shares after H&M decided to transfer). Another negative consequence emphasized by the media was that large foreign investors such as banks and trust funds might be less interested in stocks outside the primary list, due to investment regulations.[6] Both arguments are objections from a shareholders' point of view, since their investments might be devalued to an extent that exceeded benefits. These aspects indicate that the outcome of a decision to transfer was ambiguous enough to make it highly probable that directors would seek advice or guidance from other directors in order to gain information that would facilitate decision-making (Sherif, 1936; Festinger, 1954; Brown, 1988, Burt, 1987; Marsden and Friedkin, 1994).[7]

Thus, since the decision to transfer or stay was a strategic decision made at the boardroom level, and since the suggestive findings of previous research have indicated that board interlocks are a possible channel of social influence of the kind discussed here (Davis, 1991; Davis and Greve, 1997; Mizruchi, 1996), we expect that a firm's likelihood of transferring from the primary to a secondary list increases as the number of associates in the firm's board interlock network who have already made such a transfer increases.

However, as mentioned above, we also assume that firms are rational, i.e. that they try to maximize profit and minimize costs. While it is possible to mention many economic factors that are likely to influence the decision to transfer, we will restrict ourselves to the common factors discussed by the media at the time of the transfers. The reason for this is that these factors are general enough to apply to all organizations, and thus to account for some of the observed variation in list transfers related to economic factors.

Large companies are less likely to transfer

The debate at the time clearly indicated that large companies were less likely to transfer. The rationale behind this hypothesis is the commonsense notion that large firms are more visible, which implies a more conservative and careful choice of actions (Stinchcombe, 1965; Hannan and Freeman, 1989). For example, Bo Berggren, chairman of the pharmaceutical giant Astra, stated that company decisions could not be 'controlled by taxation absurdities' (*Svenska Dagbladet*, Stockholm, 24 April 1997, our translation), despite the fact that many of Astra's shareholders demanded a transfer at the annual meeting of shareholders.

Firms with a high net yield per share are less likely to transfer

The basic idea behind this hypothesis is that shareholders use the dividend to pay the capital levy on their shares. If this calculation results in a deficit, it would actually be a cost attached to owning shares in that firm. The media referred to this break-even point as the magical threshold for list transfers. Consequently, we expect a firm to opt for a transfer when the net yield per share is low or negative.

Firms with a high ratio of foreign owners (votes) are less likely to transfer

Foreign owners do not pay taxes in Sweden. The expectation is thus that foreign owners prefer the firms to remain on the primary list and not gamble with their shareholders' stakes by potentially exposing them to revaluations.

Firms with a low ratio of insider owners (votes) are less likely to transfer

The media were unanimous in the opinion that firms whose executives and board members ('insiders') were also the major owners of the firm were the ones most likely to transfer, since the insiders are in a position that enables them to look after their private interests directly.[8] This is also an important control variable since media coverage emphasized that the list transfers were the result of the private interests of major owners who were likely to sit on a company's board. Hence, we need to account for dominant insider owners in order to test the social influence hypothesis.

A Simple Model of Transfer Probability

Next, we will illustrate our reasoning more formally in order to arrive at a suitable model for testing the idea of social influence on corporate behaviour. We assume that the probability that any firm will transfer is a function of political context (i.e. tax policies), the firm's characteristics (size, ownership structure, etc.), and the social influence exercised by others. All firms are assumed to operate within the same political context. Firm characteristics are heterogeneous and can be treated as static across the short timespan under concern. Finally, social influence is firm-specific and defined as a function of the action of other firms in the social network across time. We can thus say that a firm's 'baseline propensity to transfer' is defined by political context and firm characteristics.

A simple heuristic model for the probability to transfer can be written as,

$$p_i(t) = \sum a(t) + \sum b_i + \sum c_i(t),\ 0 \leqslant p_i(t) \leqslant 1, \qquad (1)$$

where $p_i(t)$ is the probability that a firm, i, will transfer at time t and a, b, and c are factors related to the political context, firm characteristics, and social influence, respectively. Note that a and c are time-varying, while b is not. In addition, factors related to the political context are assumed to be the same for all firms. Thus, a has no subscript.

Following Strang's (1991) suggestion, we model the list transfers using an event-history technique. A decision has to be made whether to use a discrete-time or continuous-time model (see e.g. Allison, 1982). In discrete time the process can be modelled with a logit regression model (see e.g. Sandell and Stern, 1998). In continuous time, the same model can be estimated using a variety of techniques (see e.g. Tuma and Hannan, 1984; Blossfeld and Rohwer, 1995). The difference between discrete- and continuous-time event-history models should not be exaggerated because first, as time intervals become smaller, the discrete model converges to a continuous model, and second, they tend to produce very similar results. However, we base our choice of model primarily on the nature of the empirical phenomenon. The events that we study can and do take place at any point in time rather than at predefined time-intervals Therefore, we choose to model the event-history in continuous time.

As a in equation 1 is the same for every firm, its properties are of no theoretical interest in the present context. However, b and especially c are of central concern. This suggests that Cox regression is appropriate for estimating this particular model (see Cox, 1972; Blossfeld and Rohwer, 1995). In a Cox regression model, the baseline hazard rate, which corresponds to the political context, remains unspecified. Furthermore, the Cox model allows for both time-constant, i.e. firm, characteristics and time-varying, i.e. social influence, covariates. The following equation describes the Cox proportional hazard rate model:

$$r(t) = h(t)_e^{[\beta_i X + \beta_2 S(t)]}, \qquad (2)$$

where $r(t)$ is the transition rate, $h(t)$ is the (unspecified) baseline hazard, X is the vector of covariates measuring firm characteristics, and $S(t)$ is the vector of covariates measuring social influence. Parameters β_1 and β_2 are the corresponding vectors of coefficients.[9]

To model social influence, we apply a so-called 'network effects model'. Marsden and Friedkin (1993: 134) describe this model as a deterministic 'linear process in which an actor's attitudes or opinions are adjusted to those of the others who have some influence on the actor.' The social influence on each firm, s_i, is specified, following Marsden and Friedkin's suggestion, as:

$$s_i(t) = \sum w_{ij} \alpha_j(t), \qquad (3)$$

Table 1. *Descriptive statistics*

			Correlation coefficients						
	Mean	**SD**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. Transfer	0.010	0.098							
2. sqrt(foreign owner control*100)	3.896	2.224	0.057						
3. ln(private insider control)	−1.322	2.747	0.479	−0.211					
4. ln(legal insider control)	−1.156	3.824	0.199	−0.081	0.314				
5. ln(market value/100000000)	0.675	1.588	0.014	0.288	−0.425	−0.454			
6 (ln(market value/100000000))^2	2.504	3.273	−0.195	−0.160	−0.018	−0.128	−0.005		
7. Net yield per share − SEK	0.601	2.814	−0.087	−0.144	−0.103	−0.072	0.097	−0.010	
8. Board interlock influence[a]	0.069	0.119	0.018	−0.022	−0.092	−0.110	−0.091	−0.090	−0.013

Note: N = 117, transformed variables but at [a]N = 2051.

where $\alpha_j(t)$ is a variable that takes the value 0 if firm j is on the primary list at time t and 1 if firm j is on a secondary list at time t, and is the influence coefficient, i.e. the number of interlocks that i and j have in common. We have further constrained equation 3 so that it gives the relative influence (Doreian, 1981; Marsden and Friedkin, 1993).

Data and Measures

The population we study consists of all firms listed on the Stockholm Stock Exchange's primary list in 1997. The Stockholm Stock Exchange provided us with information about the dependent variable – a list of dates and subjects for firm transfers from the primary to a secondary list during the period June to September 1997. To model the social influence network, we used information on interlocking directorates. The interlock data were obtained from a list of board members in all publicly traded firms reported in Sundin and Sundquist (1997). When generating the measure of the influence coefficient (in equation 3), we disregarded board members such as deputy members, accountants, deputy accountants, and staff representatives to avoid the inclusion of redundant ties in the final analysis. The influence coefficient is the number of board members or insider owners that companies i and j have in common.[10]

Firm size was measured by market value. We defined market value as the number of issued shares times the market value of that share (in SEK) as reported by the National Board of Taxation (Riksskatteverket) on 1 January 1997.[11] Net yield per share is defined as the difference between dividend per share and the 'new' capital levy per share.[12] This measure gives a rough estimate of annual profit from a shareholding in a primary-listed firm adjusted for the proposed rate of taxation. As for market value, we collected the information about dividends per share from the National Board of Taxation. The measures of foreign owner control and insider control give the ratio of votes controlled by each of the owner categories.[13] Data on foreign owners was collected from Delphi Economics (1997), and data on insider owners from the Swedish Financial Supervisory Authority's (Finansinspektionen) database on insiders in Sweden's publicly traded firms.[14]

We wish to point out two important features of this data-set that makes it especially suitable for an event-history-based network analysis. First, we have data for the whole population and therefore, there are no missing network nodes. Second, the observation window captures the whole process, from the first to the last event.

Results

Means, standard deviations, and correlation coefficients for transformed variables are presented in Table 1. Partial likelihood estimates from two Cox models are presented in Table 2. Models 1 and 2 (Table 2) report our main findings. In addition, we present maximum likelihood estimates from three

Table 2. *Partial likelihood estimates from Cox regression of transfers from the primary to a secondary list*

	Model	
	(1)	**(2)**
Sqrt (foreign owner control*100)	0.081	0.117
	(0.119)	(0.121)
ln (private insider control)	0.554	0.605
	(0.120)	(0.129)
ln (legal insider control)	0.238	0.221
	(0.095)	(0.097)
ln (Market value/100000000)	0.890	0.872
	(0.261)	(0.272)
(ln (Market value/100000000))^2	−0.287	−0.227
	(0.174)	(0.186)
Net yield per share − SEK	−0.055	−0.061
	(0.086)	(0.085)
Board interlock influence		4.862
		(1.529)
Log likelihood	−69.63	−65.28
χ^2 against baseline	47.79	56.50
Df	6	7
N=117Number of transfers=20		

Note: Unstandardized coefficients; standard error in parentheses.

logistic regressions in Table 3. These models are provided to increase the robustness of the main result in Model 2. Since we base our data analysis on population estimates, statistical significance tests are irrelevant. It is not uncommon for variables such as those we analyse to have a skewed distribution (cf. Davis and Greve, 1997). Hence, we performed diagnostics and in some cases transformed the variables to correct for this problem. We have chosen to present our main results in two separate statistical models (see Table 2). In Model 1, we regress the event of a firm transfer on the firm characteristics. Accordingly, in Model 1 we deal exclusively with firm characteristics, without controlling for a firm's social embeddedness. In Model 2, we introduce the social influence variable.

We can see that the estimates of the independent variables in Table 2 are all quite robust across the two models. The following discussion will therefore refer mainly to Model 2. The reported parameter estimates cannot be directly compared with each other because most variables measure incommensurable quantities. To establish a basis for a meaningful comparison of the impact of the various independent variables, we present conditional effect plots in Figure 1 (based on the estimates in Model 2). For each variable, we calculate the relative hazard for a list transfer with the other covariates held at their mean. The relative hazard ratios are plotted against the independent variable without transformation. Thus, the set of six plots, with identical y-scales – indicating the relative hazard ratio – provides a visual comparison of the relative effect magnitude of the estimates.[15]

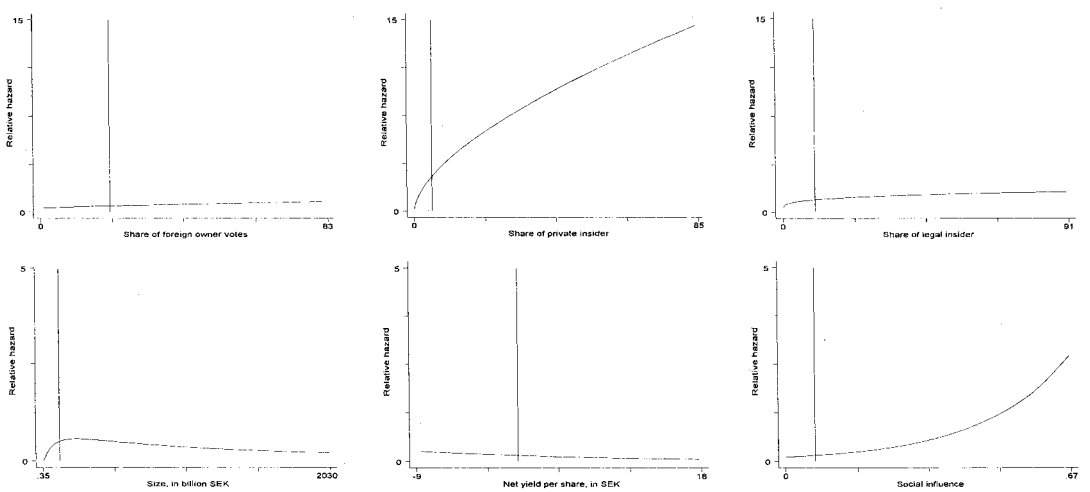

Figure 1. *Conditional Effect Plots of Relative Hazards. Based on estimates from Model 2 (Table 2). Vertical lines indicate mean value of untransformed variable. N=117, except for the social influence plot (lower right), where N=2051.*

The propensity to transfer increases slightly with size, i.e. with market value, as is clear from Figure 1. However, the relation between size and transfer propensity is non-linear, which in this case implies that the propensity to transfer does drop with size for firms with a market value greater than 2.5 billion SEK. As suggested, firms with a high net yield per share were less prone to transfer than firms with low or negative returns. However, the effect of this variable is small; the difference in relative hazard is −0.62 between maximum and minimum values, suggesting that this factor was less decisive in the transfer decision.

Somewhat surprisingly, our results indicate that a high ratio of foreign owners increased a firm's propensity to transfer. Although this effect is also small, it is still substantial; the relative hazard increases by almost three times when the foreign ownership variable changes from min. to max. value. Thus, the presence of foreign owners did not reduce the probability of a list transfer as anticipated. One reason for this might be that foreign investors pay more attention to a firm's economic performance than to its listing.

A less surprising result is the very strong effect of our insider measures. It is primarily the effect of private insider control, rather than insider control through a legal entity, that contributes to a firm's transfer. It is especially clear from Figure 1 that the few firms with a high concentration of personal ownership at the board level were particularly prone to make a list transfer. For private insider control, the relative hazard ratio rises from 0 to 14.5 between minimum and maximum values; for legal insider control, the difference is 1.5 between minimum and maximum. Based on this finding, it is safe to say that a firm was more likely to transfer if its executives had a personal interest in receiving the tax discount. The weaker effect displayed in the estimate of the legal insider control measure can be explained by the fact that a legal entity's ownership somewhat shields the insiders from capital levies.

As discussed above, we expected the decision to transfer to be dependent on social influences, and our results strongly support this view. As is evident from Model 2 (Table 2), the effect of board interlock influence is a substantial factor in predicting a list transfer. A visual comparison of conditional effects in Figure 1 clearly indicates that social influence is one of the most influential predictors of risk in this model. From the analyses in Table 2, we can conclude that social influence adds substantially to the prediction of list transfers on the Stockholm Stock Exchange in 1997. Chi-square against baseline increases from 47.8 in Model 1 to 56.5 when we introduce the board interlock influence in Model 2. It is interesting to note that the parameter estimates are approximately the same in both models. Given that we receive strong support for our network hypothesis when controlling for both private and legal insiders, we conclude that the transfers were not isolated events based on the directors' personal interest in a transfer, as commentators at the time of the transfers had unanimously suggested.

It is still possible that the list transfers could have been due to mimetic actions, i.e. that firms do not act on information transferred via board interlocks, but simply by observing and imitating similar others (see e.g. Burt, 1987; DiMaggio and Powell, 1983). Such an effect would not be spotted in the previous analysis. One way to detect such mimetic patterns is to look at the effect of cumulative transfers in the population. However, to include this variable in the Cox regression would result in a fully determined model, in which one tries to explain an event by means of the event itself. Therefore, we performed logistic regression analyses with lagged regressors, presented in Table 3.

In Model 3 (Table 3), we used the same independent variables as in Model 1 (Table 2). The result from this model leads us to conclude that the logistic set-up corresponds very well with the Cox model. It appears that the logistic regression (Model 5) somewhat over-estimates the effect of the independent variables as compared to the Cox regression (Model 2, Table 2) in the full specification, although the differences are very small. The model fits the data reasonably well, with a pseudo R-squared of 20 per cent. We ran this model again together with the cumulative transfer variable in Model 4. Apparently the cumulative transfers had no substantial effect on the transition rates; the model fit is hardly improved at all. The other estimates are consistent with the findings in Model 3 (Table 3).

Finally, we added the board interlock influence in Model 5. As was the case with our findings reported in Table 2, social influence adds substantially to the explanatory power of the model; pseudo R-squared

Table 3. *Maximum likelihood estimates from logistic regression of transfers from the primary to a secondary list*

	Model		
	(3)	**(4)**	**(5)**
Constant	−4.406	−5.188	−5.776
	(0.679)	(0.855)	(0.943)
Sqrt (foreign owner control*100)	0.070	0.083	0.127
	(0.117)	(0.121)	(0.124)
ln (private insider control)	0.533	0.570	0.629
	(0.119)	(0.123)	(0.132)
ln (legal insider control)	0.226	0.248	0.242
	(0.092)	(0.096)	(0.099)
ln (market value/100000000)	0.818	0.928	0.903
	(0.253)	(0.268)	(0.278)
$(\ln(\text{Market value}/100000000))^2$	−0.279	−0.292	−0.225
	(0.172)	(0.177)	(0.189)
Net yield per share − SEK	−0.046	−0.060	−0.079
	(0.087)	(0.088)	(0.088)
Cumulative no. of transfers		0.080	0.048
		(0.044)	(0.047)
Board interlock influence			5.275
			(1.592)
Log likelihood	−89.61	−87.94	−83.20
χ^2 against baseline	45.79	49.13	58.62
Pseudo R^2	0.20	0.22	0.26
Df	6	7	8
N=2051			

Note: Unstandardized coefficients; standard error in parentheses.
Note: Based on estimates from Model 2 (Table 2). Vertical lines indicate mean value of untransformed x-variable. N=117, except for the social influence plot (lower right), where N=2051.

increases by 6 per cent. We believe these findings add credibility to our argument that it is primarily through direct interaction that business firms influence each other, not by observation at a distance.

Conclusion

We have argued that social influence is an essential factor that can supplement the standard arguments of economic and industrial organization in predicting corporate behaviour. To illuminate the argument empirically, we analysed a striking series of events on the Stockholm Stock Exchange in 1997. We argued that the strategic decision to transfer from the primary to a secondary list due to a tax increase involved a high degree of ambiguity that would make the transfer decision susceptible to social influences across organizations. Our results strongly support this notion. Hence, to model the decision to transfer as an isolated event determined solely by the firms' economic predisposition, as suggested by commentators at the time of the events, would imply a mis-specification of the decision process preceding the transfer decision.

Another important concern in the paper is that it can be difficult to isolate the mechanism that causes the observed interdependencies in our data. In the context of this study, we argued that interdependent behaviour is likely to be caused either by social influence, as hypothesized, or by mimetic behaviour. To test for this alternative hypothesis we performed an additional analysis aimed at separating these two similar but quite distinct mechanisms. As it turned out, for this particular decision it was social influence that caused the observed interdependencies, a finding that strengthens the paper's theoretical argument.

A more general implication of our findings is that ignoring social interdependencies at the micro-level is likely to introduce a bias in explanations of events at the firm or meso-level. In terms of these findings, when explaining a firm's behaviour it is necessary to account for the simultaneous behaviour of firms whose decision makers belong to the same social network as the firm in question.

Another contribution of the paper is that we performed the analysis on a whole population of firms and with a complete observation window. Thus, data are exceptionally good for both network and event-history analysis. We were able to collect these unique data because we focused on a particular process that occurred in a small population for a limited period of time. These factors provide us with the kind of guarantee – 'what we see is what we get' – that is so often lacking in investigations based on samples and incomplete information about the studied event (see Mizruchi, 1996, for a review). Hence, despite the specific nature of the process, we feel that our results should have broader application. We conclude that in future analyses of strategic decision making at the firm level, the impact of social influence should be taken into consideration.

Notes

1. There are three main listings on the Stockholm Stock Exchange. The A-list, or *primary list*, requires a three-year verifiable history, at least 2000 shareholders, a minimum of 25% of the shares and 10% of the votes in public control, and a trade value exceeding 300 million SEK. The OTC-list requires a three-year verifiable history, at least 500 shareholders, a minimum of 25% of the shares and 10% of the votes in public control, and a market value exceeding 50 million SEK. Finally, the O-list requires at least 300 shareholders, and 10% of the shares and 10% of the votes in public control. Throughout, we refer to the O-list and the OTC-list as *secondary lists*.
2. The provisional regulation was imposed as a first step towards abolishing capital levies on shares, to be completed in 1995. The regulation meant an exemption from the capital levy on investments in secondary-list firms. For the time being, investments in primary-list firms were still subject to a capital levy (the capital levy rate was then 1.5% on 75% of the traded value), with one exception. Principal owners (a person or a family controlling 25% or more of a primary-listed firm's votes) did not have to pay the capital levy for their primary-list shares if the firm had obtained its primary listing after 1991. The sole purpose of this amendment was to make an upgrading to the primary list attractive until a full exemption from the capital levy on a person's shares, regardless of listing, could come into effect. For a legal entity, i.e. a company, the rate was only 1.5. The capital levy is only an issue for a person with total assets exceeding an amount just short of 1 million SEK. For legal entities, the limit is 25,000 SEK.
3. These figures are from a telephone survey conducted by the largest daily newspaper in Sweden, *Dagens Nyheter*, with all firms quoted on the primary list. The response rate was 65%.
4. Note that boards of directors not only represent the interests of the owners but also their own personal interests. This role ambiguity is known as the 'principal agent problem' (see e.g. Pratt and Zeckhauser, 1985; Schleifer and Vishny, 1997).
5. Some small variation should be expected due to inter-firm differences in decision-making time frames.
6. Some foreign investors interviewed by the Swedish media explained that their investment regulations concerning the Swedish stock market excluded secondary-list firms.
7. The reason why a director prefers to consult other directors is simply that the director probably perceives it as more informative to consult other directors over someone who has never had to decide on the matter for which they seek guidance.
8. Insiders are persons who are deemed to have a particularly good opportunity to obtain access to confidential information concerning a specific company. In the present context, insiders are either board members, chief executives, and executive managers (or their families) who own a large share of the voting capital, or other major shareholders, i.e. persons with a large share (exceeding 10 per cent) of voting capital. The insider can also be a legal entity (company). This is the case when the insider, instead of registering his shareholding personally, controls the shares in the company through a second company that the insider controls personally. The capital levy on shareholdings is different for persons and companies (see n. 2); thus, we make a difference between a private insider and a legal insider in our analysis.
9. We maximize the partial likelihood function, using the statistical analysis package Stata 5.0 (see Stata Corp., 1997).

10. We did estimate alternative models using binary and continuous interlock models. They generated similar results.
11. We did not distinguish between shares with different voting power when calculating market value. For firms trading in more than one type of share, there can be a slight difference in market value between shares with full voting rights and shares with restricted voting rights. This difference is usually small and does not vary systematically between firms.
12. It is not uncommon that the dividend per share is very low or zero, hence, there are many situations in which the net yield per share is actually negative.
13. Unlike the variable 'market value' (see previous note), for this variable we did consider differences in voting rights when calculating the ratios of control.
14. According to the Insider Trading Act, those persons who are in an insider position in a listed company must report their shareholdings as well as any changes in such shareholdings, to the Swedish Financial Supervisory Authority.
15. Consider the Cox model in equation 2. The right-hand term of the equation consists of the baseline hazard, $h(t)$, multiplied by the relative hazard, $exp[\beta_1 X+\beta_2 S(t)]$. For figure 1, we predict the relative hazard for each independent variable, holding the other covariates constant at their mean values. Because the baseline hazard is unspecified and time-varying, these plots do not report the risk of a list transfer. They do, however, allow us to compare the relative effect of the independent variables with one another. Due to exponentiation, linear relationships might appear as if curvilinear (see e.g. the effect of social influence). To better represent linearity, the alternative is to predict and plot the risk score, i.e. $\beta_1 X+\beta_2 S(t)$. However, we prefer to plot the relative hazard, since the risk score has no intuitive interpretation.

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