

Intra-industry benchmarking of SG&A expenses:

A neo-institutional perspective

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Abstract

In this paper we study conformity tendencies in SG&A (Selling, General and Administrative expenses) reporting from a mimetic imitation perspective. We explore intra-industry conformity tendencies in reported SG&A relative to sales over a ten-year period among a sample of US firms. We measure conformity by comparing a firm's SG&A profile against a reference group of industry model firms. Results suggest that a firm's imitation of successful firms' SG&A profiles is determined by the tendency of other industry members to imitate those reference models. Moreover, results suggest that the mimetic process is strengthened with higher environmental uncertainty and that large auditor networks function as facilitators for this type of socially-based imitation behavior. Different modes of trait imitation in SG&A reporting seem to coexist as long as the reference groups are defined in terms of size and profitability.

Key words: *SG&A reporting, overhead costs, neo-institutional theory, cost allocation, imitation behavior.*

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1. INTRODUCTION

In concert with institutional perspectives (DiMaggio and Powell, 1983; Oliver, 1991; Scott, 1995), we argue that firms may tend to embed discretionary disclosure decisions regarding more ambiguous content of financial statements in a larger social reference framework. Neo-institutional theory has drawn attention to the causal impact of social factors as opposed to market forces and technical factors on organizational behavior. Institutional pressures may bring organizations to “reproduce actions and practices of the institutional environment that have become historically repeated, customary, conventional, or taken-for-granted” (Oliver, 1991, p.152). In this paper, we focus on social factors affecting reporting of selling, general and administrative expenses (SG&A). While (relative) SG&A are highly visible in the traditional financial reporting format and are usually perceived to be a sensitive reporting issue, we argue that policy decisions with regard to the substance and form of SG&A reporting may be subject to a significant degree of uncertainty. Neo-institutional theorists have suggested that uncertainty about the consequences of policy decisions will lead organizations to imitate the content of particular policy decisions (such as the level of spending on R&D activities) of other organizations to which they are related (DiMaggio and Powell, 1983; Galaskiewicz and Wasserman, 1989). In the absence of explicit normative prescriptions, firms may look at the actions of other firms for clues as to what constitutes appropriate action and adopt other firms’ practices to structure their own behavior. In this vein, social proof of appropriate behavior functions as a cognitive heuristic to reduce uncertainty. Social proof will be most influential when decision makers are uncertain about the value and consequences of policy decisions and when they are able to observe the decisions of others (Cialdini, 1993). Voluntary disclosure and specific types of mandatory disclosures

may be prone to such mimicking behavior, as long as the issues involved are socially relevant and intrinsically ambiguous.

SG&A figure prominently in the income statement and their level and changes are usually explicitly discussed as a separate topic in the Management Discussion and Analysis (MD&A) section of the 10-K financial reports. A firm's SG&A profile typically also attracts a lot of public attention, especially through the intermediary of financial analysts who tend to follow SG&A as a percentage of sales revenue (Palepu, Healy and Bernard, 2004; Anderson et al., 2005). A structural analysis of SG&A is usually also part of auditors' analytical review procedures, with the underlying assumption that SG&A should move proportionally with sales. On the other hand, SG&A spending is often to a significant extent discretionary in nature, while the relationship between SG&A and revenue is inherently ambiguous. Indeterminate means-ends relationships underlying overhead cost decisions as well as the existence of considerable leeway in accounting rules governing overhead cost allocation affect the perceived ambiguity of the SG&A to sales relationship (Mintz, 1994; Lazere, 1995). In the absence of authoritative guidance, there is considerable variation in the way SG&A is treated by firms. For example, significant portions of human resources costs, finance, supply chain management, IT and other costs may be accounted for in the cost of goods sold (COGS) category as well as the SG&A category. These characteristics make the content of SG&A reporting prone to social comparison processes, leading to increased conformity over time.

Institutional theory posits that conformity tendencies could result from different mechanisms, one being mimetic imitation where organizations imitate each other's practices in an attempt to gain legitimacy. Mimetic imitation behavior is essentially a cognitively induced process, particularly activated in situations of uncertainty about means-ends relationships and of the consequences of policy decisions. Accounting and reporting policy decisions may well be affected by such behavioral tendencies. More specifically, the indeterminate nature of models of SG&A cost management and allocation accounting, imply a significant degree of ambiguity and related cognitive uncertainty in the process of scaling and reporting overhead costs, leading to a context in

which the cognitive dynamics of inter-firms mimesis could flourish. Through SG&A reporting firms may cognitively legitimize their overhead cost control activities by adopting SG&A reporting content and structures that are perceived to be appropriate within the larger institutional context.

We explore imitation through increased conformity in the content of SG&A reporting over a ten-year period in a sample of 27,079 firm-year observations. We measure conformity tendencies within a given industry, more specifically by comparing a firm's SG&A profile against a reference group of model firms. We test for mimetic imitation behavior by estimating an empirical model that relates similarity of a firm's SG&A profile and its industry reference group of model firms to lagged within-industry similarity in SG&A profile with regard to the same industry reference group of model firms. Higher similarity in SG&A profile within a firm's industry and the reference group of model firms inducing more similarity between a focal firm and its industry models is taken to reflect mimetic imitation.

Different modes of trait imitation (imitation of model firms with specific characteristics) are tested, with reference group modeling according to size and/or profitability delivering consistently significant mimetic imitation patterns. Congruent with neo-institutional predictions, mimetic behavior in SG&A reporting is associated with higher environmental uncertainty. Moreover, well-developed auditor networks seem to facilitate mimetic imitation.

This study's contribution is threefold. First, our study extends neo-institutional theory into a new context, being SG&A reporting. Second, our study potentially provides a promising conceptual framework to enhance our understanding of corporate reporting, for which SG&A reporting is only one facet. Third, in contrast to most previous research on SG&A cost behavior, this study does not focus on cost behavior per se, but on similarity patterns in SG&A reporting. An emphasis on the impact of more general social processes and the use of social comparison in reporting behavior distinguishes this paper from prior work.

The remainder of the paper is organized as follows. A theoretical framework for mimetic imitation in SG&A reporting is developed in section 2. The research model and hypotheses are put forward in section 3. The study's methodology is described in section 4. Empirical results are presented in section 5. Finally, a discussion of the results as well as their potential implications is provided in section 6.

2. INSTITUTIONAL PRESSURES FOR CONFORMITY IN SG&A REPORTING

2.1. A neo-institutional framework for imitation behavior

Neo-institutional theory suggests that the process and content of policy decisions at firm level may be significantly affected by actions of entities at the level of the institutional environment of the firm. As corporate financial reporting is highly embedded within an institutional environment, financial reporting practices may well be explained as the outcome of socially-based institutional forces and not only as the result of a process of consequential choice guided by coherent self-interest at firm-level (Mezias, 1990). Within the neo-institutional tradition, the concept of legitimacy and institutionalization go hand in hand. Institutionalization refers to the process by which societal expectations of appropriate organizational behavior influences the structuring and behavior of organizations in specific ways (Meyer and Rowan, 1977; Scott and Meyer, 1994; Dacin, 1997). Institutionalization mechanisms usually lead firms to engage in isomorphic responses. DiMaggio and Powell (1983) suggest that organizations' tendencies to imitate one another may reflect a need to be perceived as legitimate and not necessarily competitive or efficiency pressures. In the field of financial reporting, institutionalization occurs through regulatory and normative mechanisms, but also through cognitively-based mimetic processes.

According to Meyer and Rowan (1977), organizations have a tendency to construct and sustain stories and images about what they are doing in order to gain or maintain

legitimacy among their constituents. These images correspond to socially prescribed beliefs and norms of what such an organization should do. Meyer and Rowan's (1977) legitimacy argument is grounded in cognitive definitions of appropriateness and interpretability: organizations are legitimate when they are understandable and their actions are seen as desirable, proper and appropriate according to some socially constructed systems of shared norms and expectations. These expectations will be both explicit (e.g. norms set by professional associations and governmental authorities) and implicit. Implicit expectations emerge over time from interactions among participants in a social system. Institutional theory posits that the development of implicit norms takes place within an organizational field, e.g., a group of organizations (members of an industry, customers and suppliers, consumers, regulatory agencies) that constitute a recognized area of institutional life. Organizational fields are informationally-dense environments where organizations and those they interact with repeatedly, exchange information, form coalitions and are aware of each other (DiMaggio and Powell, 1983; Rindova, 1997). If enough organizations within an organizational field act in a certain way, that particular course of action becomes taken for granted or institutionalized, and thereafter, other organizations will undertake that course of action as the obvious or proper thing to do. Once a "logic of appropriateness" (March, 1994) has been socially established, instrumentality considerations may be of much less importance. In this vein, shared norms emerging within organizational fields exert powerful conformity pressures for organizations, the ultimate outcome of which is an increasing homogeneity of organizational structures (DiMaggio and Powell, 1983, p.147).

A key component of DiMaggio and Powell's (1983) argument on mimetic isomorphism is that mimetic tendencies can result from efficient responses to uncertainty. When faced with uncertainty about the efficiency or effectiveness of alternative practices and structures, organizations can economize on search costs and avoid the cost of experimentation by imitating the actions that are prevalent among competent others. In doing so, they replace technical rules by an institutional rule (like "imitate most common practices") (Cyert and March, 1963). This will reduce ambiguity and provide a set of acceptable solutions that can be used in shaping one's own behavior. At a more symbolic

level, organizations can avoid questioning by referring to socially endorsed practices just to “make sense”. Congruence with socially established models of appropriate behavior makes one’s own behavior predictable and meaningful. In less developed areas, cognitive legitimacy may be established by conforming to prevailing heuristics (Suchman, 1995). Social proof is such a cognitive heuristic by which we “view a behavior as correct in a given situation to the degree to which we see others performing it.” (Cialdini, 1993:95).

Whose behavior is imitated will depend on the nature of the imitation process. Lieberman and Asaba (2006) identify two broad categories of imitation processes and related motives: information-based and rivalry-based imitation. Information-based theories claim that firms follow other firms that are perceived as having superior information, while rivalry-based theories focus on imitation to maintain competitive parity or limit rivalry. The mimetic imitation perspective with its emphasis on uncertainty typically draws on information-based motives. Information-based imitation theories stress that under conditions of uncertainty and ambiguity, organizations are more open to external sources of information or to information implicit in the actions of others in order to structure their own decisions. Neo-institutional theory emphasises the salience of role models (DiMaggio and Powell, 1983). Mimetic isomorphism is usually translated as mimicking the most prominent and secure entities whose actions can be observed and that face similar institutional and resource environments (D’Aunno et al., 2000; Suchman, 1995). The actions of high-status referents are cues that enable other firms to view the behavior in question as sensible, more appropriate and less risky. From a complementary rational-choice perspective, it can be argued that high-status referents may be perceived to possess more information so that their actions and policy decisions are better reflections of the true value or potential effects of the decisions taken.

2.2. SG&A cost control and cost allocation

Although it is common belief that building a competitive SG&A cost structure puts a firm on a solid path to strengthening its effectiveness (Mintz, 1994), management usually struggles to determine whether their resources adequately support the firm’s strategy.

Financial executives generally recognize that there is no “right” level of SG&A expenses based on industry or firm size (Deloitte, 2004). Although a significant part of SG&A spending may be discretionary in nature, there are no generally accepted models to structure overhead cost decisions. Previous studies looking at cost drivers to explain the level of overhead costs were generally not very successful in documenting strong causal factors, except for firm size and industry. A restrictive approach to overhead costs (“less is better”) may cause an under-resourcing of critical activities, resulting in missed growth opportunities, whereas chasing growth at any cost might lead to SG&A expenses rising to unsustainable levels (Deloitte, 2004). Efficiency and effectiveness criteria are often hard to apply to overhead cost decisions. Managers usually have weak “prior probabilities” about the likely success of alternative overhead spending scenarios. Moreover, they may not be fully aware of the range of potential alternative scenarios. Due to complex interdependencies of overhead component strategies, experiential learning is difficult for most firms and the related means-ends ambiguity is unlikely to be resolved quickly. Under these conditions, imitating the choices of other firms (who may have superior knowledge and skills) may be more attractive than going the path of individual trial and error (Lieberman and Asaba, 2006). Recognizing the relevance of overhead spending ambiguities, the CFO Executive Board has recently developed the SG&A Benchmarking Initiative (www.cfo.executiveboard.com) in order to address these means-ends uncertainties. The overall aim of this initiative is to evaluate how well a firm’s functional resources and activities are allocated to support overall corporate objectives.

From a financial reporting point of view, a second layer of ambiguities adds to the substantive uncertainty regarding the effectiveness of overhead cost control. This second layer relates to accounting decisions regarding the allocation of overhead among SG&A and COGS (Cost of Goods Sold). Due to the lack of authoritative guidance, the components of SG&A and COGS can vary significantly from one firm to another within industries and even more so across industry lines. There is wide leeway in the classification of many types of operating expenses. One firm’s SG&A may be another firm’s COGS (Mintz, 1994; Lazere, 1995; Subramaniam and Weidenmier, 2003). Moreover, firms inconsistently classify some expenses sometimes as SG&A and other

times as COGS (Lazere 1995, 1996; Subramaniam and Weidenmier, 2003). In this vein, overhead cost allocation may be subject to shell game playing by moving expenses and resources to COGS from SG&A and vice versa (White and Dieckman, 2005).

Hence, in deciding on substance and form of reported SG&A, firms operate within a context of considerable cognitive uncertainty in which the cognitive heuristic of social proof provides an expedient solution. Thus, mimetic isomorphism may provide a powerful conceptual background to understand SG&A reporting. Haunschild and Miner (1997) stress that, within mimetic isomorphism, uncertainty strengthens the importance of social processes as it stimulates the use of social comparison as the basis for making decisions. Thus, from a cognitive institutional perspective, managers observe other firms' SG&A expense allocation and disclosure positions, rely on these observations to infer the value of the reporting structures because they are uncertain of their consequences and reflexively enact those structures at their own firm.¹ As long as the true value of the imitated practices remain uncertain after imitation, this process can be quite persistent.

3. MIMETIC TENDENCIES IN SG&A PROFILE REPORTING

3.1. Estimating mimetic imitation

In this study we contend that mimetic isomorphism can be a significant mechanism underlying SG&A reporting practices. Mimetic behavior would be evidenced by tendencies toward conformity, driven by social factors instead of technical or normative

¹ Social learning theory (Bandura, 1986) provides an additional explanation for the social processes underlying mimetic behavior. He argues that specific imitative actions are often learned and enacted subconsciously. DiMaggio and Powell (1983) also argue that social modelling is a primary mechanism underlying mimetic isomorphism. Imitation is not only an outcome from conscious choice but also from less explicit socialization processes. Mimetic processes are driven by taken-for-granted policy rules. These rules may be derived from the larger social structure which can operate as a repository or "carrier" of normative behaviour (Scott, 1995). In this vein, mimetic disclosure behaviour becomes the enactment of institutional scripts rather than a matter of internally grounded and autonomous choice, motivation and purpose (Scott, 1995)

factors. Thus, it is essential to document tendencies to conformity through an imitation process of an intersubjective or consensual nature.

Legal coercion and voluntary diffusion are the main mechanisms by which institutional pressures are exerted. As an institutional mechanism, voluntary diffusion refers to the extent to which organizational practices have already diffused or spread voluntarily through an organizational field as a predictor of the likelihood of conformity tendencies. Organizations tend to adopt practices that are used by a large number of other organizations, widespread adoption essentially legitimizing and pressuring such imitation. In this vein, earlier institutional research tended to focus on prevalence as an indicator of institutional isomorphism and demonstrated that conformity through imitation is reflected in the observation that the number and density of firms adopting a certain behavior increases the likelihood that other firms will also do so (Knoke, 1982; Tolbert and Zucker, 1983; Fligstein, 1985; Palmer et al., 1993). In this approach, voluntary diffusion is measured from the number of organizations within an organizational field that have already adopted specific social practices. Hence, in our context, if reference group targeting of SG&A reporting becomes more broadly diffused, the likelihood that firms will strive to conform with those SG&A targets should increase. Broader diffusion proxies for broader social support and would predict acquiesce to such conformity pressures because their social validity becomes more and more taken-for-granted and unquestioned (Oliver, 1991).

Firms imitate other firms within their population of reference, as their actions are more salient than actions by firms in other populations (Haveman, 1993; Garcia-Pont and Nohria, 2002). Consistent with prior research (e.g., Porac et al., 1995, 1999), we assume that firms anchor their comparability judgments within their primary industry. Dye and Shridhar (1995) specifically address herding behavior in disclosures within industries and analytically demonstrate how disclosure strategies are related in an industry since investors update their beliefs about firms within an industry based on a single firm's disclosures. Moreover, auditors also tend to compare client performance indicators to industry standards to help evaluate risk (Winograd, Gerson and Berlin, 2000) and their

clients are generally aware of these practices. A firm's management is more likely to be familiar with their primary industry and, thus, knowledgeable about its practices. The primary industry characteristics define the categories of the product and market attributes which are deemed to be diagnostic of many underlying aspects of a firm's business and processes (Porac et al., 1995). The legitimacy and plausibility of industry categories as a basis for comparability judgments is reinforced by the prominence of formal industry-based classification systems (e.g., SIC- and NAICS-codes) and their taken-for-granted use in business benchmarking practices. Moreover, prior research shows that the accounting variables of interest in this study (including the relative level of SG&A) tend to be industry-specific (Ely, 1991). The specifics of an industry's operating environment with its associated technologies, physical capacity needs, product and sourcing markets have a significant impact on characteristic operating ratios. Lazere (1996), for example, documents that a firm's SG&A to revenue ratio is typically industry-specific. The industry-specific nature of the SG&A profile targets, should bring firms to confine their social comparison processes to other firms within the same industry.

In addition to using the number or density of firms exhibiting specific practices within an industry as a predictor of conformity pressures, Haunschild (1993) proposes at least three conditions to validate the claim that a firm is engaged in an imitation process: (1) there must be a model practice exhibited by a firm or reference group at time t , (2) decision-makers at the imitating firm are exposed to the model, and (3) the imitating firm exhibits the practice with a time lag. These criteria underlie our investigation of intra-industry imitation of SG&A reporting on the basis of a similarity score (Westphal and Zajac, 1997; Westphal et al., 2001). Hence, consistent with Haunschild's criteria, (1) SG&A reporting by a firm's industry models in a given year provide a reference benchmark, (2) a firm observes the industry models relative to the behavior of other firms within the industry and, (3) once they have observed or become aware of the reporting practices of other firms within its industry, a firm's executives are likely to imitate in the following year. We measure imitation by greater or lower similarity in SG&A profile reporting between a focal firm and other model firms within its industry. Model firms within the industry are taken to represent a focal firm's reference group.

How the model firms constituting a focal firm's reference group are selected, is an empirical question. Haunschild and Miner (1997) discern different modes of imitation: frequency imitation (imitate very common practices), outcome imitation (imitate successful practices) and trait imitation (imitate practices of other organizations with certain features). In general, organizations tend to imitate higher-status referents (Fombrun and Shanley, 1990), which usually are large, prestigious and successful. For example, Haveman (1993) showed that savings and loan associations especially imitated the strategies of large and profitable associations, while Burns and Wholey (1993) documented that hospitals adopt matrix management structures when other visible and highly regarded hospitals have adopted them. On the other hand, Haveman (1993) found little support for imitation of similarly sized organizations. Whereas in rivalry-based imitation processes firms are likely to follow direct peers (with comparable resource endowments and market positions) as close competitors, information-based imitation will motivate firms to mimic others who are believed to possess superior information. Since other firms' information cannot be observed directly, the focal firm will rely on imperfect signals of information quality, including firm size and repeated success (Lieberman and Asaba, 2006). Following prior research (e.g. Haveman, 1993; Burns and Wholey, 1993; Haunschild and Miner, 1997), we will primarily focus on two traits of model firms, being prior success and size. Worded differently, a focal firm's model firms will be selected based on sustained profitability and size.

The reference group's SG&A profile provides a concrete model that encourages a mimetic response by the focal firm. So, we hypothesize that the more there is SG&A profile imitation of model firms within the industry, the more a firm tends to imitate its industry models, or:

Hypothesis 1 (H1) – Greater similarity in SG&A profile between other firms within the industry and the industry model will lead to greater similarity in SG&A profile between the focal firm and the industry model.

3.2. Environmental context and mimetic tendencies

The environmental context within which institutional pressures are exerted on firms, is likely to be a determinant of conformity tendencies. Environmental uncertainty has been argued to be a significant dimension of the environmental context to affect mimetic tendencies (DiMaggio and Powell, 1983; Oliver, 1991; Haunschild and Miner, 1997). As the uncertainty of the environment increases, the stability and predictability of institutionalised norms become more persistent and influential (DiMaggio and Powell, 1983; Zucker, 1977). In that sense, environmental uncertainty will act as a catalyst for conformity tendencies. Galaskiewicz and Wasserman (1989) were the first to offer empirical evidence in support of the effect of environmental uncertainty on mimetic behavior. Environmental uncertainty has been defined by Pfeffer and Salancik (1978) as “the degree to which future states of the world cannot be anticipated and accurately predicted” (p.67). Industry concentration has been suggested and used to measure environmental uncertainty. Wiersema and Bantel (1993) argue that industry concentration is a primary determinant of intra-industry competitive dynamics and large absolute changes in industry concentration would engender a high level of environmental uncertainty (Wiersema and Bartel, 1993; Porter, 1998).

Given the presence of mimetic SG&A profile imitation of model firms within the industry, we hypothesize that higher levels of environmental uncertainty will strengthen a firm’s tendency to imitate its industry model, or:

Hypothesis 2 (H2) – The relationship between similarity in SG&A profile of other firms in the industry and their industry model and similarity of the focal firm and its industry model will be strengthened under higher levels of environmental uncertainty.

3.3. Auditor networks as a vehicle for more active social comparisons

Social modelling is a primary mechanism underlying mimetic isomorphism (DiMaggio and Powell, 1983: 15). Social modelling will be facilitated by the presence of an

intermediary using past experiences in similar social settings as scripts for determining appropriate behavior in a current environment. Auditors may well act as institutional intermediaries of information and facilitate the formation of social impressions and evaluations. Institutional intermediaries “specialize in the collection and transmission of information and accumulate resources and expertise to do so a lot more effectively than their constituents can do on their own. Because of their role, intermediaries become central nodes in interorganizational networks, which increases their access to information. In addition, these organizations often summarize and juxtapose available information, which allows constituents to draw comparisons easily. They also offer authoritative evaluations on a number of dimensions which might be beyond the expertise of a constituent to evaluate” (Rindova, 1997, p.192). Larger audit firms with more extensive client bases and well-developed (inter)national networks may well develop benchmarking databases used to compare, evaluate and guide their client’s reporting practices. Some of the bigger firms even offer professional benchmarking services (Winograd, Gerson and Berlin, 2000). Moreover, auditor networks represent an interconnected environment that provides relational channels through which shared ideas and norms can be diffused. This would support more implicit coordination, more consensus on diffused norms and greater ubiquity of the institutional effects.

Given the role of auditors as a vehicle for social comparison, we hypothesize that the size of the firm’s auditor will strengthen a firm’s mimetic tendency to imitate its industry model, or:

Hypothesis 3 (H3) – The relationship between similarity in SG&A profile of other firms in the industry and their industry model and similarity of the focal firm and its industry model will be strengthened by the size of the auditor of the focal firm.

3.4. Impact of a firm’s public profile on SG&A imitation

The self-serving advantages of complying with socially constructed norms of appropriate behaviour may be revealed in a variety of benefits/rewards, such as increased reputation and access to resources, stability, social support and commitment, sustained confidence

and credibility (Meyer and Rowan, 1978). Mimetic isomorphism with its roots in a cognitive legitimation mechanism may be powerful in establishing the adequacy of organizational actions and thereby buffer the organization from intrusive questioning (Meyer and Scott, 1983). The latter would be especially rewarding for organizations subject to higher levels of public attention and scrutiny. Higher public pressures may promote risk-reducing behaviour through conformity tendencies. Isomorphic responses establish perceived control over a situation and often insulate firms from scrutiny. By adopting reporting structures that are shared by successful others, firms reduce inspection by both internal and external constituents (Meyer and Rowan, 1977) and avoid questioning and negative assessments of their conduct and practices. In this vein, higher visibility and associated increased public scrutiny may induce a social amplification effect on imitation behavior. Visibility generally strengthens the impact of social factors, while technical factors may remain largely unaffected. This suggests that a firm's public profile may well affect its propensity to take into account social factors. Firm size is a first proxy for the degree of public pressures. Larger firms are generally subject to greater public scrutiny (Fombrun and Shanley, 1990).

Given the expected augmentation effect of public scrutiny on mimetic tendencies, we hypothesize that higher firm visibility will strengthen a firm's mimetic tendency to imitate its industry model, or:

Hypothesis 4 (H4) – The relationship between similarity in SG&A profile of other firms in the industry and the industry model and similarity of the focal firm and the industry model will be strengthened by the level of public scrutiny regarding the focal firm.

4. METHOD

4.1. Sample and data

Our method involves longitudinal analyses of imitation using reported SG&A data over a ten-year period. Our data are collected from the COMPUSTAT North-America database and cover the period from 1994 to 2003. Because lagged (similarity) data are required in

our model, we also include accounting data for 1993. Analogous to prior studies on SG&A (see e.g. Anderson et al., 2005), we eliminate firm-year observations for which selling, general and administrative expenses are greater than sales. Banks, insurance firms and all other financial holdings (i.e. primary SIC industry codes between 6000 and 6799) and public administrative institutions (i.e. primary SIC industry codes above 9000) are excluded from our sample. The final sample comprises 27,079 firm-year observations. The number of firms range from 2,562 in 1994 to 4,160 in 2002. Sample firms are active in 45 industrial sectors (cf. Table 2).

To mitigate the impact of outliers on the estimated coefficients, outlying values for the independent variables are winsorized. Winsorization restates outlying values to the largest non-outlying value. Values are winsorized when they are more than two standard deviations away from the mean value.

Preliminary analyses showed high correlations between main effects and interactions. Therefore, we centered all main effects (i.e. average values are subtracted from each datum) and used the centered values to calculate the interaction variables, a procedure suggested by Cronbach (1987) and Jacard, Turrisi and Wan (1990).

4.2. Measures

Focal Firm SG&A Profile Similarity

For the purpose of our study, SG&A profile similarity is the focal construct by which we measure imitation in SG&A reporting. The similarity construct is a direct proxy for imitation and goes beyond frequency-based measures that have been used in previous research. The SG&A profile is the ratio of reported SG&A (Compustat item #189) to net sales (Compustat item #12). Similarity is measured within a firm's industry.

Our primary proxy captures similarity to selective model firms and rests on a focused and benchmarked comparison approach. The proxy is based on the following equation:

$$DS_{it} = \left[\sum_{j=1}^5 (SP_{it} - SP_{jt})^2 / 5 \right]^{1/2}$$

where SP_{it} denotes the value on SG&A/Sales for the focal firm (i.e. firm i) and SP_{jt} denotes the value on SG&A/Sales for model firm j in the focal firm's industry in year t . Industry is measured at the two-digit SIC industry code level.

In our primary proxy we use a combination of two traits to select model firms: profitability (success-based imitation) and size (size-based imitation). We ranked firms within their industry according to their average size (i.e. total assets (Compustat item #6)) over the 10-year sample period and selected the five most profitable firms (average return on assets over the sample period) within the upper-half of this ranking.

In order to capture alternative modes of trait imitation, we developed three additional imitation proxies: a one-dimensional size imitation proxy, a one-dimensional success imitation proxy and a commonality imitation proxy. To measure the one-dimensional size-based imitation variable, we identify the five largest firms within an industry according to total assets. More specifically, the largest firms for each industry are those for which average total assets are largest over the entire period under study. The one-dimensional success-based imitation variable captures similarity of the focal firm to the five most profitable firms (average return on assets over the entire period under study) within its industry.

Our fourth proxy captures similarity on commonality characteristics and is based on the following equation:

$$DS_{it} = ABS[SP_{it} - M(SP_t)] / SD(SP_t)$$

where SP_{it} denotes the value on SG&A/Sales for the focal firm (i.e. firm i) in year t . $M(SP_t)$ and $SD(SP_t)$ denote the mean and standard deviation for the firm's industry (i.e. the mean and standard deviation for firms in the same industry, excluding the focal firm). As before, industry is measured at the two-digit SIC industry code level. This proxy is in fact the variation coefficient: it compares a focal firm's SG&A profile to the industry mean value and expresses it as a standard deviation. This approach is consistent with earlier work by DiMaggio and Powell (1983) and by Scott (1995). It mainly focuses on the link between a broadly-based reference model and the firm's imitation of that model. The fourth proxy rests on the premise that the most common disclosure approach functions as the most probable model. In the absence of best practice benchmarks, average behavior can be rationalized to be the best proxy for "generally accepted" or "appropriate" behavior.

The aforementioned measures are then subtracted from the highest value in the sample, so that higher values indicate greater similarity. The resulting similarity indices provide a relative ranking of firms within their industry, with higher values indicating greater similarity.

(Prior) Intra-industry SG&A profile similarity

Mimetic isomorphism in SG&A reporting is assumed to be a phenomenon driven by the behavior of other firms within a focal firm's organizational field (industry). Hence, for each focal firm the similarity indices of the other firms within its industry (excluding the focal firm) are averaged and lagged by one year. The resulting measure provides a proxy for the extent of imitation patterns within the industry that builds a social incentive for the focal firm's own imitation response in a following year.

Prior focal firm SG&A profile similarity

As both overhead control and related disclosure positions can be largely ritualistic (Gibbins et al., 1990), SG&A reporting could be subject to significant inertial forces

(Aerts, 2001). Hence, the lagged focal firm imitation variable is introduced to capture this inertia factor. Adding the lagged dependent variable also implies control for omitted firm characteristics. Alternatively, we could have expressed the dependent variable as a change variable. We chose not to do so because such a procedure constrains the coefficient of the lagged variable to equal one and we preferred to model the inertia factor as theoretically relevant determinant.

Absolute change in industry concentration

In concert with Wiersema and Bartel (1993), absolute change in industry concentration as a proxy for environmental uncertainty. We rely on a concentration ratio as a measure of industry concentration. The concentration ratio is an indicator of the relative size of the largest firms in relation to the industry as a whole and helps to determine the market form of the industry. It is common to define the concentration ratio as the percentage of an industry's sales (i.e. at the two-digit SIC industry code level) accounted for by the four largest firms. For each year-observation, we divide total sales of the largest four firms by total sales of the remaining firms in the industry (Compustat item #12).

Auditor size

We rely on the so-called 'brand name variable' (i.e. BigN vs. non-BigN audit firms) in order to distinguish between large and small audit firms. BigN audit firms are then the largest audit firms, with larger client bases and well-developed (inter)national networks (see e.g. DeAngelo, 1981; DeFond, 1992; Becker et al., 1998). They frequently offer overhead control services to their clients and are generally more involved in SG&A benchmarking activities than smaller firms. We thus measure auditor size as a dummy variable that is coded one for clients of a BigN auditor and zero otherwise.

Firm size

Firm size may underly a firm's reputation as a model and thus constitute a target trait for

imitation. On the other hand, size, as a proxy for a firm's public visibility, has been shown to predict mimetic tendencies (Fligstein, 1991; Deephouse, 1996, Westphal et al., 2001). Firm size is measured as the natural logarithm of total assets (Compustat item #6).

Firm age

Previous research has shown that organizational age influences rates of organizational change (Delacroix and Swaminathan, 1991). Older organizations are more likely to be inertial (Hannan and Freeman, 1989). As a proxy for the firm's age, we use the ratio of total accumulated depreciation (Compustat item #196) divided by the annual depreciation expense (Compustat item #14).

Firm-specific financial variables

A firm's financial condition and operating environment will probably constitute primary technical determinants of a firm's imitation behavior. We include profitability, leverage (i.e. total debt (Compustat item #34 + Compustat item #9) divided by total assets (Compustat item #6)) and reliance on capital markets as primary financial condition indicators. Profitability is expected to be related to imitation as poor performance could lead firms to change their past behavior, including their taken-for-granted reporting routines and their propensity to imitate others (Haveman, 1993). Moreover, market pressure and financial viability concerns may bring firms with higher leverage, higher external financing needs and poorer profitability to focus more on technical factors and less on benchmarking efforts.

We use return on assets as a proxy for firm performance in our model. As a measure of external financing, we rely on the amount of financing that was raised through stock or debt offerings (sum of new debt and equity issued by the firm (Compustat item #108 + Compustat item #111)) scaled by total assets (Compustat item #6) (Dechow et al., 1996).

Control variables

We control for time-specific determinants of imitation by including year-specific dummy variables in the models. Additionally, we control for variables which are expected to affect the (relative) level and change of overhead costs. In this vein, we introduce the following control variables:

- revenue increase (dummy);
- capital intensity;
- labor intensity;
- gross margin
- asset growth.

We introduce the revenue increase dummy to take into account the stickiness of SG&A. Cooper and Kaplan (1992) observed that managers seem more inclined to increase expenses when activity levels increase than they are to decrease expenses when activity levels decrease. This asymmetric cost response has been labeled “stickiness of cost”. Anderson, Banker and Janakiraman (2003) document the stickiness effect for SG&A in general. A dummy variable is used to distinguish between revenue-decreasing and revenue-increasing periods. This variable is coded one for increases in sales revenue (Compustat item #12) and zero otherwise (Anderson, Banker and Janakiraman, 2003).

As volume of sales, value of fixed assets and number of employees are taken to be the main drivers of operating costs (Anderson et al., 2005), they are the primary bases to allocate expenses functionally. While volume of sales is implicit in the SG&A profile measure, capital intensity and labor intensity are introduced to control for the degrees of freedom in allocating overhead costs between SG&A and COGS. Moreover, Subramaniam and Weidenmier (2003) showed that the relationship of costs to activity level changes was highly dependent on the level of fixed assets (especially in the manufacturing industry) and on employee intensity (in the service industry). We define capital intensity as gross property, plant and equipment (Compustat item #7) to total assets (Compustat item #6) and labor intensity as the number of employees (Compustat

item #29) divided by sales (Compustat item #12).

SG&A spending has been documented to be heavily dependent on the gross margin available (White and Dieckman, 2005). Moreover, White and Dieckman (2005) showed that firms tend to play a shell game by shifting expenses between SG&A and COGS buckets, with gross margin delimiting the playing field. In that sense, gross margin is likely to be a significant technical factor for variations in reported SG&A. Gross margin is measured as (Sales (Compustat item #12) – Costs of Goods Sold (Compustat item #41))/ Sales.

We use a firm's asset growth, measured as the yearly percentage change in total assets (Compustat item #6), to control for the effect of mergers and acquisitions on the focal firm similarity measure.

Accordingly, we estimate the following regression model (full model):

$$\begin{aligned}
 SIM_{it} = & \delta_0 + \delta_1 SIM_{it-1} + \delta_2 INDSIM_{it-1} + \delta_3 INDSIM_{it-1} \times ENVUNC_{it} + \\
 & \delta_4 INDSIM_{it-1} \times AUD_{it} + \delta_5 INDSIM_{it-1} \times SIZE_{it} + \delta_6 ENVUNC_{it} + \\
 & \delta_7 AUD_{it} + \delta_8 SIZE_{it} + \delta_9 LEV_{it} + \delta_{10} ROA_{it} + \delta_{11} FINRAIS_{it} + \delta_{12} AGE_{it} + \\
 & \delta_{13} GROWTH_{it} + \delta_{14} REVINC_{it} + \delta_{15} CAPINT_{it} + \delta_{16} LABINT_{it} + \\
 & \delta_{17} GPM_{it} + \delta_{18} YEAR + \varepsilon_{it}
 \end{aligned}$$

Where

SIM = focal firm SG&A profile similarity;

INDSIM = intra-industry SG&A profile similarity;

ENVUNC = environmental uncertainty (absolute change in concentration ratio);

AUD = auditor size;

SIZE = firm size;

LEV = leverage;

ROA = return on assets;

FINRAIS = financing raised through stock or debt offerings;

AGE = firm age;
GROWTH = asset growth;
REVINC = revenue increase dummy;
CAPINT = capital intensity;
LABINT = labor intensity;
GPM = gross profit margin;
YEAR = year-specific dummy variables; and
i, t = denote firms and years.

5. RESULTS

Table 1, Panel A, provides descriptive information about SG&A and the SG&A profile similarity proxies for the period under study. The mean value of SG&A as a percentage of sales is 29.17% (median = 24.34%, standard deviation = 20.53%). Table 1, Panel B, presents correlations among the similarity proxies. While correlations between all four proxies are positive and significant, it might be interesting to note that the correlation between the commonality proxy and the other three proxies is substantially lower than all other correlations.

[INSERT TABLE 1]

Table 2 presents descriptive statistics regarding SG&A profile similarity by industry. Due to the fact that our primary analyses are based on the two-dimensional trait imitation mode (i.e. target firms selected on a combination of both size and profitability), descriptive statistics are only reported for this proxy. Analyses by industry show that the total similarity score was, on average, lowest for ‘SIC 72 Personal services’ (mean = 0.3683, median = 0.3611, standard deviation = 0.0975) and highest for ‘SIC 44 Water transportation’ (mean = 0.7192, median = 0.7270, standard deviation = 0.0468).

[INSERT TABLE 2]

Correlations among the variables included in our model are reported in Table 3 (once again based on the two-dimensional trait imitation mode). The correlation between focal firm similarity and prior intra-industry similarity is positive and statistically significant at the 1% level. This suggests that, other things equal, greater similarity in SG&A profile between other firms within the industry and the industry model lead to greater similarity in SG&A profile between the focal firm and the industry model, which is consistent with H1.

[INSERT TABLE 3]

Table 4 provides results for the OLS regression models of SG&A profile imitation of target firms selected on a combination of both size and profitability (our primary trait imitation mode) with a firm's similarity score as the dependent variable. As mentioned before, we will focus hypothesis testing on this primary trait imitation mode. Later on in this section, we will test for the presence of other trait imitation mechanisms, using our alternative imitation proxies (cf. section 4.2).

[INSERT TABLE 4]

In model 1, the control model, we introduced firm-specific financial and control variables (including year-dummies) to explain the focal firm's similarity score. Results from model 1 indicate that focal firm SG&A profile similarity is significantly higher for firms with increasing revenues. Capital intensity and labor intensity are also significantly and in a positive sense related to SG&A profile similarity, suggesting that firms with a more extensive allocation playing field are more prone to imitate industry model firms. As expected, SG&A profile similarity is significantly and negatively related to financing concerns (level of external financing raised) and asset growth, while firm size, profitability, age of fixed assets and leverage show a significant positive relationship with focal firm SG&A profile similarity. The significant negative impact of gross profit margin establishes the fact that firms with a higher gross profit margin show less

tendency to imitate their industry model firms on relative SG&A spending. The significant relationship with environmental uncertainty suggests that similarity is lower in firms confronted with higher environmental uncertainty. The control model, while not testing mimetic tendencies, does evidence the significant impact of firm-specific financial and operating characteristics which can be considered technical factors, on success-imitation of SG&A reporting and, thus, corroborates the need to control for them.

In model 2, prior focal firm similarity is added to the variables of the control model, whereas in model 3 both prior intra-industry similarity and prior focal firm similarity are added to the base model. Overall, these two lagged variables enhance the regression model's explanatory power with an incremental adjusted R-square of 61.56% ($p < 0.001$).

Results for model 3 support H1 that greater intra-industry similarity in SG&A profile (excluding the focal firm) will lead to greater SG&A profile similarity between the focal firm and its industry model firms. After controlling for the other variables included in our model, prior intra-industry SG&A profile similarity is positively and significantly related to focal firm similarity. The model including prior intra-industry SG&A profile similarity improves model fit over model 2 significantly. The significant impact of prior intra-industry similarity, while controlling for the lagged dependent variable, represents strong evidence of a mimetic imitation pattern in SG&A profile reporting.

The lagged focal firm similarity variable is positively associated with the dependent variable, suggesting a strong routine or inertia factor in imitation behavior. In general, firm-specific variables appear to have a stronger effect on SG&A profile similarity in model 1 than in the other models where there is control for prior focal firm similarity. This finding suggests that the effect of a number of explanatory variables, which are relatively stable over time, is captured in a focal firm's prior year similarity index. Among control variables, taking into account models 1 to 3, leverage and new financing, gross margin, capital intensity, direction of revenue change are the most consistent firm-specific predictors of SG&A profile similarity.

Model 4 tests whether the relationship between focal firm similarity and intra-industry similarity can be reversed. The dependent variable in this model is current-year intra-industry similarity and the main independent variable is prior year focal firm similarity. This is the reverse of the relationship tested in model 3. This additional analysis can be seen as a strong test for mimetic behavior (Haunschild, 1993). The results show that prior focal firm similarity is not related to current intra-industry similarity. This result indicates that the imitation relationship does not reverse and that there is not some third variable common to both the focal firm and the other firms in its industry that is causing the observed similarity relationship.

Model 5 allows for an assessment of H2 that predicts an interaction effect between prior year intra-industry similarity and the environmental uncertainty variable. More specifically, we predict that environmental uncertainty will be positively related to mimetic isomorphism in SG&A reporting. Results from model 5 provide support for the hypothesized interaction. Hence, the positive coefficient for “prior intra-industry similarity X environmental uncertainty” (0.633; $p < 0.01$) indicates that higher environmental uncertainty strengthens the positive relationship between prior year intra-industry similarity and focal firm similarity. Moreover, the addition of this interaction term variable in model 5 significantly improves model fit over model 3.

H3 predicts an interaction effect between intra-industry similarity and auditor size on focal firm similarity in SG&A reporting. More specifically, we predict that auditor size will be positively related to mimetic isomorphism in SG&A reporting. The results shown in model 6 provide support for this hypothesized interaction. The significant coefficient for “prior intra-industry similarity x auditor size” indicates that the positive relationship between prior intra-industry similarity and focal firm similarity increases significantly when a BigN auditor is involved. Again, the model including the interaction term with auditor size significantly improves model fit over the model with only the main effects.

The results shown in model 7 provide no convincing support for H4, which predicts that firm size (our visibility proxy) will be positively related to mimetic isomorphism in

SG&A reporting. The coefficient for “prior intra-industry similarity x firm size” indicates that the positive relationship between prior intra-industry similarity and focal firm similarity increases with firm size, but both the size of the coefficient and its significance attain only a marginal level. Moreover, the model including the interaction term with firm size does not improve model fit over the model with only the main effects.

The significant main effects of firm-specific technical factors (financial and operating variables) brought us to inquiry into the effect of a firm’s financial condition on its propensity to mimetic responses. Resource dependency constraints may limit the scope of a firm’s behaviour and its propensity to imitate other firms. A compliance strategy may well be severely constrained by the firm’s current level of resources or its financial condition. In this vein, although not explicitly hypothesized, we additionally test whether the relationship between similarity in SG&A profile of other firms in the industry and the industry model firms and similarity of the focal firm and the industry model firms is moderated by financial condition characteristics of the focal firm. More specifically, we test for the effect of profitability (return on assets), leverage and reliance on capital markets (financing raised) as typical financial condition variables, on a firm’s mimetic tendencies. The results of these models (not reported in table 4) show that the interaction term with prior intra-group similarity is significantly positive for profitability (0.0887, $p < 0.01$) and significantly negative for leverage (-0.0823, $p < 0.01$), but insignificant for the external financing variable. These results suggest that, when a firm’s financial condition is less prosperous or more risky, an idiosyncratic disclosure policy and content is likely to emerge, partially supplanting a conformity driven disclosure position. Firms that are close to the violation of debt covenants or that suffer from poor profitability probably have other priorities in their disclosure decisions than firms not burdened by such financial concerns.

Alternative imitation modes

We tested other modes of trait imitation by employing the alternative similarity measures defined in Section 4.2. Results of these tests are shown in Table 5. The results of models

9 tot 11 show that the processes that generate the different modes of mimetic imitation are not mutually exclusive. Both the one-dimensional size imitation proxy (model 9) and the one-dimensional success imitation proxy (model 10) deliver significant results for the hypothesized mimetic relationships. However, we do not find support for commonality imitation (model 11). So, selective trait benchmarking seems to be the basic approach to setting SG&A target levels, with success imitation and size imitation modes occurring in concert.

[INSERT TABLE 5]

Sensitivity analyses

We checked the sensitivity of our results on the success/size imitation models to alternative proxies of the independent variables. We considered the Herfindahl Index as an alternative proxy for industry concentration. The Herfindahl Index is calculated as the sum of the squared market shares (determined based on sales (Compustat item #12)) of all firms within an industry (based on two-digit SIC industry code level). Similar to the original proxy, absolute change in the Herfindahl Index is used as a proxy for environmental uncertainty. Furthermore, we used free cash flow as an alternative measure for externally raised finance. Free cash flow is measured as the net cash flows from operating activities (Compustat item #308) less average capital expenditures (Compustat item #128) (lagged over 3 years) deflated by lagged total assets (Compustat item #6). This proxy measures a firm's ability to cover its capital expenditures through assets that the firm already holds. Moreover, we considered return on equity instead of return on assets. Our results are insensitive to these alternative specifications.

As imitation behavior may be affected by earnings management motives, we included an earnings management proxy in our model. In order to capture earnings management, we rely on the methodology based on discontinuities in the distribution of reported earnings figures. Prior studies (see e.g. Burgstahler and Dichev, 1997; Degeorge, Patel and Zeckhauser, 1999) find statistically significant discontinuities in the distribution of

reported earnings around specific targets (e.g. zero earnings and last year's earnings figure). More specifically, these studies report significantly fewer (more) observations that fall just below (just exceed) the threshold than would normally be expected under a smooth distribution. Degeorge, Patel and Zeckhauser (1999) argue that this behavior is attributable to the fact that shareholders typically rely on rules of thumb in their evaluation of firm performance. We therefore consider small profits as a proxy for just beating zero earnings (or so-called loss avoidance) and small earnings increases as a proxy for just beating last year's earnings figure. One speaks about a small profit if its value scaled by total assets falls within the interval]0.00, 0.05]. Quite similarly, one speaks about a small earnings increase if the change in earnings ($\text{earnings}_t - \text{earnings}_{t-1}$, where t denotes a year subscript) scaled by total assets falls within the range]0.00, 0.05]. Our earnings management proxy is therefore a dummy variable that equals one for firm-years with a small profit and/or a small earnings increase and zero otherwise. In order to identify small profits and small earnings increases, we rely on net income (Compustat item #172). Results reveal a statistically significant positive coefficient on this dummy variable and therefore suggest that firms that engage in earnings management are more prone to imitate industry model firms. It might be interesting to add that results are unaffected when considering earnings before extraordinary items (Compustat item #18) instead of net income in order to identify small profits and small earnings increases.

6. DISCUSSION AND CONCLUSION

Relying on an institutional theory framework, we explore intra-industry imitation in SG&A profile reporting over a ten-year period in a large sample of US firms. The institutional perspective with its logic of reproduction and isomorphism emphasizes the role of conformity, habit and convention rather than instrumentality and agency in reporting decisions. Chalmers and Godfrey (2004) linked this to the concept of reporting reputation. It highlights the causal impact of social and cultural pressures as opposed to market and resource dependency forces on reporting behavior.

Mimetic imitation has been portrayed as a contagion process that spreads specific practices within an organizational field (from one organization to another) (Tolbert and Zucker, 1983; Fligstein, 1985). Mimetic isomorphism is theorized as an efficient response to uncertainty: when a clear course of action is not available, organizations tend to mimic peers that they perceive to be successful. Conforming to shared norms of appropriate disclosure content aligns the firm with social expectations, while preserving discretionary managerial prerogatives by decoupling disclosure content from substantive practices. In our study, uncertainty operates at two levels. At a cognitive level, uncertainty about means-ends relationships affects what (the object that) will be imitated. At the organizational level, environmental uncertainty will predict the likelihood and the strength of mimetic imitation tendencies. In the context of environmental uncertainty, firms are more likely to imitate other firms.

Overall, our results provide substantive evidence that mimetic imitation plays a significant role in SG&A reporting. First, consistent with hypothesis 1, SG&A profile similarity among other firms within its industry and the industry model firms in a prior year drives the extent to which a focal firm's SG&A profile is similar to model firms within the industry in the current year. So, greater imitation in the industry leads, on average, to greater imitation by a focal firm of its SG&A reference model.

Second, consistent with hypothesis 2, industry-driven imitation tendencies are influenced by the environmental context, with firms confronted with more environmental uncertainty being more likely to be influenced by conformity tendencies in their industry. Such a finding provides additional support for the mimetism interpretation of the imitation relationship, which stresses the impact of environmental uncertainty as a factor driving conformity tendencies in time.

Third, our results convincingly establish the role of auditor size and related auditor networks as facilitators of mimetic imitation. As institutional intermediaries of information, auditors carry over taken-for granted scripts from prior experiences about appropriate reporting structures. A firm's auditors may develop beliefs about appropriate

practices by observing firsthand the allocation and reporting practices in other firms. Moreover, the interconnectedness of their networks facilitates the voluntary diffusion of norms, values and shared information. Institutional intermediaries, however, do not only transmit or add information, but they also create and disseminate new sets of images of proper behavior. Auditors may well process the information of the projected images through the lenses of their own agendas, institutional mandates or organizational goals. For example, by reinforcing the importance of such socially-derived norms of appropriate behavior, they create a need and demand for more (benchmarking) services. Contrary to expectations, visibility in terms of firm size does not significantly strengthen the impact of social factors on imitation behavior.

The results of our study show that a firm's prior year tendency to imitate the reference group significantly determines its tendency to imitate in the current year. This suggests that reference group imitation may be to a large degree routinized and result from the force of habit as well as standardized processes. Routinized actions are well recognized to be a cornerstone of institutions (e.g., March and Simon, 1958). Organizational routines translate themselves into standardized protocols, processes and procedures. By simply replicating a firm's SG&A reporting benchmarking effort from a prior period, managers at least conform to investors' and other stakeholders' expectations and do not destabilize their internal disclosure procedures.

The moderating impact of firm-specific financial condition variables on mimetic tendencies suggests that the loss of discretion which is inherent to a compliance policy, may be too much a constraint on substantive financial decision-making if technical and economic performance concerns get more weight or become threatening (George et al., 2006). When the financial condition of the firm worsens, it often implies multiple conflicting pressures that bound the firm's ability and willingness to unilaterally conform. Incompatible and competing demands may promote the predominance of technical factors over criteria of social acceptability and responsiveness to publicly defined norms and practices. Acquiescence to technical and economic performance standards may become more important than social influences in affecting reporting decisions.

Due to data constraints related to our sample size, we did not explore the effect of network ties on imitation tendencies. Both theoretically and empirically (e.g. Davis, 1991; Haunschild, 1993), good arguments can be put forward that more intense network ties and network centrality would have an impact on imitation patterns, since they may serve as a reliable indicator of information quality. More network ties indicate the availability of more detailed information about other participants' characteristics, while firms with a more central network position are more likely to have better information and are typically regarded as high-status which makes them more likely to be imitated. However, firm characteristics and network characteristics are often interdependent. Although firms with a central network position or with more network ties usually are larger and possess a higher status, it may be worthwhile to look at the effect of network structural features on imitated reporting behavior, as Abrahamson and Rosenkopf (1997) show how seemingly minor network features may have a significant effect on the diffusion process.

Our results are consistent with traditional predictions of neo-institutional theory. They show that financial reporting content is affected by actions at the level of organizational fields (in casu social factors at the industry level) and not only by technical, firm-level characteristics. The finding that use by large, successful firms and growing intra-industry similarity enhances imitation are consistent with the arguments emphasizing cognitive legitimacy concerns and taken-for-granted practices as engines for discretionary disclosure decisions. Overall, the results show that the behavior of firms at the industry level can be significant predictors of financial reporting practices at firm level and illustrate specific, socially-based mechanisms through which the institutional environment affects financial reporting processes.

This study did not specifically address the question to what extent conformity is the result of purposeful action whereby compliance with socially established tendencies is done in a manipulative fashion rather than resulting from taken-for-granted, habitualized action. Firms may use imitation strategies in a "window-dressing" mode, where reported

structures are indeed decoupled from actual structures and practices, but whereby the conformity strategy effectively buffers the organization from intrusive questioning. (and ultimately enhances the firm's continued existence and growth prospects).

A general theme running through neo-institutional theory papers is the loose coupling of formal structures and procedures of organizations and their actual work practices (Meyer and Rowan, 1977). Disclosure positions and their content may be seen as such formal structures which may become partly decoupled from underlying business when institutional pressures become prominent. Accounting rules and, more specifically, allocation procedures may constitute the main mechanisms through which such decoupling is effectuated. Like formal structures and procedures, the firm's SG&A profile tends to be very visible and able to confer assurance (legitimation) that overhead control is appropriate through social proof, but through the allocation mechanism reported SG&A may well be detached from the everyday sourcing of business practices.

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TABLE 1: SG&A Profile Similarity Proxies

This table reports descriptive statistics on the dependent variable employed in the current study. We focus on SG&A profile (selling, general and administrative expenses (Compustat item #189) divided by net sales (Compustat item #12)) similarity as a measure for imitation in SG&A reporting. Four alternative similarity proxies are considered in this study. Three proxies capture similarity to selective model firms and rest on a focused and benchmarked comparison approach. These proxies are based on the following equation:

$$DS_{it} = \left[\sum_{j=1}^5 (SP_{it} - SP_{jt})^2 / 5 \right]^{1/2}$$

where SP_{it} denotes the SG&A profile of the focal firm (i.e. firm i) and SP_{jt} denotes the SG&A profile of model firm j in the focal firm's industry in year t . For all proxies, industry is measured at the two-digit SIC industry code level. For our primary proxy (two-dimensional imitation proxy), we use a combination of two traits to select model firms: profitability (success-based imitation) and size (size-based imitation). More specifically, we rank firms within their industry according to their average size (i.e. total assets (Compustat item #6)) over the 10-year sample period and select the five most profitable firms (average return on assets over the sample period) within the upper half of this ranking. Quite similarly, to measure the one-dimensional size (success) imitation proxy, we identify the five largest (most profitable) firms within an industry according to total assets (return on assets). The largest firms for each industry are those for which average total assets (return on assets) are largest over the entire period under study. Our fourth proxy captures similarity on commonality characteristics and is based on the following equation:

$$DS_{it} = ABS[SP_{it} - M(SP_t)] / SD(SP_t)$$

where SP_{it} denotes the SG&A profile of the focal firm (i.e. firm i) in year t . $M(SP_t)$ and $SD(SP_t)$ denote the mean and standard deviation for the firm's industry (i.e. the mean and standard deviation for firms in the same industry, excluding the focal firm). As mentioned earlier, industry is measured at the two-digit SIC industry code level. The aforementioned measures are then subtracted from the highest value in the sample, so that higher values indicate greater similarity. Panel A reports the mean value, the median value and the standard deviation for each proxy. Panel B presents correlations between the alternative similarity proxies.

The sample contains 27,079 firm-year observations from 1994 to 2003. The number of firms range from 2,562 in 1994 to 4,160 in 2002. All data are collected from the COMPUSTAT North-America database. We eliminate firm-year observations for which selling, general and administrative expenses are greater than sales. In addition, we exclude banks, insurance firms and all other financial holdings (primary SIC industry codes between 6000 and 6799) and public administrative institutions (primary SIC industry codes above 9000).

Panel A: Descriptive Statistics

Variable	Mean	Median	Standard Deviation
SG&A (millions of \$)	222.03	20.69	1,072.57
SG&A as a percentage of sales	29.17	24.34	20.53
Two-dimensional imitation proxy (size and success)			
Focal firm similarity	0.5038	0.5153	0.1330
Intra-industry similarity	0.4880	0.4952	0.0753
One-dimensional size imitation proxy			
Focal firm similarity	0.7354	0.7686	0.1243
Intra-industry similarity	0.7291	0.7425	0.0722
One-dimensional success imitation proxy			
Focal firm similarity	0.7302	0.7534	0.1055
Intra-industry similarity	0.7249	0.7352	0.0667
Commonality proxy			
Focal firm similarity	10.0161	10.1374	0.5546
Intra-industry similarity	9.9767	9.9774	0.1925

Panel B: Correlations between Similarity Proxies

	Two-dimensional imitation proxy (size and success)	One-dimensional size imitation proxy	One-dimensional success imitation proxy	Commonality proxy
Two-dimensional imitation proxy (size and success)	1	0.790	0.899	0.651
One-dimensional size imitation proxy	.	1	0.820	0.596
One-dimensional success imitation proxy		.	1	0.689
Commonality proxy			.	1

TABLE 2: SG&A Profile Similarity by Industry

This table reports descriptive statistics (mean value, median value and standard deviation) on the two-dimensional imitation proxy by industry (based on two-digit SIC industry codes). This proxy is based on the following equation:

$$DS_{it} = \left[\sum_{j=1}^5 (SP_{it} - SP_{jt})^2 / 5 \right]^{1/2}$$

where SP_{it} denotes the SG&A profile (selling, general and administrative expenses (Compustat item #189) divided by net sales (Compustat item #12)) of the focal firm (i.e. firm i) and SP_{jt} denotes the SG&A profile of model firm j in the focal firm's industry in year t. Industry is measured at the two-digit SIC industry code level. For this two-dimensional proxy, we use a combination of two traits to select model firms: profitability (success-based imitation) and size (size-based imitation). More specifically, we rank firms within their industry according to their average size (i.e. total assets (Compustat item #6)) over the 10-year sample period and select the five most profitable firms (average return on assets over the sample period) within the upper half of this ranking. The aforementioned measures are then subtracted from the highest value in the sample, so that higher values indicate greater similarity.

	N	Mean	Median	Standard Deviation
SIC 10 Metal mining	112	0.6000	0.6479	0.1486
SIC 13 Oil and gas extraction	1,223	0.4728	0.4791	0.1070
SIC 15 Building construction general contractors and operative builders	236	0.6471	0.6837	0.1267
SIC 16 Heavy construction other than building construction contractors	128	0.6067	0.6189	0.0586
SIC 20 Food and kindred products	1,015	0.4932	0.5139	0.0767
SIC 22 Textile mill products	222	0.5074	0.5208	0.0639
SIC 23 Apparel and other finished products made from fabrics and similar materials	464	0.6154	0.6402	0.0917
SIC 24 Lumber and wood products, except furniture	228	0.5955	0.6078	0.0831
SIC 25 Furniture and fixtures	283	0.5858	0.6045	0.0769
SIC 26 Paper and allied products	384	0.5639	0.5630	0.0686
SIC 27 Printing, publishing and allied products	541	0.4817	0.5025	0.0960
SIC 28 Chemicals and allied products	2,123	0.4216	0.4305	0.0810
SIC 29 Petroleum refining and related industries	216	0.6032	0.6526	0.1520
SIC 30 Rubber and miscellaneous plastics products	598	0.5431	0.5572	0.0776
SIC 31 Leather and leather products	199	0.6228	0.6363	0.0811
SIC 32 Stone, clay, glass and concrete products	224	0.5388	0.5527	0.1039
SIC 33 Primary metal products	683	0.5493	0.5581	0.0635
SIC 34 Fabricated metal products, except machinery and transportation equipment	661	0.5265	0.5458	0.0615
SIC 35 Industrial and commercial machinery and computer equipment	2,696	0.4858	0.5139	0.0841
SIC 36 Electrical and other electrical equipment and components, except computer equipment	3,491	0.5528	0.5795	0.1420
SIC 37 Transportation equipment	1,017	0.6072	0.6328	0.1003
SIC 38 Measuring, analyzing and controlling instruments; photographic, medical and other goods; watches and clocks	2,572	0.5380	0.5543	0.1285

TABLE 2: SG&A Profile Similarity by Industry (Continued)

		N	Mean	Median	Standard Deviation
SIC 39	Miscellaneous manufacturing industries	430	0.5192	0.5391	0.0829
SIC 42	Motor freight transportation and warehousing	105	0.6438	0.6466	0.0994
SIC 44	Water transportation	111	0.7192	0.7270	0.0468
SIC 45	Transportation by air	158	0.6227	0.6549	0.0910
SIC 47	Transportation services	131	0.5444	0.5837	0.1300
SIC 48	Communications	592	0.5391	0.5531	0.1452
SIC 50	Wholesale trade – durable goods	1,133	0.4525	0.4579	0.0675
SIC 51	Wholesale trade – non-durable goods	666	0.5597	0.6186	0.1500
SIC 52	Building materials, hardware, garden supply and mobile home dealers	86	0.5742	0.5854	0.0451
SIC 53	General merchandise store	294	0.6368	0.6515	0.0811
SIC 54	Food stores	266	0.6095	0.6361	0.0671
SIC 55	Automotive dealers and gasoline service stations	219	0.5283	0.5316	0.0799
SIC 56	Apparel and accessory stores	518	0.5642	0.5652	0.0579
SIC 57	Home furniture, furnishings and equipment stores	231	0.6295	0.6507	0.0708
SIC 58	Eating and drinking places	859	0.6298	0.6775	0.1373
SIC 59	Miscellaneous retail	929	0.4674	0.4897	0.0798
SIC 70	Hotels, rooming houses, camps and other lodging places	120	0.5695	0.5662	0.1062
SIC 72	Personal services	148	0.3683	0.3611	0.0975
SIC 73	Business services	4,629	0.3796	0.4072	0.1125
SIC 78	Motion pictures	217	0.4894	0.5039	0.2035
SIC 79	Amusement and recreation services	508	0.5588	0.5951	0.1335
SIC 80	Health services	642	0.4923	0.5420	0.1346
SIC 87	Engineering, accounting, research, management and related services	706	0.4461	0.4684	0.1010

TABLE 3: Correlation Matrix

This table reports correlations among the variables included in our model, employing the two-dimensional imitation proxy as the dependent variable. This proxy is based on the following equation:

$$DS_{it} = \left[\sum_{j=1}^5 (SP_{it} - SP_{jt})^2 / 5 \right]^{1/2}$$

where SP_{it} denotes the SG&A profile (selling, general and administrative expenses (Compustat item #189) divided by net sales (Compustat item #12)) of the focal firm (i.e. firm i) and SP_{jt} denotes the SG&A profile of model firm j in the focal firm's industry in year t . Industry is measured at the two-digit SIC industry code level. For this two-dimensional proxy, we use a combination of two traits to select model firms: profitability (success-based imitation) and size (size-based imitation). More specifically, we rank firms within their industry according to their average size (i.e. total assets (Compustat item #6)) over the 10-year sample period and select the five most profitable firms (average return on assets over the sample period) within the upper half of this ranking. The aforementioned measures are then subtracted from the highest value in the sample, so that higher values indicate greater similarity.

Prior focal firm similarity is the lagged dependent variable. *Prior intra-industry similarity* is determined as the mean of the similarity indices of the other firms within its industry (excluding the focal firm). This variable is then lagged by one year. We rely on the absolute change in industry concentration as a measure of *environmental uncertainty*. Industry concentration is then determined for each year-observation by dividing total sales (Compustat item #12) of the largest four firms in an industry by total sales of the remaining firms in the industry. *Auditor size* is a dummy variable that takes a value of one if the firm has a BigN auditor and zero otherwise. *Firm size* is measured as the natural logarithm of total assets (Compustat item #6). *Leverage* is determined as total debt (Compustat item #34 + Compustat item #9) divided by total assets (Compustat item #6). *Financing raised* is calculated as the sum of new debt and equity issued by the firm (Compustat item #108 + Compustat item #111) scaled by total assets (Compustat item #6). *Fixed asset age* is used as a proxy for firm age and is defined as the ratio of total accumulated depreciation (Compustat item #196) divided by the annual depreciation expense (Compustat item #14). *Growth* is measured as the yearly percentage change in total assets (Compustat item #6). *Revenue increase* is a dummy variable that takes a value of one for increases in sales revenue (Compustat item #12) and zero otherwise. *Capital intensity* is calculated as gross property, plant and equipment (Compustat item #7) divided by total assets (Compustat item #6). *Labor intensity* is measured as the number of employees (Compustat item #29) divided by sales (Compustat item #12). *Gross profit margin* is calculated as the difference between sales (Compustat item #12) and costs of goods sold (Compustat item #41) divided by sales.

	Focal firm similarity	Prior focal firm similarity	Prior intra-industry similarity	Return on assets	Financing raised	Auditor size	Fixed asset age	Firm size
Focal firm similarity	1.000	0.861	0.588	0.142	-0.075	0.111	0.061	0.249
		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Prior focal firm similarity		1.000	0.605	0.085	-0.047	0.098	0.052	0.210
			0.000	0.000	0.000	0.000	0.000	0.000
Prior intra-industry similarity			1.000	0.037	-0.007	0.045	0.053	0.105
				0.000	0.212	0.000	0.000	0.000
Return on assets				1.000	-0.073	0.082	0.032	0.134
					0.000	0.000	0.000	0.000
Financing raised					1.000	0.020	-0.136	-0.039
						0.000	0.000	0.000
Auditor size						1.000	-0.129	0.501
							0.000	0.000
Fixed asset age							1.000	-0.126
								0.000
Firm size								1.000
Leverage								
Environmental uncertainty								
Capital intensity								
Growth								
Revenue increase								
Gross profit margin								
Labor intensity								

TABLE 3: Correlation Matrix (Continued)

	Leverage	Env. Uncertainty	Capital intensity	Growth	Revenue increase	Gross profit margin	Labor intensity
Focal firm similarity	0.024 <i>0.000</i>	-0.002 <i>0.696</i>	0.085 <i>0.000</i>	-0.021 <i>0.000</i>	0.085 <i>0.000</i>	-0.238 <i>0.000</i>	0.018 <i>0.001</i>
Prior focal firm similarity	0.040 <i>0.000</i>	0.040 <i>0.000</i>	0.075 <i>0.000</i>	-0.066 <i>0.000</i>	0.018 <i>0.002</i>	-0.264 <i>0.000</i>	0.040 <i>0.000</i>
Prior intra-industry similarity	0.077 <i>0.000</i>	0.065 <i>0.000</i>	0.082 <i>0.000</i>	-0.044 <i>0.000</i>	0.017 <i>0.003</i>	-0.249 <i>0.000</i>	0.044 <i>0.000</i>
Return on assets	-0.235 <i>0.000</i>	-0.001 <i>0.899</i>	-0.032 <i>0.000</i>	-0.005 <i>0.371</i>	0.092 <i>0.000</i>	0.083 <i>0.000</i>	-0.003 <i>0.535</i>
Financing raised	0.219 <i>0.000</i>	0.025 <i>0.000</i>	-0.045 <i>0.000</i>	0.044 <i>0.000</i>	0.103 <i>0.000</i>	-0.042 <i>0.000</i>	0.026 <i>0.000</i>
Auditor size	-0.069 <i>0.000</i>	0.020 <i>0.000</i>	-0.051 <i>0.000</i>	-0.048 <i>0.000</i>	0.078 <i>0.000</i>	0.036 <i>0.000</i>	-0.058 <i>0.000</i>
Fixed asset age	0.002 <i>0.76</i>	0.014 <i>0.011</i>	0.540 <i>0.000</i>	-0.018 <i>0.001</i>	-0.106 <i>0.000</i>	-0.099 <i>0.000</i>	-0.009 <i>0.115</i>
Firm size	0.008 <i>0.123</i>	0.020 <i>0.000</i>	-0.027 <i>0.000</i>	-0.036 <i>0.000</i>	0.097 <i>0.000</i>	-0.022 <i>0.000</i>	-0.101 <i>0.000</i>
Leverage	1.000 <i>.</i>	0.032 <i>0.000</i>	0.179 <i>0.000</i>	0.009 <i>0.098</i>	-0.079 <i>0.000</i>	-0.108 <i>0.000</i>	0.009 <i>0.122</i>
Environmental uncertainty		1.000 <i>.</i>	0.096 <i>0.000</i>	0.007 <i>0.205</i>	-0.006 <i>0.282</i>	-0.026 <i>0.000</i>	0.020 <i>0.000</i>
Capital intensity			1.000 <i>.</i>	-0.018 <i>0.001</i>	-0.094 <i>0.000</i>	-0.091 <i>0.000</i>	0.049 <i>0.000</i>
Growth				1.000 <i>.</i>	0.043 <i>0.000</i>	-0.007 <i>0.18</i>	0.022 <i>0.000</i>
Revenue increase					1.000 <i>.</i>	0.089 <i>0.000</i>	0.015 <i>0.006</i>
Gross profit margin						1.000 <i>.</i>	-0.090 <i>0.000</i>
Labor intensity							1.000 <i>.</i>

TABLE 4: Regression Results

This table reports regression results employing the two-dimensional imitation proxy as the dependent variable (except for Model 4, cf. infra). This proxy is based on the following equation:

$$DS_{it} = \left[\sum_{j=1}^5 (SP_{it} - SP_{jt})^2 / 5 \right]^{1/2}$$

where SP_{it} denotes the SG&A profile (selling, general and administrative expenses (Compustat item #189) divided by net sales (Compustat item #12)) of the focal firm (i.e. firm i) and SP_{jt} denotes the SG&A profile of model firm j in the focal firm's industry in year t . Industry is measured at the two-digit SIC industry code level. For this two-dimensional proxy, we use a combination of two traits to select model firms: profitability (success-based imitation) and size (size-based imitation). More specifically, we rank firms within their industry according to their average size (i.e. total assets (Compustat item #6)) over the 10-year sample period and select the five most profitable firms (average return on assets over the sample period) within the upper half of this ranking. The aforementioned measures are then subtracted from the highest value in the sample, so that higher values indicate greater similarity.

Prior focal firm similarity is the lagged dependent variable. *Prior intra-industry similarity* is determined as the mean of the similarity indices of the other firms within its industry (excluding the focal firm). This variable is then lagged by one year. We rely on the absolute change in industry concentration as a measure of *environmental uncertainty*. Industry concentration is then determined for each year-observation by dividing total sales (Compustat item #12) of the largest four firms in an industry by total sales of the remaining firms in the industry. *Auditor size* is a dummy variable that takes a value of one if the firm has a BigN auditor and zero otherwise. *Firm size* is measured as the natural logarithm of total assets (Compustat item #6). *Leverage* is determined as total debt (Compustat item #34 + Compustat item #9) divided by total assets (Compustat item #6). *Financing raised* is calculated as the sum of new debt and equity issued by the firm (Compustat item #108 + Compustat item #111) scaled by total assets (Compustat item #6). *Fixed asset age* is used as a proxy for firm age and is defined as the ratio of total accumulated depreciation (Compustat item #196) divided by the annual depreciation expense (Compustat item #14). *Growth* is measured as the yearly percentage change in total assets (Compustat item #6). *Revenue increase* is a dummy variable that takes a value of one for increases in sales revenue (Compustat item #12) and zero otherwise. *Capital intensity* is calculated as gross property, plant and equipment (Compustat item #7) divided by total assets (Compustat item #6). *Labor intensity* is measured as the number of employees (Compustat item #29) divided by sales (Compustat item #12). *Gross profit margin* is calculated as the difference between sales (Compustat item #12) and costs of goods sold (Compustat item #41) divided by sales.

Model 4 tests whether the relationship between focal firm similarity and intra-industry similarity can be reversed. The dependent variable in this model is current-year intra-industry similarity and the main independent variable is prior year focal firm similarity. This is the reverse of the relationship tested in Model 3.

Coefficients for the year-specific dummies are not reported.

	Model 1	Model 2	Model 3	Model 4
Variable	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)
Intercept	0.1198 (.000)	0.0091 (.029)	0.0042 (.293)	0.2777 (.000)
Prior focal firm similarity		0.8454 (.000)	0.7868 (.000)	-0.0015 (.442)
Prior intra-industry similarity			0.1646 (.000)	0.9361 (.000)
Environmental uncertainty	-0.0848 (.001)	-0.1927 (.000)	-0.2079 (.000)	-0.2005 (.000)
Auditor size	-0.0001 (.953)	0.0008 (.551)	0.0009 (.505)	-0.0001 (.904)
Firm size	0.0135 (.000)	0.0004 (.133)	0.0005 (.066)	0.0002 (.125)
Leverage	0.0186 (.000)	0.0063 (.001)	0.0045 (.016)	0.0002 (.805)
Return on assets	0.0268 (.061)	0.0084 (.095)	0.0082 (.108)	0.0019 (.014)
Financing raised	-0.0431 (.000)	-0.0065 (.001)	-0.0065 (.001)	0.0012 (.155)
Fixed asset age	0.0007 (.003)	-0.0001 (.426)	-0.0001 (.448)	-0.0001 (.186)
Growth	-0.0012 (.004)	0.0003 (.356)	0.0003 (.306)	0.0001 (.506)
Revenue increase	0.0242 (.000)	0.0254 (.000)	0.0250 (.000)	0.0024 (.000)
Capital intensity	0.0128 (.000)	0.0060 (.000)	0.0056 (.000)	0.0052 (.000)
Labor intensity	0.2652 (.003)	-0.0361 (.304)	-0.0488 (.163)	0.0193 (.217)
Gross profit margin	-0.1327 (.000)	-0.0171 (.000)	-0.0117 (.000)	-0.0025 (.026)
Adjusted R ²	0.1511	0.7601	0.7667	0.9454
Incremental R ²		0.6090	0.0065	
F Change		68,702.21 (.000)	754.57 (.000)	
Durbin-Watson	1.9576 (.000)	1.9895 (.277)	1.9842 (.154)	2.1312 (.999)

TABLE 4: Regression Results (Continued)

Variable	Model 5	Model 6	Model 7	Model 8
	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)
Intercept	0.0038 (.340)	0.0039 (.331)	0.004 (.316)	0.0035 (.379)
Prior focal firm similarity	0.7858 (.000)	0.7871 (.000)	0.7863 (.000)	0.7861 (.000)
Prior intra-industry similarity	0.1283 (.000)	0.1673 (.000)	0.1634 (.000)	0.1323 (.000)
Prior intra-industry similarity X Environmental uncertainty	0.633 (.007)			0.6083 (.010)
Prior intra-industry similarity X Auditor size		0.0451 (.002)		0.0434 (.008)
Prior intra-industry similarity X Firm size			0.0041 (.108)	0.0003 (.916)
Environmental uncertainty	-0.2073 (.000)	-0.2264 (.000)	-0.2083 (.000)	-0.2251 (.000)
Auditor size	0.0011 (.404)	0.0009 (.471)	0.0009 (.497)	0.0012 (.379)
Firm size	0.0005 (.066)	0.0004 (.080)	0.0005 (.062)	0.0004 (.080)
Leverage	0.0045 (.018)	0.0045 (.017)	0.0046 (.016)	0.0045 (.018)
Return on assets	0.0082 (.107)	0.0082 (.108)	0.0083 (.107)	0.0082 (.107)
Financing raised	-0.0066 (.001)	-0.0064 (.001)	-0.0065 (.001)	-0.0065 (.001)
Fixed asset age	-0.0001 (.448)	-0.0001 (.437)	-0.0001 (.462)	-0.0001 (.438)
Growth	0.0003 (.303)	0.0003 (.291)	0.0003 (.308)	0.0003 (.289)
Revenue increase	0.0250 (.000)	0.0250 (.000)	0.0250 (.000)	0.0249 (.000)
Capital intensity	0.0055 (.000)	0.0056 (.000)	0.0055 (.000)	0.0055 (.000)
Labor intensity	-0.0464 (.181)	-0.0478 (.173)	-0.0475 (.175)	-0.0455 (.193)
Gross profit margin	-0.0116 (.000)	-0.0117 (.000)	-0.0117 (.000)	-0.0116 (.000)
Adjusted R ²	0.7670	0.7667	0.7667	0.7668
Incremental R ²	0.0003	0.0000	0.0000	0.0001
F Change	35.99 (.000)	5.80 (.016)	2.32 (.128)	16.24 (.000)
Durbin-Watson	1.9841 (.155)	1.9842 (.156)	1.9839 (.152)	1.9840 (.160)

TABLE 5: Regression Results for the Alternative Similarity Modes

This table reports regression results based on three alternative similarity proxies (i.e. other than the two-dimensional imitation proxy), being a one-dimensional size proxy (Model 9), a one-dimensional success proxy (Model 10) and a commonality proxy (Model 11). The former two proxies are based on the following equation:

$$DS_{it} = \left[\sum_{j=1}^5 (SP_{it} - SP_{jt})^2 / 5 \right]^{1/2}$$

where SP_{it} denotes the SG&A profile (selling, general and administrative expenses (Compustat item #189) divided by net sales (Compustat item #12)) of the focal firm (i.e. firm i) and SP_{jt} denotes the SG&A profile of model firm j in the focal firm's industry in year t . For all proxies, industry is measured at the two-digit SIC industry code level. To measure the one-dimensional size (success) imitation proxy, we identify the five largest (most profitable) firms within an industry according to total assets (return on assets). The largest firms for each industry are those for which average total assets (return on assets) are largest over the entire period under study. The latter proxy captures similarity on commonality characteristics and is based on the following equation:

$$DS_{it} = ABS[SP_{it} - M(SP_{it})] / SD(SP_{it})$$

where SP_{it} denotes the SG&A profile of the focal firm (i.e. firm i) in year t . $M(SP_{it})$ and $SD(SP_{it})$ denote the mean and standard deviation for the firm's industry (i.e. the mean and standard deviation for firms in the same industry, excluding the focal firm). As mentioned earlier, industry is measured at the two-digit SIC industry code level. The aforementioned measures are then subtracted from the highest value in the sample, so that higher values indicate greater similarity.

Prior focal firm similarity is the lagged dependent variable. *Prior intra-industry similarity* is determined as the mean of the similarity indices of the other firms within its industry (excluding the focal firm). This variable is then lagged by one year. We rely on the absolute change in industry concentration as a measure of *environmental uncertainty*. Industry concentration is then determined for each year-observation by dividing total sales (Compustat item #12) of the largest four firms in an industry by total sales of the remaining firms in the industry. *Auditor size* is a dummy variable that takes a value of one if the firm has a BigN auditor and zero otherwise. *Firm size* is measured as the natural logarithm of total assets (Compustat item #6). *Leverage* is determined as total debt (Compustat item #34 + Compustat item #9) divided by total assets (Compustat item #6). *Financing raised* is calculated as the sum of new debt and equity issued by the firm (Compustat item #108 + Compustat item #111) scaled by total assets (Compustat item #6). *Fixed asset age* is used as a proxy for firm age and is defined as the ratio of total accumulated depreciation (Compustat item #196) divided by the annual depreciation expense (Compustat item #14). *Growth* is measured as the yearly percentage change in total assets (Compustat item #6). *Revenue increase* is a dummy variable that takes a value of one for increases in sales revenue (Compustat item #12) and zero otherwise. *Capital intensity* is calculated as gross property, plant and equipment (Compustat item #7) divided by total assets (Compustat item #6). *Labor intensity* is measured as the number of employees (Compustat item #29) divided by sales (Compustat item #12). *Gross profit margin* is calculated as the difference between sales (Compustat item #12) and costs of goods sold (Compustat item #41) divided by sales.

Variable	Model 9		Model 10		Model 11	
	Coefficient	(p-value)	Coefficient	(p-value)	Coefficient	(p-value)
Intercept	0.0230	(.000)	0.0022	(.544)	-0.0964	(.000)
Prior focal firm similarity	0.7980	(.000)	0.7675	(.000)	0.7640	(.000)
Prior intra-industry similarity	0.1189	(.000)	0.1364	(.000)	0.0494	(.172)
Environmental uncertainty	0.0201	(.067)	-0.1359	(.000)	-0.0672	(.320)
Auditor size	-0.0004	(.766)	0.0004	(.708)	-0.0014	(.843)
Firm size	0.0019	(.000)	0.0008	(.000)	0.0022	(.072)
Leverage	0.0097	(.000)	0.0047	(.003)	0.0210	(.021)
Return on assets	0.0086	(.029)	0.0070	(.113)	0.0282	(.060)
Financing raised	-0.0057	(.002)	-0.0057	(.001)	-0.0325	(.001)
Fixed asset age	0.0000	(.931)	0.0000	(.728)	-0.0006	(.252)
Growth	0.0008	(.061)	0.0003	(.229)	0.0015	(.452)
Revenue increase	0.0271	(.000)	0.0202	(.000)	0.0835	(.000)
Capital intensity	0.0043	(.000)	0.0045	(.000)	0.0109	(.047)
Labor intensity	-0.0181	(.601)	-0.0757	(.018)	-0.6358	(.000)
Gross profit margin	-0.0329	(.000)	-0.0099	(.001)	0.0321	(.015)
Adjusted R ²	0.7879		0.7112		0.6163	
Durbin-Watson	1.9993	(.586)	2.0069	(.802)	2.0020	(.673)