

## Complex Incremental Product Innovation in Established Service Firms: A Micro Institutional Perspective

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# Complex Incremental Product Innovation in Established Service Firms: A Micro Institutional Perspective

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# **Complex Incremental Product Innovation in Established Service Firms: A Micro Institutional Perspective**

## **ABSTRACT**

Many product innovation studies have described key determinants that should lead to successful incremental product innovation. Despite numerous studies suggesting how incremental product innovation should be successfully undertaken, many firms still struggle with this type of innovation. In this paper, we use an institutional perspective to investigate why established firms in the financial services industry struggle with their complex incremental product innovation efforts. We argue that although the impact of micro institutional forces is often overlooked in innovation studies, these forces matter for innovation success. Our study complements the existing innovation literature and provides an additional explanation why incremental product innovation is highly complex and suffers from several liabilities in established firms. Using qualitative data from the Dutch financial services sector collected over the period 1997-2002, the paper illustrates how micro institutional forces at the business unit level affect complex incremental product innovation and how the interaction of these forces delivers their impact.

Key Descriptors: Complex incremental product innovation, neo-institutional theory, micro institutional forces, financial services sector.

# **Complex Incremental Product Innovation in Established Service Firms: A Micro Institutional Perspective**

## **INTRODUCTION**

Developing new products and services on a regular basis is one of the key activities for many organizations. New products are a means to gain market share and ensure the viability of companies. They have been referred to as the crucial sources for competitive advantage (Tushman et al. 1997). This is also the case for incremental product innovations. Incremental product innovations are not radically different from the current product portfolio, but are often refinements and extensions of existing products of a company and seem to involve primarily exploitation-oriented activities (cf. March 1991). Incremental product innovation is, therefore, a critically important competitive factor in established industries (Banbury and Mitchell 1995) and focuses on leveraging a firm's existing resources and capabilities (Henderson and Clark 1990; Leonard 1998).

Incremental product innovation is typically implemented within the organization using existing organizational arrangements. Nonetheless, empirical evidence suggests that many firms seem to struggle with this type of innovation, which often results in diminished company performance, and lengthened development times (Banbury and Mitchell 1995; Song and Montoya-Weiss 1998). Past research on product innovation in both manufacturing and service industries has focused on key determinants that lead to successful product innovation. This large body of literature has examined the development process, what models could support the development process, and what key factors separate winners from losers (Cooper and Kleinschmidt 1986; Cooper 1984, 1999; Cooper et al. 1994, 2002). Additionally, important organizational issues such as working with and listening to lead users (Von Hippel 1986; Leonard 1998); involvement and cooperation of multiple functions during the development process (Moenaert and Souder 1990; Dougherty 1992); use of flexible organizational structures and cross-functional teams (Souder 1987; Thwaites 1992; Volberda, 1996) and a close fit between the firms' strategy and resources (Crawford 1994) have all been cited as contributing to the success of incremental product innovation.

Despite the value of these studies, the problems firms are confronted with when engaging in this type of innovation seem persistent (e.g. Adams et al. 1998; Tidd and Bodley 2002). We do not suggest that firms never successfully develop new products. On the contrary, there are many examples of firms that successfully develop new products. Often

such projects are managed as ‘mindful deviations’, exciting enough to gain support, but they do not deviate from current practices to create illegitimacy (Garud and Karnøe 2001). We suggest that *intraorganizational* institutional forces have a strong impact on organizations (cf. Elsbach 2002), which may cause some parts of the organizational system to struggle more with incremental product innovation than others. Pfeffer and Sutton (2000) argued that divisions develop their own institutional norms and rules. The identification with such institutional norms and rules at the level of divisions or business-units can lead to the use of distinct organizational practices. This may imply significant differences in performance across organizational units.

In this paper we take an institutional perspective to illustrate how intraorganizational institutional forces affect the development and implementation of incremental product innovation. We focus specifically on institutional forces at business-unit level and demonstrate how such micro-level forces may lead to the development of distinctive practices regarding innovative behavior within the same firm. We acknowledge that institutional forces at other levels (organization or field) may also affect the development and implementation of new products, yet these are beyond the scope of our study.

## **INSTITUTIONAL THEORY**

Institutional theory has developed prominently within the field of organizational analysis and is often viewed as a break from rational-actor models (see Zucker 1991; Scott 1987). Conforming to institutional rules may even conflict with organizational efficiency criteria (Meyer and Rowan 1977). Institutionalized organizational behavior is seen as being based on ideas, values, norms, and beliefs embedded in the institutional environment. Oliver (1992) speaks of a ‘force of habit’ that alongside an organization’s history and tradition creates a certain degree of value congruence among its members. Institutions guide individual actions in a specific direction due to the predefined patterns of which the institution is constructed and therefore constrain and enable individual behavior. The concept of legitimacy has been a focal point of study in institutional theory and refers to the degree of cultural support that an organization receives when adhering to demands and expectations from the institutional environment. Organizations incorporating legitimated elements maximize social acceptance and increase their capabilities for survival (Meyer and Rowan 1977). In other words, for something to be considered legitimate it has to conform to accepted rules, procedures, expectations and frames of reference at the next highest level.

This means that employees' actions should be legitimate at the firm level, whereas firms acquire their legitimacy from the field and societal level (Holm 1995).

In line with Greenwood and Hinings (1996), this paper assumes that important institutional drivers or inhibitors of innovation can be found within organizations. Intraorganizational or micro-level institutional forces may provide strong explanations for the continued struggle of incumbent firms with incremental product innovation. Following Scott (2001), three types of institutional forces are distinguished: *regulative*, *normative*, and *cultural-cognitive*.

#### *Micro regulative forces*

Organizational structures and procedures are among the most frequently studied institutional elements (Scott 1987). Many formal authority structures have defined clearly specified procedures to be followed, as well as associating penalties in the case of failure (March et al. 2000). In his case study in Canadian mining, Wicks (2001) clearly portrayed organizational structures as 'organizationally-imposed' rules controlling the behavior of employees. Elsbach (2002) argued that organizational procedures dictate the behavior of organizational members. Regulative forces have been associated with obtaining compliance with the field in which they are embedded and the pursuit of self-interest. North (1990) stresses the use of rules and enforcement mechanisms enabling this compliance. When these rules are violated, punishment is administered. Formal structures and procedures and organizational systems therefore prohibit and enable individual behavior. Incremental innovations seem to benefit from structures and procedures that are familiar to organizational members (Ettlie et al. 1984). These innovations are typically consistent with the prevailing organizational archetypes (Greenwood and Hinings 1993), which suggests that developing and implementing them will be considered legitimate and should not be too problematic.

#### *Micro normative forces*

Normative forces introduce a prescriptive, evaluative, and obligatory dimension into social life, reflecting the values (what is preferred) and norms (how things should be done) of the social system (Scott 2001). People in specific organizational roles are expected to fulfill certain social obligations (March and Olsen 1989). In the Westray mine example, Wicks (2001) showed that the underground miners fulfilled at least two roles; organizational roles and non-work roles. In the organizational roles certain ideas about how to act as a miner were

stressed, whereas in non-work roles their families expected them to behave differently. Appropriate behavior reflects the normal way in which people do what they are supposed to do and is based on behavior that is expected and valued by other actors (March and Olsen 1989: 21). These expectations are often perceived as external pressures to which one must conform. In the financial sector consistent performance at a high level and processing competency are highly valued. Raising uncertainties or increasing risks is not consistent with the ruling values and norms and is therefore most likely to be avoided. However, since incremental innovation is of an evolutionary nature, only a limited number of uncertainties are involved and firms are likely to engage in such innovation.

#### *Micro cultural-cognitive forces*

Cultural-cognitive forces include shared systems of meaning that arise in processes of interaction between organizational members (Berger and Luckmann 1967; Scott 2001). Eventually these systems are taken for granted by individual actors because humans tend to habitualize their actions. By repeating actions they become patterns that can be reproduced and transmitted to new entrants (Berger and Luckmann 1967; Zucker 1987). Shared systems of meaning can arise *within* groups, but may differ *between* groups within the same organization. Dougherty (1992) empirically demonstrated that groups with distinct identities based on professional disciplines respond differently to new product development efforts. This is largely the result of frames that individuals use to make sense of their environment. Information has to be consistent with these frames or it will be repressed or ignored (Garud and Rappa 1994). Kaplan (2003) argued that framing is a political and self-conscious process in which meaning is negotiated between groups of individuals. This means that the frame that appeals to one group within the organization may not appeal to another group that has a different system of meaning.

Although Scott (2001: 51) argues that he refrains from an integrated conception of the three forces, he acknowledges that the forces can reinforce each other. A few empirical studies demonstrated that multiple institutional forces can simultaneously exert pressure on organizations (Ruef and Scott 1998; Hoffman 1999; D'Aunno et al. 2000; Wicks 2001). However, teasing apart the forces in practice is extremely difficult. The different forces are so interwoven with each other that it is almost impossible to describe any without reference to the others. However, we try to describe them separately. Figure 1 displays our model.



---Insert Figure 1 about here---

## **RESEARCH CONTEXT**

The financial services sector in the Netherlands is an interesting research context for increasing our understanding of micro institutional forces in incumbent firms. It is a highly institutionalized sector that has been confronted with major changes that have challenged these firms to invest in new products (cf. Volberda et al. 2001). However, banks and insurance companies are not known for their innovativeness and many financial companies in the Netherlands struggle with incremental product innovation (Vermeulen 2005). A study by Volberda et al. (2001) showed that there are only a few outliers in terms of innovation in the financial services sector. We excluded these outliers in our sample. For most banks and insurance companies new products are only modifications of existing products that build on current competencies (Avlonitis et al. 2001). This type of innovation mainly concerns improvements in existing ‘combi-products’. Combi-products resemble architectural innovations (Henderson and Clark 1990). The separate component parts of these products already exist, yet either the combination is new or one of the components has changed which creates new linkages with other components. As such, they also resemble Garud and Nayyar’s (1994) notion of transformative capacity in which firms combine resources spread over the organization. In our case, we are interested in improved versions of these products. This means that the linkages between components remain unchanged and the core concepts are reinforced. These improved combi-products are labeled *incremental innovations*. The complexity of these innovations concerns the reorganization of interdependent administrative procedures and the co-ordination of the multiple departments involved (MacMillan et al. 1985).

### **Research methods**

We conducted an inductive study in the period 1997-2002 using multiple qualitative data collection methods. In total over 175 people were interviewed. All those interviewed, except one, agreed on the use of a tape recorder that was used in the writing of transcripts. These transcripts were sent back to the respondents in order to give them the opportunity for factual corrections. The final version of all transcripts and the documents based on meetings with the twelve case organizations covered more than 1400 pages of empirical material. Table 1 provides an overview of the research phases and activities, displays the number of companies involved, the main goals, and the research instruments for the various activities.

--- INSERT TABLE 1 ABOUT HERE ---

In the first phase of the empirical research in 1997, a panel of company experts was formed. Representatives from ten of the largest Dutch financial services companies, i.e. firms with more than 2500 employees like ABN-AMRO, AEGON, ING and Rabobank, participated in this group. Members of the group were actively involved in product innovation processes in their organization. Together with the members of the panel it was decided to study the development of the latest generation of combi-products. The panel considered these products as the most appropriate examples of incremental innovations.

In the second phase an exploratory round of interviews was conducted in 39 firms including incumbent and non-incumbent companies. These companies were selected using criterion sampling (Miles and Huberman 1994). The sampling criterion used was to focus on companies that had recently introduced an *improved combi-product*. 42 companies were contacted by phone, of which eventually 39 agreed to cooperate. The interviews focused on the respondent's understanding of product innovation processes and the surrounding forces affecting the development of new products. All the interviews followed a common protocol: people were first asked to elaborate on product development processes and subsequently generic questions were asked to find out more about the stages and the potential problems in these processes, and who was involved. The questions that were asked in this round were based on the existing NPD literature. We did not include the results from this first round in the paper since we have limited information on the projects. Hence, we only used this information as a first exploration. The results from the exploratory interviews in phase 2 did show that especially incumbent firms (the larger and older firms in the industry) experienced problems in complex incremental product innovation projects. Therefore, in the final stage of data collection (see below) we focused on the incumbents.

In phase three and in addition to these exploratory interviews in 39 companies, ten interviews were conducted with IT experts in the ten companies from the panel group. This type of convenience sampling (Miles and Huberman 1994) saved time and effort in gaining access to firms. The reason for conducting these interviews was twofold. Firstly, the data from the exploratory interviews was rather one-sided, because only marketers or product developers were interviewed. Secondly, the results from the exploratory interviews indicated that information systems had a strong impact on the possibility of developing new products. This was verified in the panel. These interviews followed a similar protocol as mentioned

above. Furthermore, the IT experts were asked to provide a detailed description of the companies' information systems.

In the fourth phase the panel group was again consulted. We wanted to make sure that not only did we think that our projects were examples of complex incremental innovations, but we also wanted to know the opinion of the experts in the field. This way we could strengthen our argument that we are really looking at complex incremental projects.

In the final phase of data collection, selected business units from twelve incumbent companies were studied. We selected respondents from two different but similar business units in each of these firms in which exemplary product development projects were studied. These could be either successful or unsuccessful projects (in terms of development). In our analysis we constantly compared these projects to understand why they developed differently. Since we tried to study intraorganizational institutional forces, we needed data on both firm level and project level. Furthermore, we wanted to make sure that the business units we selected were highly similar in terms of their strategic situation. We did not include, for instance, the damage insurance business units because these are in a different strategic situation (e.g. short time-frames of products). The selected companies were all founded more than 75 years ago, however, they differed in size (number of employees) and focus (global versus national). Our sample is equally divided into banks and insurance companies.

Two product development projects in separate business units were selected in each of the firms in close consultation with a business unit manager (see Table 2). Two selection criteria were used. The products had to be so-called improved combi-products, meaning that besides functional departments (such as actuaries, marketing, IT, and legal affairs) more than one product department was involved in the development process due to the multiple aspects of the product.

--- INSERT TABLE 2 ABOUT HERE ---

The second criterion was the development stage of the project. The development process had to be either finished within the last year or had to be in progress in order for the respondents to be able to recall the details about the development process. Three companies were not able to present two product development projects in distinct business units. In these firms we chose the two most recent incremental development efforts in one business unit and added these to our sample. The 125 interviews were conducted with people in different departments

and at various hierarchical levels in the organization. The same protocol mentioned was again used.

## **Data Analysis**

The transcripts describe the experiences and opinions of the respondents regarding complex incremental product innovation projects. As such, they reflect specific characterizations of the respondents' version of reality. These characterizations referred to the respondent's opinion on why certain events and activities occurred. Several steps were taken in the analysis of the transcripts (see also Appendix 1). *First*, we engaged in a coding procedure (cf. Miles and Huberman 1994) in which labels were assigned to text units (sentences or paragraphs). These labels represented the key issues mentioned by the respondents. During this initial stage we mainly used descriptive codes for broad overview of key issues in the innovative efforts of banks and insurance companies. These codes entail little interpretation since they closely resemble the text of the transcripts; in our case descriptive codes like cooperation (COP), division of labor (DOL), sanctions (SAN), informal meetings (IME), formal meetings (FME), and coordination (COR) are examples of descriptive codes that were attributed to 'organizational structure'.

Second, we identified underlying patterns by grouping the initial codes into a smaller number of themes (cf. Miles and Huberman 1994), often referred to as axial coding. These patterns were first compared across interviews. An example of a pattern that appeared from our data is the so-called expectancy gap. While examining our data we discovered that the unsuccessful projects suffered from major differences between the managerial and employee level. CEOs and senior managers thought incremental innovation was crucial for the viability of their companies, whereas the employees considered it as a burden. Passages from the transcripts related to each of the patterns were highlighted. Next, we grouped passages relating to the same patterns. We were eventually able to identify several patterns that appeared to be dominant (we counted the appearance of all the patterns in the interviews) in either the regulatory, normative or cultural-cognitive perspective.

Thus, we structured the data analysis process by using coding procedures allowing us to identify the most relevant issues in our data. We were able to construct two distinct templates that were used in the firms we studied. One of these was labeled the 'business-as-usual' template and the other 'innovation' template. The patterns from the axial coding stage and the further refinement into separate themes helped us in describing the features of the two templates.

## RESEARCH FINDINGS

This section discusses the empirical findings in line with the three types of forces as discussed above (regulative, normative and cultural-cognitive). We make a distinction between the successful and unsuccessful projects. The quotes used in the description of our research findings are exclusively related to specific projects. The quotes in Table 3, however, are used to illustrate the findings across multiple projects and resemble exemplary quotes that are associated with at least eight of the twelve unsuccessful or successful projects.

---INSERT TABLE 3 ABOUT HERE---

### **Micro regulative forces**

Micro regulative forces are relatively easy to identify. These forces are highly influential in organizations due to their “power to set rules, monitor activity, and enforce compliance” (Wicks 2001). The case studies revealed that most financial companies tried to change their formal structure.

#### *Unsuccessful projects*

The organizations in our study demonstrated that new project based organizational structures did not function as they were supposed to at work floor level. Individual actions that were aimed at avoiding the old departmentalized structure were in some cases sanctioned. Exchanging information between departments was experienced as being difficult and at times undesirable.

Formal rules and procedures dictate organizational behavior in many business units in the financial services sector. Although these rules are often meant to improve the efficiency and effectiveness, they may also affect business units negatively. This was clearly the case in the unsuccessful projects in our study. Whereas employees in banks and insurance companies used to be appraised and rewarded for the number of policies processed, in the new structures this had not changed. Especially for smaller projects this has had its effects. Team members often hardly work on these projects because they fear that they will be sanctioned if the departments’ targets are not reached. The functional heads of departments were, therefore, unwilling to free some of their employees to work on new product development projects. As a result, incremental projects sometimes take up to 24 months to be completed (see also Table 2).

“Our organizational structure is set up to support innovation. However, this only applies to big projects. When smaller projects are involved the misery begins. Team members hardly work on these projects, because they will be sanctioned if they do not reach the targets for the department they normally work for. So, the functional team leaders are not really interested in letting people go to work on new product development and start harassing my project members about targets that should be reached. How are you supposed to run a project when this is constantly slowing the development process down?” (BanCo project leader).

This clinging to formal rules and procedures had a strong inhibitive impact on the product development activities. In seven of the business units we were able to identify some kind of sanction mechanism used to keep in line with the standard procedures.

The existing information systems are also an important regulative force, which set hard boundaries for new products yet to be developed. Product developers in all twelve failed projects complained that the IT department often claimed that when some new product was being developed the adaptations needed in the system were not possible. This necessitated adjustments in the product concept. In all twelve cases, this meant that the product concept was less innovative than was originally intended and as such the information systems inhibited the development of new products. A complicating factor is that it is not possible for people outside the IT department to judge whether adjustments to the systems are possible. It was frequently mentioned that IT personnel were not really interested in product development and often claimed that something was not possible. Most new products are still IT driven or at least guided by the state of IT. Most of the time the product concept would be adjusted in line with IT possibilities, because it was considered impossible to change the information systems.

### *Successful projects*

One of the key features of the successful projects is their separation from the regular organization, not leaving room for ‘outside’ interference. The bureaucratic influences from the organization were successfully kept away from these projects, meaning that the team members could concentrate on their project tasks without being bothered with routine day-to-day activities. Several respondents claimed that the only way to avoid the excessive rules and procedures in their organizations was to isolate their projects. In these situations separate structures were designed to shelter the new product from the standing

organization. Furthermore, in the successful projects the team members were reluctant to use formal rules and procedures.

“When I was transferred to the BU Pensions, I was immediately asked to forget all the procedures used in the rest of the organization. I knew this was a rather strange bunch of cowboys, but in the first development project I was involved in, I immediately understood what they were doing and why they were doing it. These guys almost made me swear not to look into any manual. They claimed that that would restrict our creative capabilities” (PayCo Marketing Manager).

Key to all the successful projects in our study was the idea of ‘letting go’. Several business unit managers claimed that every innovation project required a slightly different approach. They stressed, however, the importance of creativity and freedom to maneuver as the key to success.

### **Micro normative forces**

Normative aspects of institutions are often found in notions of appropriate behavior (March and Olson 1989). The emphasis of normative forces is on “prescriptive, evaluative and obligatory dimensions” of social life (Scott 2001: 54).

### *Unsuccessful projects*

The business unit managers in our study closely monitored the activities at the initiation stage, not allowing for much creativity. There is a clear attitude of risk avoidance displayed in the business units we studied. Many of our respondents claimed that managers constantly think they should reduce any risk involved with innovative projects. This kind of risk avoiding behavior is reflected in much of the innovative activities of the firms in our study and is closely related to the formal rules and procedures. In the product development manuals, for instance, the type of initial scans needed before a decision is taken to actually develop a new product are clearly described. The actual amount of pages related to these initial stages, before a go/no-go, is often twice the number of pages spent on the execution and implementation. Besides that, the formal rules and procedures (including the manuals) are often used as straightjackets that inhibit innovative behavior, also leading to expectations of appropriate behavior. This was explained by a HypCo product manager:

“Cooperating with other team members was really difficult. The tasks were strictly divided and no one seemed to be interested in each other’s task. I tried to get some of the other members more involved with my tasks, but they just rejected any attempt at closer cooperation. I just didn’t understand why this was the case, but some of the colleagues in my department told me that it was just not done to have these informal talks in this organization. The project’s weekly meeting was the place to discuss these things.”

The results from our case studies also showed that there is a gap between the expectations from management regarding the necessity of incremental product innovation and the perception of these expectations of the employees. This frequently meant that employees did not understand that innovation was highly valued, or at least claimed to be highly valued, by top management. Business unit managers and ‘shop-floor’ employees were not only hardly interested in new products, but also did not see these activities to be very relevant for their organization. Furthermore, they were sometimes sanctioned for not reaching operational targets (for instance in terms of policies processed) and as a result did not value innovation.

This is closely related to the lack of (social) obligation to incremental product innovation. The project leaders particularly experienced this. They claimed that many projects are completed in a very different team composition compared with the ‘starting line-up’. Apparently, somewhere during the development process priorities shift to projects related to the daily activities and team members are reallocated by their superiors who feel no obligation to finish projects team members were originally assigned to. Due to the high frequency with which this happens, the project leaders feel as if their projects are of little relevance. There was hardly any obligation from team members to finish their project activities. Their team leaders often did not expect them to spend too much time on product development.

### *Successful projects*

In the BU’s with successful projects we identified a different set of normative forces, in particular ruling norms and values related to risk and mutual expectations, clearly directed to enabling incremental innovation. What was most striking in the interviews with respondents from these BU’s was the absence of ‘risk’ in their stories. Only when asked they talked about potential risks of innovation. They merely considered risk to be an essential part of every



innovation project, incremental or radical, but did not bother too much with avoiding it. One BU manager from CreditCo claimed:

“We borrowed Nike’s slogan; Just do it. This is how it works. If you start wondering or recalculating everything too long there will be no new products launched or you launch them too late. This is even worse than an occasional failure. I know we are about the only ones in this company who do it like this, but it really works for us. And as long as they (referring to top management) let us, why should I start worrying about possible problems. We do our homework, but do not drown in it”.

This quote illustrates the main differences in the perception and way of handling risk between successful and unsuccessful projects. Whereas the unsuccessful projects spend the majority of their time on avoiding any potential risk, the successful projects are much faster on deciding whether or not to develop the new product. As a result, the development times were much shorter in these latter projects. Remarkably, this way of thinking is reinforced by the way these BU’s deal with formal rules and procedures. In the previous section it was explained that ‘letting go’ was considered essential for innovation. The idea of ‘just do it’ seems to be closely related to the rejection of using development manuals and other organizational procedures.

The expectancy gap between top management and business unit, as it appeared in the unsuccessful projects, did not appear in the successful projects. The expectations from top management were aligned with the actual behavior in the successful projects. Again, this speeded up the development process and led to less iteration. Most of the team members were fully devoted to the innovative projects they were working on and some considered it to be an honor. The alignment of expectations has been a key success factor in these business units.

### **Micro Cultural-Cognitive forces**

The cultural-cognitive emphasis of institutions resembles “shared conceptions that constitute the nature of social reality and the frames through which meaning is made” (Scott 2001: 57). In this study micro cultural-cognitive forces are shared conceptions and frames of reference belonging to distinct professional identities. Furthermore, we discovered that the successful projects were framed (cf. Kaplan 2003) differently when compared with their less successful counterparts.

### *Unsuccessful projects*

The various professional disciplines involved in innovation processes have developed different systems of meaning over time. The departments in the case companies seemed to have their own way of working (accompanied by specific jargon or language and even dress codes), and their own vision of the path their business unit and organization should follow. The specialists from different disciplines did not speak the same language and created little understanding for each other's activities. Project team members represented their functional department. This led to difficulties in creating a common understanding of the aims, properties, and process-requirements of incremental innovations. It often involved aspects such as different languages and visions resulting in lower levels of cooperation in the project teams. Most of these problems manifested themselves on the interface between marketing and information technology departments and (in case of insurance products) between actuaries and the other team members. This kind of behavior has developed over the years and is an illustration of the existence of distinct systems of shared meanings. Eventually the most dominant disciplines decided what happened. In the unsuccessful projects these were often actors from the actuarial, legal and IT departments. These departments had a limited interest in exploring new opportunities, and instead focus on exploiting the companies' existing practices.

“Basically what happens is that we come up with an interesting new idea. Management initially approves of the idea and commits to the project. However, typically when the idea is further described in a product concept, all sorts of adjustments need to be made because the idea is too far-fetched and does not fit our current systems or whatever. It happens with almost every improved combi-product. There are too many powerful people in certain parts of this organization that are just not fond of all these new ideas. In the end they decide what happens”  
(BanCo product manager).

### *Successful projects*

The successful projects in our sample show that different meaning systems do not necessarily have to lead to conflict situations. In four of the successful projects, project leaders focused on team building and creating a shared understanding before the team actually started working on the project. A special kick-off session was organized in which the team members quickly discovered that they could cooperate together despite their differences. These projects were given the opportunity (in terms of funding and top management support) to actually

invest in team building. Instead of these project teams being dominated by different identities, they converged into groups with a shared identity.

“What we actually do is more or less pretend that these projects are major breakthrough innovations. We set up the entire organization, as was it a radical project. We separate it from the regular organization, away from all the rules and procedures, because otherwise our daily operations will interfere. We have people who are almost fully dedicated (in time) to the project and they all work in the same room. Only if we set it up like this the rest of the organization realizes that this is important for the entire organization, which creates a better position for the project when it needs to be implemented” (SureCo BU manager).

In eight of the successful projects we were able to identify similar attempts of ‘framing’ incremental innovation projects as radical innovation projects<sup>2</sup>. For many business units this seemed to be the most effective way of managing incremental projects. Some of the BU managers claimed that increasing the importance of their projects for the whole organization gave them a better bargaining position for resources. This very much relates to the notion of framing contests (Kaplan 2003) in which negotiation is a political game to be played with powerful players. Framing projects more radically provides a jumpstart in these negotiations.

## **DISCUSSION**

The innovation literature emphasizes that incremental innovations do not differentiate much from existing product portfolios and therefore routine procedures and capabilities are sufficient to initiate this type of innovation. However, many incumbent firms still struggle with incremental product innovation efforts despite the numerous studies suggesting solutions to overcome potential barriers. Occasionally they are capable of successfully developing incremental innovations, which means that the innovation is developed and launched onto the market rapidly and smoothly. The main reason for this variation in success does not only come from better organizing projects or more sophisticated use of the available tools to develop new products, as has often been suggested by the new product development literature (e.g. Cooper 1999; Kahn 2004). We have argued that *intraorganizational* institutional forces have a strong impact on the innovative efforts of incumbent firms (cf. Elsbach 2002).

In our study of the development and implementation of complex incremental product innovation projects we have provided evidence that micro institutional forces impact strongly

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<sup>2</sup> We would like to thank one of the anonymous reviewers for pointing out the notion of framing.

on these projects. Their persistence over time is largely due to the fact that they have become institutionalized and have led to the development of distinct organizational templates (cf. Greenwood and Hinings 1993). As such, we believe that an institutional perspective has the potential to complement the existing innovation literature in uncovering some of the underlying reasons for the (lack of) innovative behavior of certain parts of an organization.

The regulatory forces, for instance, primarily deal with facilitating or obstructing exchanges among members of an organization (cf. Zucker 1988). This not only refers to the organizational rules and standard operating procedures, but also to the IT systems. For any innovation project in which multiple departments are involved facilitating exchanges between representatives from these departments is crucial. However, internal structures exhibit “the social permanence of institutions”. When the degree of internal institutionalization in incumbent firms increases over time, similarity with other organizations, including the degree of codification and interdependence, will make it for incumbent firms more difficult to change these structures (Zucker 1988:35). The unsuccessful projects in our study clearly suffered from these regulatory institutional forces. In the successful projects we also were able to identify some kind of regulatory forces. These were, however, very much directed towards enhancing creativity. The rules that guide the actions of individuals in these projects were mostly informal, were clearly communicated and deviations were hardly accepted.

The micro normative forces in our study also affected incremental innovation. Managers in the unsuccessful projects displayed a strong risk-avoiding attitude on the one hand, whereas on the other hand they hardly felt any obligation towards completing projects on time. The internalization of this kind of behavior generates expectations that guide the actions of other organizational members (Scott 2001). In our case this meant that not only managers, but also team members lacked social obligation. Furthermore, there were clear distinctions regarding the perceptions on the need for incremental innovation between various actors in the organizations studied; different perceptions of top managers, business unit managers and lower level managers and employees directly involved in executing incremental product innovation projects in particular contributed negatively to the success of these projects. The unsuccessful projects in our study seem to be lacking institutional concurrence (Dougherty and Cohen 1995), which indicates that there is no alignment between what top management is thinking and doing and what employees are thinking and doing. In the business units that successfully managed to develop incremental innovations, we found a different institutional logic (cf. Friedland and Alford 1991). Not only were the expectations clear and consistent in various layers of the organization, the perception of risk

was quite different. Risk was valued as being ‘part of the game’ and could not be reduced completely.

Cultural-cognitive forces include different systems of meaning and dominant identities. When powerful actors in the organizations were opposed to innovation (cf. Greenwood and Hinings 1996), hardly any resources were made available. The shared systems of meaning are negotiated over time in interaction processes between organizational actors (Scott 2001). The more time individuals spend interacting with identity-like individuals, the stronger the degree of segmentation in an organization (cf. Trice 1993). Again, we found strong differences between the successful and unsuccessful cases. The successful projects were almost all framed as radical projects in order to obtain and maintain the necessary resources and to be able to escape from the rules and procedures of the standing organization.

*Two distinct templates* were found in the firms in our study. Although there were differences between the templates used in these firms, the templates shared many attributes. Here we focus only on the commonalities. The unsuccessful projects were all dominated by a ‘business as usual’ template. The projects were all managed by a strict adherence to prevailing rules and procedures, risk avoidance was highly valued and the dominant powerful departments clearly supported this way of dealing with incremental innovation projects which were taken for granted. The successful projects displayed an ‘innovation’ template in which the rules and standard procedures were discarded, projects were isolated from the organization, risks were valued as being part of the innovation game and projects were framed in line with more breakthrough innovations. Our ‘innovation’ template deviates from many studies that suggest that new ideas must be framed in line with the status quo, disguising their radical nature, in order to obtain legitimacy (e.g. Aldrich and Fiol 1994; Hargadon and Douglas 2001). Although the true nature of these innovative attempts can be labeled ‘mindful deviations’ (Garud and Karnøe 2001), they were framed in a more deviant way. However, as Garud and Karnøe (2001) argued this degree of deviance should not be too large for this will generate illegitimacy. It is not likely that all projects within a firm can be managed as breakthrough innovations, most firms will lack the resources to do so. The concept of mindful deviations is, however, an intriguing concept that may allow firms to be more successful with incremental innovations.

It was mentioned earlier that a few empirical studies demonstrated that multiple institutional forces can simultaneously exert pressures on organizations (Ruef and Scott 1998; Hoffman 1999; D’Aunno et al. 2000; Scott et al. 2000; Wicks 2001). Although we tried to

describe the forces separately from each other, the forces are clearly interwoven. The *interaction between micro-institutional forces* further enforces their impact on the two templates we identified. Our data also provided empirical evidence for the existence of interactions between various forces that reinforced their impact. The regulatory forces in our study clearly interacted with normative forces. The rules and procedures that drive organizational behavior seem to interact with the perceived expectations of employees regarding the core activities of their organizations. If employees are sanctioned for not reaching set targets (e.g. number of policies processed), while simultaneously not being rewarded for efforts in new product development projects, they may experience a lack of legitimacy for incremental product innovation. This way of working becomes normatively valued over time and then taken for granted. Furthermore, the business units that embraced incremental innovation created an atmosphere of ‘letting go’ of the formal rules and procedures, which simultaneously led to a ‘just do it’ mentality. The prevailing idea in these units was that incremental innovation always carries a certain amount of risk, but that should not stop or delay the development process. The latter normative force (risk avoidance) closely interacted with the meaning systems of different professional disciplines (micro cultural-cognitive), which in turn interacted with the regulatory forces. A final example of interaction was the framing of incremental projects as if they were ‘radical’ projects. These projects were separated from the regular organization and managed to escape the formal rules and procedures. The institutional logic in the business units that framed their projects in more ‘radical’ terms clearly differed from the more traditional business units in our study. Thus, in this research context we found indications that micro-institutional forces do not compete with each other, but instead are complementary and reinforce each other in favor of either of the two templates.

## **LIMITATIONS, FUTURE RESEARCH AND CONCLUSION**

As with most studies, our study also has limitations. We only studied one specific sector, the financial services sector, in one country. Additionally, there may be differences between countries regarding the macro institutional forces and their impact on micro institutional forces that may affect the outcomes of our study. Finally, we studied a specific type of innovation; incremental product innovation. Radical innovations may follow a completely different trajectory and may be more legitimate, so the impact of micro institutional forces may be limited. More research on these issues is needed.

These limitations suggest at least two directions for *future research*. *Firstly*, empirical research is needed in both other industries and in the financial services sector of other (EU) countries (Flier et al., 2003) to investigate the value of our framework. It has been argued in the innovation literature that innovation differs across industries and countries. The financial services industry is highly regulated, which makes it extremely interesting to study other highly regulated industries such as utilities, public school systems, childcare and airlines. In some countries, innovation may in itself prove to be more legitimate as the national government provides an environment that is conducive to innovation (Afuah 1998).

*Secondly*, the findings also suggest that special attention is needed for the interaction dynamics between regulatory, normative and cultural-cognitive forces. As was argued above, institutional research has not often focused on this interaction. Further research is needed to uncover the dynamics of interaction to fully understand (a) which institutional forces interact, (b) how these forces exactly interact, and (c) how the interaction of forces affects the legitimacy of innovation.

In this paper we set out to investigate the determinants of successful incremental product innovations. The innovation literature has identified several important issues that affect the success or failure of incremental innovation. We argued that these valuable contributions have not addressed some of the underlying reasons for the problematic nature of incremental innovation. By using an institutional perspective we have been able to add another important determinant for the success of the development and implementation of incremental product innovation. We identified micro institutional forces that affect incremental product innovation and, as such, contribute to the persistence of innovation problems as identified in the literature. Scholars studying incremental product innovation could take these forces into account in their attempts to generate alternative strategies to successfully develop and implement incremental product innovations. We also expand the innovation literature by explicitly focusing on a service environment, whereas most of this literature still builds on manufacturing or high-tech industries. Moving into other empirical fields may also increase our understanding of the identified problems and could lead to the generation of valuable new ideas to solve these problems. Our suggestion to both practitioners and academics is not to solely focus on the traditional determinants that should lead to success, but to also take into account a variety of micro institutional forces from different empirical settings that may be responsible for the struggle regarding incremental product innovation. This will increase the chances for solving the persistence of these problems.

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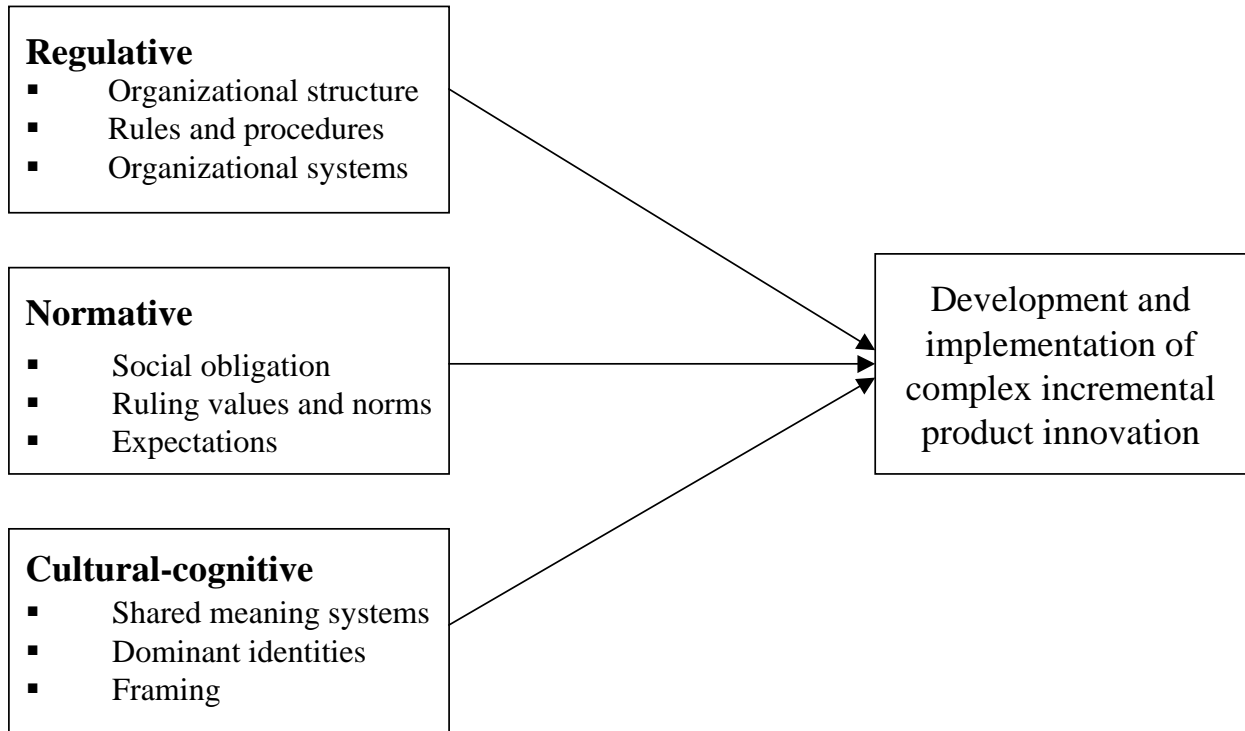
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**Figure 1**  
**Micro institutional forces and complex incremental product innovation**

*Micro institutional forces*



**Table 1**  
**An overview of the empirical research activities (1997-2002)**

<b>Research phase</b>	<b>Research Activity</b>	<b>Companies involved</b>	<b>Goals</b>	<b>Research instruments</b>
Phase 1	Panel sessions	10	To get acquainted with the sector and financial services	4 Panel sessions with 6-10 people
Phase 2	Exploratory interviews	39	To obtain preliminary insights in product innovation process and forces affecting the process	39 interviews (tape recorder used for transcripts)
Phase 3	Interviews with IT experts	10	To explore IT related forces	10 interviews (tape recorder used for transcripts)
Phase 4	Panel sessions	10	To discuss results of stages 2 and 3 and select cases	2 Panel sessions with 6-10 people
Phase 5	Case studies	12	To obtain in-depth insight of institutional forces affecting product innovation processes	125 interviews (5 CEOs, 12 BU managers, 5 IT managers, 12 Product Managers, 24 Project leaders, 24 IT project members, 45 team members), observations, internal documents (tape recorder used for transcripts)

**Table 2**  
**Extended Profile of projects**

<b>Project</b>	<b>Features of Product Innovation*</b>	<b>Development time in months</b>	<b>Number of departments involved</b>
<b>Unsuccessful projects</b>			
BanCo 1	Improved combi-product; new version of an existing mortgage product with existing linkages	> 24	8
FinCo 1	Improved combi-product; investment annuity of which several existed in the company, this product had several new investment features	> 24	7
SureCo 1	Improved combi-product; single-premium policy with investment opportunities. Similar products already present in the company	$12 \leq 24$	6
RealCo 1	Improved combi-product; investment annuity of which several existed in the company, this product had several new investment features related to pensions	$12 \leq 24$	7
PayCo 1	Improved combi-product; extension of already existing flexible life insurance product	$6 \leq 12$	6
RiskCo 1	Improved combi-product; mortgage product with extra features. Consumers can choose between saving and investing. Similar linkages between products already exist.	$6 \leq 12$	5
CashCo 1	Improved combi-product; mortgage product with extra features. Consumers can choose between saving and investing. Similar linkages between products already exist.	$12 \leq 24$	7
LifeCo 1	Improved combi-product; extension of already existing flexible life insurance product	$6 \leq 12$	6
HypCo 1	Improved combi-product; mortgage product for capital accumulation. New version of existing product with several adjustments.	$6 \leq 12$	6
CreditCo 1	Product improvement; minor extension of original mortgage product	$1 \leq 6$	3
AssurCo 1	Improved combi-product; mortgage product with extra features. Consumers can choose between saving and investing. Similar linkages between products already exist.	$6 \leq 12$	6
ChipCo 1	Improved combi-product; investment annuity of which several existed in the company, this product had several new investment features	$6 \leq 12$	4
<b>Successful projects</b>			
BanCo 2	Improved combi-product; extension of original investment product with savings account	$1 \leq 6$	4
FinCo 2	Product improvement; minor extension of original mortgage product	$6 \leq 12$	7
SureCo 2	Improved combi-product; mortgage product with extra features. Consumers can choose between saving and investing. Similar linkages between products already exist.	$6 \leq 12$	7
RealCo 2	Improved combi-product; new version of investment and savings product. Product is revised every two years.	$6 \leq 12$	6
PayCo 2	Improved combi-product; extension of original savings product combined with pension product	$1 \leq 6$	4
RiskCo 2	Product improvement; minor extension of original investment product	$1 \leq 6$	4
CashCo 2	Improved combi-product; mortgage product for capital accumulation. New version of existing product with several adjustments.	$6 \leq 12$	6
LifeCo 2	Product improvement; minor extension of original life insurance product	$1 \leq 6$	3
HypCo 2	Improved combi-product; flexible mortgage product with many options for consumers to choose from. Improved and extended version of an already existing flexible mortgage product.	$6 \leq 12$	6
CreditCo 2	Improved combi-product; new version of investment and savings product.	$1 \leq 6$	5
AssurCo 2	Product improvement; minor extension of original pension product	$1 \leq 6$	4
ChipCo 2	Improved combi-product; life insurance product with additional features, closely linked with investment product	$1 \leq 6$	4

\* Combi-products are improved combinations of already existing products, product improvements are minor adjustments to an existing combi-product.

**Table 3**  
**Exemplary quotes regarding micro institutional forces**

<b>Exemplary Quotes</b>	<b>Unsuccessful projects</b>	<b>Successful projects</b>
<i>Micro regulatory forces</i>	“We have a set of clear procedures and guidelines we need to use to develop new products. I always make sure that my project leaders follow this procedure. If not, they have a serious problem”.	“We need to isolate these projects from the rest of the organization. Otherwise there will be too much formal rules that we need to comply with. We first design something really good, and then fit it in the system, not the other way around”.
<i>Micro normative forces</i>	“I know that there are some board members that want us to develop more new products, but luckily most of the people down here do not bother too much with these ideas. We don’t have time to work on innovation”.	“Our main strength is that everybody shares the same expectations. We all know where we are going and why. From the CEO to people in the administrative departments, we know what to expect from each other. As long as nobody deviates from that path there is no problem”.
<i>Micro cultural-cognitive forces</i>	“There were four key departments concerned with this product; marketing, product management, actuary and IT. I had the feeling that they did not speak each other’s language at all. This was one of the reasons for our problems. The activities of these departments have, of course, hardly been integrated into our organization. They operated mostly in isolation. This (cooperating with other departments) was therefore more or less new to them”.	“If you look at who is actually in the lead here...it’s us! We are the creative people in this organization and we make the rules of the innovation game. Not the bureaucrats from IT or the legal departments that try to block every new idea. Although they often succeed, it will not happen here. Our boss does not allow that to happen. We are in charge of these projects”.

## Appendix 1 Coding procedures

Steps	Coding activities						
Step 1	Open coding of interviews to identify variety of intraorganizational institutional forces (examples provided in the main text)						
↓							
Step 2	<p>Axial coding for each of the intraorganizational institutional forces and see if types fit the entire data set:</p> <ul style="list-style-type: none"> <li>• Compare within cases and across cases to ascertain intraorganizational institutional forces</li> <li>• Sort the various issues into one of the three intraorganizational forces</li> </ul>						
↓							
What intraorganizational institutional forces is the issue related to?							
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center; padding: 5px;">Regulative</td> <td style="width: 33%; text-align: center; padding: 5px;">Normative</td> <td style="width: 33%; text-align: center; padding: 5px;">Cultural-cognitive</td> </tr> <tr> <td style="padding: 5px;">Letting go or strict adherence to rules and procedures, isolated from or embedded in organization, information systems that control type of innovation</td> <td style="padding: 5px;">Employees feel obligated to fulfill their roles, ruling values and norms towards risks and clarity of expectations between top and employees</td> <td style="padding: 5px;">Employees share similar belief systems or fundamentally differ in their beliefs, some identities are powerful and have strong impact on innovation, explicit framing of some projects</td> </tr> </table>	Regulative	Normative	Cultural-cognitive	Letting go or strict adherence to rules and procedures, isolated from or embedded in organization, information systems that control type of innovation	Employees feel obligated to fulfill their roles, ruling values and norms towards risks and clarity of expectations between top and employees	Employees share similar belief systems or fundamentally differ in their beliefs, some identities are powerful and have strong impact on innovation, explicit framing of some projects
Regulative	Normative	Cultural-cognitive					
Letting go or strict adherence to rules and procedures, isolated from or embedded in organization, information systems that control type of innovation	Employees feel obligated to fulfill their roles, ruling values and norms towards risks and clarity of expectations between top and employees	Employees share similar belief systems or fundamentally differ in their beliefs, some identities are powerful and have strong impact on innovation, explicit framing of some projects					
Step 3	<p>Based on step 1 and 2 distinguishing and describing of the two templates</p> <p>‘Business as usual’ template: projects managed by strict adherence to prevailing rules and procedures, risk avoidance highly valued and dominant departments supported this way of dealing with incremental innovation projects which had become taken for granted.</p> <p>‘Innovation’ template: the rules and standard procedures were discarded, projects were isolated from the organization, risks were valued as being part of the innovation game and projects were framed in line with more breakthrough innovations.</p>						



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