

International Firms' Innovation Signaling – A Double-edged Sword?

Abstract

There has been a recent hype in the business world which centres on corporate governance and codes of conduct as well as the voluntary adoption of best principles to pursue sound business practice. Research to date has largely focused on providing insights into the contents of various codes of conduct while only a few studies have adopted a theory-based argument. To address this gap, we use the theoretical lens of signaling theory and presume that adopting codes of conduct can be understood as a clear market signal with positive implications for a company's reputation. In addition, this research places a major focus on 'innovation' in codes of conducts - an issue which has largely been neglected in previous studies. We content-analyzed 150 codes of conducts, taken from the web-sites of internationally operating companies and showed that 60 of them contain references to innovation. The mere number of mentions might already signify that innovation is likely to become part of industry-wide shared codes of conduct which potentially influence competitive action. However, future research should be built on a theoretical framework with testable propositions. Based on market signaling theory, we address research issues as well as managerial implications.

Introduction

During the last few years, interest in responsible business behaviour, sound ethical practices, integrity and compliance has grown markedly (e.g. Waddock et al., 2002; Wright and

Rwabizambuga, 2006). Framed in terms of ‘corporate governance’, ‘business ethics’, ‘codes of conduct’, etc. the consensus view assigns considerable importance to the voluntary adoption of moral obligations and guidelines as opposed to legally binding requirements. While recent disasters in the corporate world, like the customarily mentioned Enron and WorldCom cases, have instigated moves towards governmental regulations (e.g. Sarbanes Oxley Act) to prevent major catastrophes, so-called ‘codes of conduct’ express a self-imposed obligation to meet the responsibilities of a corporation towards its stakeholders. Often formulated on the basis of some just and rightfully perceived ethical guidelines, they clarify the objectives a company pursues, its norms and values as well as what it can be held accountable for (Kaptein, 2004).

While the reasons for these voluntary undertakings are manifold, there is major evidence that companies benefit from publicly committing themselves to a set of core values against which their actions can be measured. In more general terms, using codes of conduct is presumed to anticipate stakeholder expectations and increase confidence (Raiborn and Payne, 1990). Accordingly, issues such as risk avoidance, adherence to local laws and regulations, quality of products and services, the protection of the natural environment and shareholder rights, corporate core values, corruption, and fraud, etc. are frequently mentioned (Kaptein, 2004; OECD, 1999). Codes can also clarify what is expected of employees in their engagement with one another and their treatment of organizational assets (Mathews, 1987). Indeed, codes of conduct can address a variety of internal and external stakeholders and their content needs to be formulated accordingly.

To date, there have been numerous studies which content-analyzed codes of conduct. These have mostly been conducted with respect to specific countries and the operations of multinational companies (Langlois and Schlegelmilch, 1990; Levebvre and Singh, 1992), or else focused on selected issues, such as ‘bribery’ (Gordon and Miyake, 2001), ‘child labor’ (Kolk and van Tulder, 2002) or ‘tourism’ (Payne and Dimanche, 1996), etc. Given the fact that ‘innovation’ has become one of the major pillars of corporate strategy, it seems surprising that the topic of innovation has only very rarely been mentioned as an integral element of codes of conduct. As one exception, Langlois and Schlegelmilch (1990) referred to the category ‘innovation in technology’ and found a surprising dominance in codes of conduct of the then Western Germany as opposed to France and Britain. But apart from a descriptive

mentioning of the relevant sections, it has not been their objective to investigate the role of innovation in further detail.

Besides an apparent neglect of innovation topics, most previous studies that focused on content analysis suffered from a lack of clear theoretical grounding. By far the majority of research has adopted a descriptive/exploratory count analysis e.g. (Preble and Hoffman, 1999; Wiley, 2000; Jamal and Bowie, 2002; Kaptein, 2004) without using a succinct theoretical lens to anchor their findings within an overall generic research framework. We redress this gap in the previous literature and base our investigation on theoretical insights from market signaling theory (Spence, 1974; Eliashberg and Robertson, 1988; Heil and Robertson, 1991). Our research question is as follows: Do companies with publicly reported R&D spendings include the subject of innovation in their codes of conduct, and if so, what is the proximate cause of aspiration to do so? In answering these questions, we intend to provide a better grasp of the contents of business codes as related to innovation.

We analyzed 150 codes of conduct, taken from the web-sites of internationally operating companies, showed that only 60 include any reference to innovation. Firms that adopt innovation can be further specified according to their industry affiliation (innovation is mainly mentioned in technology, industrial engineering and biotechnology / pharmaceuticals) and their regional location (innovation is mainly mentioned in American firm's codes of conduct). By interpreting our findings from the perspective of signaling theory, we offer an initial set of propositions that explain the logic of 'innovation signaling'. These propositions should be of value in suggesting further empirical research and providing implications for managerial practice of why and how companies include the topic of innovation in their codes of conduct. The empirical effectiveness of codes of conduct, however, falls beyond the scope of this paper.

The remainder of this paper is structured as follows. First, we will briefly summarize the state-of-the art literature on corporate governance and codes of conduct. In the following section, we introduce signaling theory as a theoretical angle to conceptualize innovation announcements in codes of conduct as a specific type of 'market signaling'. After briefly describing our methodology, the next two sections present the analytical heart of our paper, where we discuss our findings. These are related to three types of outputs: (1) an analysis of

the contents of 150 codes of conduct of internationally operating companies, (2) a classification scheme related to the issue of innovation in codes of conduct, (3) a preliminary model to further investigate the interactions between codes of conduct, innovation as market signaling and its presumed influence on stakeholder reactions. The paper closes with an outlook for future research.

Corporate Governance and Codes of Conduct

Corporate governance is a complex and multi-dimensional topic which includes ethical considerations such as the self-discipline and honesty of high-level managers, as well as internal measures to avoid fraud in the company or more concrete behavioural implications for managers and staff. While the notions of corporate governance and codes of conduct have sometimes been used synonymously, the plethora of titles for documents both in the literature and in company documents indicates that various names are used under the generic heading of corporate governance. These invariably include “codes of conduct” (White and Montgomery, 1980), “corporate code of ethics” (Cressey and Moore, 1983), “ethical standards” (Wiley, 2000), and “business codes” (Kaptein, 2004) or, from a more practical side, “Business Conduct Manual” (P&G, Kodak, IBM, HP), “Business Practice Standard” (Baxter), “Business Principles” (Philips, Shell), “Code of Business Conduct” (Monsanto, Siemens, Honeywell) “Code of Business Conduct and Ethics” (Amazon, ebay, Pfizer, Exxon), etc. While vagueness in terminology may have hampered progress in measurement and analysis, we believe that the field still suffers from conceptual structuring and therefore terminology acts as a means to incorporate different contents and approaches into a not yet clearly defined research agenda.

Accordingly, we did not want to confine our research from the outset instead looked for any sorts of principles and norms companies acknowledge for themselves, whether these are directed at internal or external stakeholders, or relate to rather abstract or more concrete guiding principles. In most general terms, we therefore look for what Kaptein (2004) defines as policy documents that determine responsibilities of the corporation towards its stakeholders. While we recognize that codes of conduct have been primarily directed towards employees, they also refer to other stakeholder groups, such as customers, suppliers, and competitors. Throughout the following text, we will consistently refer to the notion of “code of conduct” while acknowledging the existence of variations in terms of content and focus.

Recently, there have been discussions on whether codes of conduct are voluntarily adopted guidelines. With the adoption of the Sarbanes-Oxley Act there has been a veering away from purely enabling governance systems to imposing mandatory governance rules. Even though legislative regulation is on the move, companies even strive to adopt corporate governance rules on a voluntary basis. So what could be the incentives for doing so? One of the most important reasons that have been discussed have clearly been to deter investors from devaluating the firm and respond to investors' desire for information relating to the firms business (Diamond and Verrecchia, 1991) and to gain credibility with customers especially in rough-and-tumble markets. This might be particularly relevant for specific industries which suffer from high turbulence and instability. Along this line it has been argued that there are decisive differences within and across industries (Lefebvre and Singh, 1992; Khanna and Palepu, 2004) as to the adoption and convergence of codes of conduct. These insights are extended by research that indicates significant differences in company codes across countries (Langlois and Schlegelmilch, 1990; Preble and Hoffman, 1999).

Codes of Conduct from the Perspective of Signaling Theory

While the broader field of corporate social responsibility has recently undergone an upsurge in theoretical development (Williams et al., 2006), we are currently unaware of any study that adopts the theoretical perspective of signaling theory. However, one of the reasons why firms communicate externally can be explained by their intent to influence their competitors.

Signaling theory describes these communications as 'signals' that precede concrete actions in the marketplace (Heil and Robertson, 1991). The content of such signals may be defined rather broadly, e.g. judging the productivity of employees (Spence, 1974), providing information on product quality (Engers, 1987), of proposed price increases (Gerstner, 1985), market entry, capacity increases etc. Signals may not only be directed at customers but at a variety of different audiences, including competitors, shareholders, employees, or distributors (Eliashberg and Robertson, 1988). One of the most prominent works related to competitive behaviour is by Porter who suggests that "A market signal is any action by a competitor that provides direct or indirect indication of its intentions, motives, goals, or internal situation" (Porter, 1980: 75). Others have focused on signals as announcements or previews of potential actions intended to convey information before a firm actually undertakes a particular action (Eliashberg and Robertson, 1988).

Similar to the objectives of codes of conduct, signaling is being undertaken for several reasons. Major effort to send signals to observers are undertaken to use these signals to form impressions or positive reputations or pre-empt the competition and trigger the development of competitive norms that discourage competitors from following (Heil and Robertson, 1991). If, for instance entry barriers are perceived as high due to intended investments and if communicated commitment to the intended actions is in line, competitor's intentions to react to such a strategy might be low. While signals may be truthful or not, their credibility depends on a variety of factors such as previous actions, ease of interpretability or likelihood of the intended strategy to become realized (Schwarz, 2002).

While signaling theory has been taking a strong focus on the announcement of new products (product innovation), its line of reasoning can be extended to several levels of innovative activities. For instance, signals form opinions about a firm's ability to create value on a more generic level, i.e. in terms of innovations that affect the overall corporate strategy. Thus, signaling innovation activities may provide important information about a company's strategic goals and intent. Overtime, perceptions of market participants as to the firm's capabilities may form (Clark and Montgomery, 1998). Also, joint innovation efforts with collaborating or competing firms may be used as a clear market signal and thus influence the competitive threats within the industry (Madhavan and Prescott, 1995).

Industry context and the actions of rivals may further influence in how far positive reputation building efforts are successful (Basedo et al., 2006). While firms in the same industry are likely to compete in the same product market, the competitive position might be weakened by the announcement of specific innovations. On the contrary, if competitors attempt to adopt similar innovations (me-too), the benefit of an announcement might be seen in positive spill-over effects. In the first case, stakeholders may believe that innovations signals are favourable news for the firm and that rival companies may benefit as well. In the second case, a positive overall valuation may occur for the announcing firm which may experience an increase in product demand.

As various industries have different predilections in announcing intended activities, the presumed benefit of signaling first may large depend on the degree of market dominance. This in turn, leads to the expectation that the role of promoting the use of codes of conduct and

innovation signals is generally executed by market leaders as those firms have more to lose than others (Scherer, 1980). However, contrary evidence exists that firms with low market dominance benefit from signaling effects because they face lower risks of cannibalization associated with the announcement of new product development (Eliashberg and Robertson, 1988). Taken collectively, we presume that codes of conduct, and more precisely, the signaling of innovation activities provides visible signs upon which stakeholders infer various characteristics of the firm. In aggregate, these characteristics may determine a firm's overall posture in the market place.

Research Design and Methods

Our data sample is based on the Global R&D Scoreboard 2006, as prepared for the UK Department of Trade and Industry (DTI). The 2006 R&D Scoreboard contains extensive data on the top 1,250 global R&D companies with a total amount of \$b 428 R&D spendings. The "Global 1,250" is dominated by a few major economies (82% of R&D is from companies based in the USA, Japan, Germany, France and the UK), by large companies (61% of the R&D is done by the top 100 companies), and by companies in major R&D sectors (70% of R&D is in the top 5 sectors: technology hardware, pharmaceuticals, automotive, electronics and software).

Sample Selection

From the top 300 of the 1,250 global companies by R&D Investment (2005/2006), a total number of 150 companies has been selected, which equals an investment of \$b 281 in R&D or 66% of the total R&D investments of the TOP 1,250 global companies. Concurrently, it was ensured that these 150 companies on average cover 62% of the total R&D spendings within each industry. This reflects that industrial R&D is a key component of sustainable innovation-led growth since it helps to create the higher value added products, processes and services on which the future companies increasingly depends. Selected companies can be seen as having a major impact on industry standards and their developments.

Data Analysis

The entire research is based on investigating web-sites of internationally operating companies. We consistently referred to the English web-sites, even though a majority of companies is of

non-English speaking origin (91 of 150). We first conducted a basic frequency count analysis according to the criteria “code of conduct exists”, “code of conduct does not exist”, “code of conduct includes the topic of innovation”. Figure 1 depicts the regional specification of our sample:

Insert Figure 1 about here

Around 40% of the companies in sample are from Europe and North America and around 20% from Asia. Within these regions, a clear distinction can be made according to the use of codes of conduct. In North America 95% of the companies have already introduced a code of conduct, while only 80% of the European and 71% of the Asian corporations have done so.

With respect to the aspect of innovation, around half of the North American companies (51%) as well as Asian companies (50%) which expressed a code of conduct have further incorporated the topic of innovation. However, only 43% of the European companies did the same.

A further breakdown of the regional result to country levels reveals the following: The top spending countries for R&D, namely, USA, Japan, Germany, France and the UK exhibit different patterns. Whereas in the USA, Japan and France half of the companies with a code of conduct also refer to innovation, less than a third of the companies with a code of conduct in Germany and the UK take innovation into consideration. In the next step, we were interested in industry-specific distributions. The sample of 150 as related to industry affiliation is shown in Table 1.

Insert Table 1 around here

The application of codes of conduct can be observed across almost all industries. The only exceptions are the industry groups “Electricity” and “Industrial Metals”. Seen from an international angle, these firms still have a dominant home market orientation, especially Japan, France and South Korea, and are less dependent on the international finance market than other industries. Thus, signaling to financial investors (via an English code of conduct

version) may not be driven by the same necessity as in other industries. It can further be observed that within the automobile and parts industry, the publication of a code of conduct does not yet amount to common standard. Despite being global players, these companies are again mainly focused on their home markets in Europe, Asia and North America and are less concerned with developing a publicly available code of conduct. As for innovation, aerospace and defense, electronics and electrical industries as well as industrial engineering are the leading industries in adopting an innovation focus as based on the frequency counts.

Codes of Conduct and Innovation – A Classification Scheme

After the general overview in the preceding section, we focus on those 60 companies that have explicitly incorporated innovation into their code of conduct. We base our classification on a similar approach suggested by Gaumitz and Lere (2004) who looked at codes of ethics in terms of length, focus, level of detail, and shape. In addition, we analyse the mentions of innovation as presented in codes of conduct by referring to different headlines (e.g. mission, competence, employees, etc.). As there these mentions quite often overlap, we chose the category with the highest mentions to be included in our analysis.

Altogether, seven main different representation of innovation were found. In order of frequency, these relate to: (1) Innovation as corporate value (Va), (2) Innovation as core competence (CC), (3) Innovative products/services (P/S), (4) Innovation as part of the corporate mission and vision (M/V), (5) Innovation as intellectual property (IP), (6) Innovation for Stakeholders (Sth) and (7) Innovation as a result of diversity (Div). The last category (8) Others (Oth) includes all other references to innovation not included in previous categories. As this only refers to three companies, we will not explicitly include it into our further analysis.

Insert Table 2 around here

These categories also have a clear backing in the theoretical literature. For instance, innovation has been identified as an important component of corporate values, missions, and visions (Giblin and Amuso, 1997; Martensen and Dahlggaard, 1999). Further, it has been

argued that especially high-tech companies depend on highly innovative R&D as one of their core competencies (Yu-Fen and Tsui-Chih, 2006). Purporting innovation as a core competency is also reflected in a specific focus on innovative products and services (Martensen and Dahlgard, 1999) as well as diversity as a necessary prerequisite to innovation (Bassett-Jones and Nigel, 2005). Finally, there have been ongoing efforts to link the discussion on innovation to intellectual property rights (Simon and Emery, 1996), and further include various stakeholders in the innovation development process, e.g. via open innovation (Chesbrough, 2003).

(1) Innovation as Corporate Value (Va)

Innovation as part of the corporate values reflects the intrinsic code of a company, e.g. what it does and what it stands for. This can be seen as the DNA of a company. The value statements should therefore act as an overarching guideline for the code of conduct. “If we keep our commitments and promises, we will live our core values of quality, commitment, integrity and innovation and will protect the Company’s good name”, is how the relationship between code of conduct and the company’s values is phrased by John Deere in their Business Conduct Guidelines.

(2) Innovation as Core competence (CC)

For thirteen companies in our sample, innovation represents a core competence. Roche, the Swiss pharmaceutical company, stated within its code of conduct that it is committed to innovation: “Innovation across all aspects of our business is key to our success“. Or as expressed by the German households goods company Henkel: “To be successful, Henkel must be flexible and innovative in the allocation of its resources and the development of its business in the different parts of the world.“

(3) Innovative Products/Services (P/S)

In close alignment with the original ideas of signaling theory, innovation is mentioned with respect to product and service development. Innovative products and services are seen as the distinctive factors that differentiate companies from their competitors. There is a difference as to whether innovation of products or services is regarded from a broader perspective or from a rather narrow scope: „To Create and Supply Innovative, Original Products and Services that Meet the Needs of Customers” is how Sharp incorporates in a broad sense innovation to enhance customer satisfaction. On the other side Nestlé, the Swiss food producer, takes a

focused approach. Nestlé, being quite active in developing countries, where water shortage is a major concern, takes a very narrow focus on innovation within its corporate business principles: “The innovation and renovation of its products and processes, including manufacturing methods that minimise water consumption and waste water generation”.

(4) Innovation as Part of Mission/Vision (M/V)

Similar to innovation as corporate value (Va) as well as core competence (CC), innovation as ‘part of the overall mission/vision statement’ is a key building block for many codes of conduct. For once, companies restrict their focus on innovation to their general mission / vision statement. For example, in the “Philips General Business Principles” innovation is only referred to at the very beginning of their code of conduct as “Philips’ General commitment: Philips’ mission is to improve the quality of people’s lives through the timely introduction of meaningful technological innovations.” Besides, the citation of the mission statement innovation is not explicitly incorporated in Philips’ business principles.

On the other side, companies clearly move beyond simply incorporating innovation in their mission/vision statement and refer to some more precise details. For instance, it says in the code of conduct of the Fiat Group: “The Group’s mission is to grow and create value by supplying innovative products and services for maximum customer satisfaction with due respect to the legitimate interests of all categories of stakeholders”. The aspect of innovation within the Fiat Groups’ Code of Conduct explicitly relates to external relationships with customers “...maintaining profitable and lasting relationships with customers; offering safety, service, quality and value supported by continuous innovation” as well as suppliers “...The Group selects suppliers that offer the best capabilities in terms of quality, innovation, costs and service, guaranteeing the highest level of customer satisfaction at all times.”

(5) Innovation as Intellectual Property (IP)

Innovations are part of the company’s intellectual property and therefore have to be protected. The objective of this statement is to relate innovation to legal consequences if inherent intellectual property rights within innovation development are disregarded. General Electric’s (GE) code of conduct (“The Spirit & The Letter”) gives cross reference to the internal “Employee Innovation and Proprietary Information Agreement” (EIPIA) in order to make

their employees aware of the importance of protecting GE intellectual property. However, it is only this single time that ‘innovation’ is mentioned by GE in their 59-page code of conduct.

(6) Innovation for Stakeholders (Sth)

Customers are the primary stakeholder group that are addressed, when incorporating innovation into codes of conduct. It is assumed that meeting customer needs will be financially rewarding. ABB, the Swiss electronic and electrical equipment company, makes this very explicit in its “ABB Code of Conduct” in the section “Determination - We show determination when we help our customers to succeed”. Here they explain: “Customers look to ABB for innovation, reliability and integrity. We believe in a competitive, free enterprise system because it guarantees that our hard work and innovation will be rewarded.” Apart from explicitly addressing customers, employees and shareholders, competitors are also mentioned when introducing innovation aspects.

(7) Innovation as a Result of Diversity (Div)

A rather recent focus on innovative product and processes is derived from paying respect to a diverse workforce. The link between diverse workforces, innovation and code of conduct is most prominent within North American companies but also gains importance elsewhere. The “Microsoft Standards of Business Conduct” refers to innovation, while putting major emphasis on the employee side: “Microsoft aspires to be a great company, and our success depends on you. It depends on people who innovate and are committed to growing our business responsibly”. And further: “Diversity: Microsoft promotes and supports a diverse workforce at all levels of the company. It is our belief that creating a work environment that enables us to attract, retain, and fully engage diverse talents leads to enhanced innovation and creativity in our products and services.” While the diversity discussion has been ignited by North American companies, other continents have been catching up in relating to these issues.

Discussion and Conceptual Model

While our previous findings are based on simple frequency counts, as have been adopted by the majority of studies, we are now going to discuss our results with regard to our theoretical perspective of signaling theory. We offer some initial propositions based on both an

extrapolation of the existing literature and our preliminary analysis of some 150 codes of conduct.

Overall, we argue that the topic of innovation within codes of conduct is primarily adopted by firms as a signaling device for demonstrating positive credentials, i.e. with the aim of strengthening corporate reputation and therefore stakeholder impact. While the link between corporate reputation and financial implications has been well established in the literature (Fombrun and Shanley, 1990), it is less clear how reputation is developed. We suggest that this is primarily done by signaling efforts. Reputation forms as stakeholders either observe concrete actions or perceive the way in which a company tries to legitimize its strategy, products, and operations. The latter implies that companies use codes of conduct simply to pretend some objectives with no obvious intention of implementing these commitments as indicated in the codes. This might imply that companies rather adopt those topics that are either necessary or fashionable. While we found a variety of categories of innovation topics, these may be used for different purposes and we suggest to investigate the following propositions:

Proposition 1: Codes of conduct that are implemented for pure legitimization purposes, refer to more operational innovation topics, such as products/services, property rights, or diversity.

Proposition 2: Codes of conduct that are directed at the company's intended future plans and actions, reflect more generic issues, such as values, mission/vision and core competencies.

As shown in our data, codes of conduct also play a role in different industries. While we have found preliminary insights that some industries are more prone to adapting codes of conduct which include innovation topics than others, it would be of interest to see how this influences the competitive market for reputation within and across industries. Within an industry, signaling innovation could especially help differentiating a company from the malpractice (no innovation, no innovation success) of competing firms or clients, and boost its credibility relative to critics. This might be a particularly cost-effective way to differentiate oneself from and to deter competitors. As for industry effects, we suggest to investigate the following propositions:

Proposition 3: The adoption of innovation in a code of conduct has positive differentiation effects on a company's reputation.

Proposition 4: The adoption of innovation in a code of conduct deters competitors and helps to protect a favorable industry position.

Industry effects may further be relevant with regard to industry concentration. Given a large number of competitors, stakeholders are faced with a variety of signals they need to interpret. Consequently, the effectiveness of innovation signaling may be more limited in concentrated industries, reducing a firm's ability to cultivate the stakeholder opinion necessary for building a reputation (Basedo, 2006).

If we further interpret our findings with respect to regional differences, there are some preliminary hints that specific regions are forerunners with innovation signaling, e.g. North America. This may be explained by the fact that several institutional conditions are more conducive to providing reputational gains for those companies that adopt innovation topics that are often lacking in others. Specifically, there may be markets which may not function well in respect to the introduction of innovations or companies may lack capabilities and resources to mobilize innovation campaigns. This may be reflected in the overall amount of national R&D spendings. Thus, we suggest to investigate the following proposition:

Proposition 5: The higher the overall R&D spendings of a country, the more often is innovation part of a company's code of conduct

Finally, national differences may be expressed with regard to the level of concreteness within a code of conduct or a presumed innovation topic and we suggest to extend previous classification systems like the one by Gaumitz and Lere (2004).

Limitations and Outlook

As with every piece of research, we face limitations. Given the fact that we chose a small sample with predefined industry classifications, one of the major limitation clearly relates to the lack of generalizability. However, as our objective was exploratory research, samples like ours are both acceptable and well in line with previous studies on codes of conduct. Extending our findings, we suggest to use other data sources and check our findings against a much larger variety of data. Another aspect we deliberately neglected in our study refers to the financial implications of reputation effect, thus innovation signaling. As we did not look at results, e.g. in terms of market share valuations, we do not yet know much about the effects of innovation signaling. Further, there may be variations of what is considered sufficient in terms of legitimization and action over time, and indeed among individual firms, according to the evolving practice and the changing expectations of stakeholder experiences. This poses clear challenges for future research on this important topic.

In terms of research methods, it would be highly interesting to apply longitudinal research. Up to the present, many companies have managed to implement their very first version of a code of conduct. Over time, this may include fashionable management topics or anticipate potential legal requirements. Further, an analysis that reflects current ‘hot topics’ in industry would bring interesting insights as to whether innovation may be more stronger represented in codes of conduct, if the overall economic situation is more favourable towards growth and innovation development. This also applies to the linkage between innovation and industry affiliation which should be undertaken from a dynamic perspective as the basic principles on which an industry builds, change over time.

Announcing innovations in codes of conduct would further allow managers to both convey information to their stakeholders and also receive feedback as to the value this places for the overall implementation of codes of conduct and corporate innovation strategy. This might even include that they refrain from or explicitly accelerate innovation projects perceived differently by consumers. Finally, as innovation is given a different preference in national cultures, it would be of great value to explicitly extend existing studies on codes of conduct by an innovation component and ask for more specific motivations why this topic has or has not been included.

Taken collectively, we suggest to extend research which applies a signaling perspective to innovation announcements in codes of conduct. We suggest that this would be a fruitful direction for further research, especially as signaling is often supposed to precede concrete actions and has the potential to anticipate both crisis and competitive moves. Moreover, the major benefit stemming from a signaling perspective to codes of conduct, and more precisely, to the announcements of innovations in codes of conduct, would be a richer understanding of the process of stakeholder reactions to the announcements of innovations. This would require that a receiver perspective is added to that of a sender as taken here.

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APPENDIX : FIGURES & TABLES

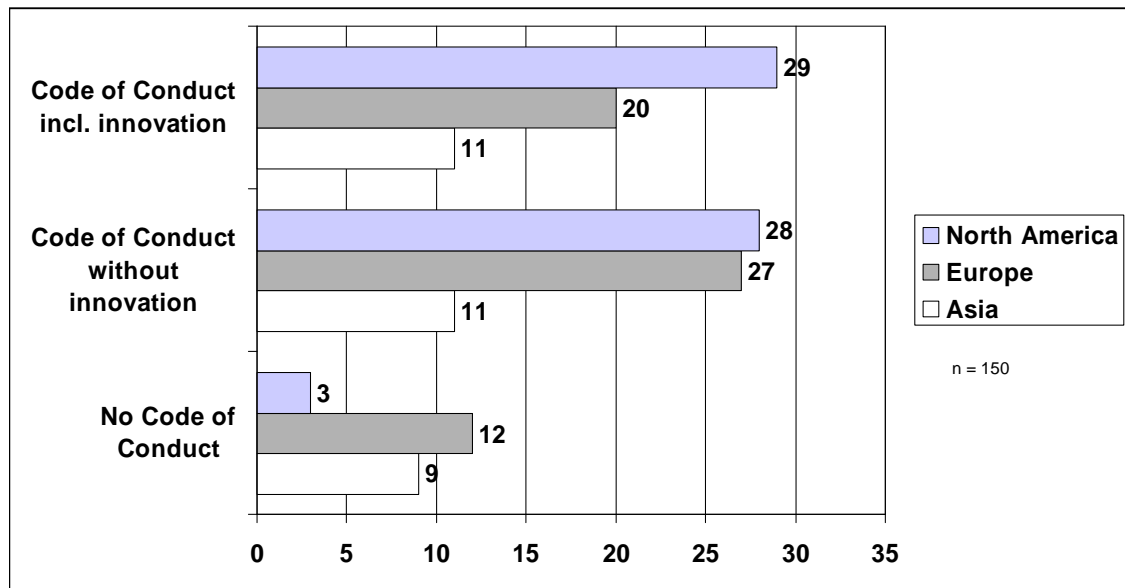


Figure 1: Regional Representation of Codes of Conduct and Innovation

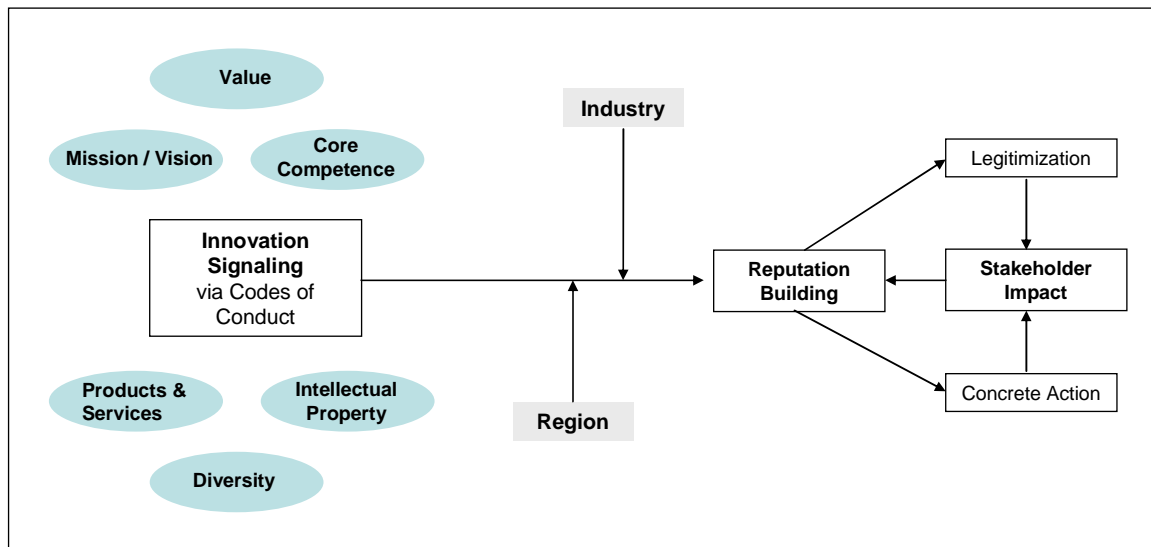


Figure 2: Innovation Signaling and Effects on Stakeholders

Industry Sector	Code of conduct incl. innovation	Code of Conduct without innovation	No Code of Conduct	Total
Technology hardware & equipment	6	10	3	19
Pharmaceuticals & biotechnology	9	7	1	17
Automobiles & parts	4	4	7	15
Chemicals	1	7	2	10
Industrial engineering	6	2	1	9
Electronic & electrical equipment	5	3		8
Aerospace & defence	5	1	1	7
Software & computer services	4	3		7
Health care equipment & services	2	3	2	7
Leisure goods	2	5		7
Fixed line telecommunications	2	3		5
General industrials	2	3		5
Oil & gas producers	2	2		4
Personal goods	2	2		4
Household goods	1	3		4
Electricity			4	4
Food producers	3			3
Media	1	1	1	3
Construction & materials	1	1		2
Oil equipment, services & distribution	1	1		2
Tobacco	1	1		2
Banks		1	1	2
Mobile telecommunications		2		2
Industrial metals			1	1
Mining		1		1
Total	60	66	24	150

Table 1: Industrial Representations, Codes of Conduct and Innovation

	Innovation Categories								
Country	Va	CC	P/S	V/M	IP	Sth	Div	Oth	Total
Asia									
Japan	1	3	4	1					9
South Korea		2							2
Europe									
France		2	1			1			4
Germany	1	1						1	3
Italy	1			1					2
Netherlands	1			1					2
Sweden			1		1				2
Switzerland		1	1	1		1			4
UK	1		1			1			3
North America									
Canada							1		1
USA	8	4	1	4	4	2	3	2	28
	13	13	9	8	5	5	4	3	60

Table 2: Innovation Categories in Codes of Conduct