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Politicized projects: Schedule modification as a tool for coordination between temporary interventions and long-term policies at an aid agency

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Abstract

This paper aims to contribute to the general discussions within organization theory about a multi-level/contextualized approach to the study of project performance, while at the same time speaking to the emerging interest in projectified politics. The introduction of temporary economic incentives to reach specific goals is often described as a novel form of organizing (national) public policy. Yet, a related project form for stimulating change and development has since long been of frequent use in international policy settings – notably that of development aid. Project-based organizing assumes that the imposition of deadlines and management towards completion enables objectives to be reached more efficiently and effectively. Why, then, is it so common for projects to run overtime? Most previous studies concerning delays have focused on the complexities associated with the implementation of distinct project assignments. This study expands the lens to the organizational context in which projects are embedded. It hypothesizes that the priority of a project in relation to the longer-term goals and strategies of a multi-project organization is central for understanding project outcomes. The argument is tested with respect to the influence of policy frameworks and political agendas on the timeliness of aid projects funded through a public agency.

Introduction

Project-like policy interventions – that is, the introduction of temporary economic incentives to reach specific goals – can be described as a novel form of organizing (national) public policy. Yet, the project form for stimulating change and development has since long been of frequent use in international policy settings – notably that of international development cooperation (Odén, 2006). Despite some harsh criticisms towards this model (e.g. Naudet, 2000), development aid is predominantly organized in the form of time-limited funding contracts between donor and recipient country parties, emphasizing the need for clear objectives, implementation plans and exit strategies.

Aware of the potential friction between the logic of temporary organizing and the production of long-term results, donors have increasingly sought to avoid taking on active roles in the design and management of project activities. Instead, the importance of recipient "ownership" of aid-generated processes is seen as central for fostering sustainability (OECD, 1989 and followers). Practically, this means that donor decisions affecting project operations and performance (such as schedule changes) are ideally to be undertaken only as responses to counterpart needs and requests.

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Still, the allocation of aid money remains a highly political task, subject to a plethora of geographic as well as thematic strategies to ensure the alignment with donor country priorities, values and available resources. These frameworks are not static – on the contrary, they are subject to periodic changes resulting from political turnover and redirections. A pertinent question is to what extent ongoing projects – which are supposed to be self-contained and evaluated solely on the basis of their own merits – are influenced by concurrent policy flux in the donor country?

This paper addresses this question by looking at to what extent, and why, aid projects are delayed. Using a rich data set from the Swedish International Development Cooperation Agency (Sida), I map patterns of extension beyond original end dates, and examine how such reschedulings were justified and valued within the agency. While the mainstream project management literature has focused on the complexities involved in the implementation of distinct project assignments (cf. PMI, 2004), this study puts its emphasis on the policy context in which projects are embedded.

The analysis suggests that the importance and timing of an aid project in relation to the overarching goals and strategies of its funding agency are central aspects to understanding the phenomenon of project duration extension. For example, it is shown that during the study period Sida was more likely to extend projects that enjoyed a high priority status within its portfolio; moreover, a significant proportion of the extensions granted were associated with the agency's own administration (notably, the reassessment of projects to evaluate their fit with new strategic frameworks and associated allocation targets). These findings contrast starkly with many previous studies, in which delays have commonly been reduced to task-specific reasons at the implementation level, and are typically seen to involve an element of negative feedback from the project activities (see Pinto & Prescott, 1988 for a review).

The results can be well explained, however, by considering project schedule modification as a tool for coordination between the portfolio of time-limited commitments and the more long-term frameworks and goals for the studied organization's activities (cf. Sahlin-Andersson & Söderholm, 2002). From this perspective, the need to synchronize project cycles with overarching processes of policy-making was as a recurrent reason for the studied aid agency to adjust project deadlines. Interestingly, this reason also appeared as an internally legitimate justification of actively engaging in project design, even in cases where the expressed intention was to outsource operational planning and implementation to external partners.

This paper is outlined as follows: I first provide a background on the problem of timeliness within the project management discourse. I then introduce the multi-project perspective as an analytical framework for studying project outcomes, and present the Swedish development aid administration as a case of multi-project organizing. The subsequent empirical section describes a two-phased mixed methods study of factors affecting project completion timing and extension justifications at Sida.[1] The paper ends with a discussion of how this

study and its conclusions can be used to discuss dilemmas of projectified politics within other sectors, notably the challenge of reconciling short-term efforts with lasting results, and the question of which role the political administration should take on to maximize the quality of intervention results.

Projects and the problem of timeliness

During the past few decades, society has seen a proliferation in the most varied settings of activities labeled as "projects". The project notion is general enough to encompass large inter-organizational ventures as well as temporary activities inside organizations, various kinds of time-limited investment, and short-term work assignments (Sahlin-Andersson & Söderholm, 2002). There are many different explanations to why the project mode of organizing has become popular, ranging from efficiency arguments to theories about mere fashion or labeling. A practical dimension that is sometimes emphasized is that the political administration is increasingly making use of the project form in its efforts to stimulate innovation, change and development, thereby contributing to the spread of the model in different parts of society (cf. Jensen et al., 2007; Krohwinkel-Karlsson, 2009). Major shares of the ordinary activities within the non-profit, cultural and academic sectors are financed by time-limited grants endorsed by public agencies or funds. Similarly, numerous local and regional authorities offer project funding for different growth and entrepreneurship initiatives. The logic of temporary economic incentives to reach specific goals can also be found in public programs targeted at individuals, for instance to support re-entry into the labor market. Support via the EU structural funds and international development cooperation programs are examples of public project financing at the inter-state level.

A common characteristic of projects – regardless of their size and aim – is that they are managed towards completion, that is, with the expectation of coming to an end once the objectives have been fulfilled (Lundin & Söderholm, 1995; Packendorff, 1995; Wikström, 2000). This of course does not mean that projects are necessarily short. As clarified by Grabher (2002), projects are defined by their anticipated temporal limitation rather than by their actual length. In other words, the practitioner-oriented strand of the project literature has approached activity duration as an organizational design variable that can (and should) be subject to strategic planning and management (Eksted et al., 1999; Engwall, 1995). Accordingly, correspondence to time schedules is one of the most emphasized success criteria in mainstream project management models (Project Management Institute, 2004).

At the same time, the project literature notes that in practice, project completion more often than not occurs off-schedule. 25 years ago, Morris and Hough (1987) concluded, from their summary of 33 databases of project outcomes in various industries, that "despite the enormous attention project management and analysis have received over the years, the track record of projects is fundamentally poor, particularly for the larger and more difficult ones [...] Projects are

often completed late or over budget, do not perform the way expected, involve severe strain on participating institutions or are cancelled prior to their completion after the expenditure of considerable sums of money" (p. 5). This observation has been corroborated in a wide array of studies on project success and failure (Atkinson, 1999; Flyvbjerg et al., 2003; Murphy, 1983; Williams, 1995, 1999). A pertinent question for students of the project phenomenon has thus been how the difference between the theory of project management and its practice can be explained.

In examining the problem of delays, the mainstream project management literature has tended to distinguish between factors that are 'external' or 'internal' to the project in question. Causes in the former category are typically related to environmental uncertainty and change during the course of project implementation, while those in the latter category involve things such as inherently complex project tasks, poor project management and unclear division of responsibilities between involved counterparts (Engwall, 2002; Pinto & Prescott, 1988; Wikström, 2000; Williams, 1995). Consequently, the solutions most commonly proposed for making projects deliver on time have revolved around refined techniques for project planning, monitoring and evaluation.

A different line of argument is found in behaviorally oriented research, from areas such as expectancy theory, self-justification theory and escalation of commitment. Within this literature, the assumptions of instrumental rationality that underlie most project management models are in themselves seen as important explanations for the emergence of undesired outcomes (Brockner, 1992). Overambitious goals, excessive managerial attachment (supposedly leading to slack resources and loose controls), group think and general lags in the human perception of deterioration in performance, are reasons for project delays commonly proposed within this tradition (Drummond, 1996; Keil, 1995; Keil & Montealegre, 2000; Mähring & Keil, 2008; Staw, 1976; Staw & Ross, 1978, 1987).

Multi-project organizing: A conceptual framework for studying project outcomes

While inherently different in their view on managerial behavior and its outcomes, the two perspectives described above have shared a focus on the structure and dynamics of individual project entities. This "single project perspective" has been reinforced by the empirical bias of project studies within both veins towards "extraordinary" and "unique" undertakings (e.g. Wikström, 2000). More recently, however, a growing number of researchers have acknowledged the need to analyze projects as part of larger organizational structures (Sahlin-Andersson & Söderholm, 2002). Similarly, one of the more recent contributions of Ross and Staw (1993) suggests "provid[ing] additional grounding for an organizational theory of escalation [by] lodging the research within organizational contexts" (p. 701).

One empirically driven motivation for such a wider focus has been the increasing emergence of so-called "multi-project organizations", i.e. organizations

that make repeated use of the project form for their core activities and that are typically engaged in several projects simultaneously (Gareis, 1989; Payne, 1995). This form of organizing is prevalent in larger engineering- and research-based organizations, within consulting firms and in the construction business, and seems also to be expanding into more traditional industries (Hobday, 2000; Midler, 1995; Sydow et al., 2004; Whitley, 2006). Moreover, the multi-project concept need not be constrained to the level of project implementation, but may also be fruitful for understanding the activities of other types of stakeholders in project-like endeavors. In this study, it supports the analysis of a large (public) project financier, which maintains a portfolio of time-limited investments under the umbrella of a single formal organization (Krohwinkel-Karlsson, 2008b).

A distinguishing feature of a multi-project context is that even projects that may appear to be separate and autonomous have to compete for scarce organizational resources and strategic commitment (Engwall & Jerbrant, 2003; Lindkvist, 2004). In other words, an umbrella organization that manages, administers and/or finances several projects at once faces considerable challenges in prioritizing and synchronizing its allocation of resources between these entities in the most efficient way. Apart from instrumental coordination aspects such as the distribution of personnel and other types of production capacity according to project tasks, research has drawn attention to factors such as legitimacy, uniqueness, visibility and top management support to explainin variations in project access to resources. It has been emphasized that the planning, scheduling and implementation of projects is normatively influenced by the institutional environment of the parent organization, notably so since a multi-project organization incorporates many goals and strategies that are more general in nature and persist longer in time than each single project (Eskerod & Östergren, 2000; Kadefors, 1995). A central assumption is that decisions regarding individual projects – for example about whether to re-invest or withdraw – cannot be considered immune to these overarching structures and processes (Bowen, 1987; Cyert & March, 1963/1992).

This study departs from the hypothesis that the priority of a project in relation to the more continuous and long-term strategies of a multi-project organization is central to understanding project outcomes such as delays. In principle, this theoretical argument could be applied to multi-project organizations of different types, i.e. on the "demand" as well as "supply" side of projects. The kinds of overarching goals and strategies that are relevant for consideration would, however, vary with the type of organization studied. In this paper, the empirical setting consists of a public agency that distributes and administers project funds. Consequently, a main focus is on the embeddedness of public project financing within policy frameworks and political agendas. Thus, the paper aims to contribute to the general discussions in project management and organization theory about a multi-level/contextualized approach to the study of project performance, while at the same time speaking to the emerging interest in projectified politics.

Development aid financing as a case of multi-project organizing

This paper investigates how the goals and strategies of a continuing umbrella organization affect outcomes at the project level. It does so within the context of public project funding, more specifically through the study of completion timing within a portfolio of aid projects supported by the Swedish International Development Cooperation Agency (henceforth referred to as "Sida" or "the Agency"). During 2007, Sida's financial disbursements – totaling more than SEK 15 billion – were allocated across 2592 time-limited funding agreements ("projects") of various sizes, spread over a wide spectrum of societal sectors and across five continents. As such, Sida's project portfolio is larger and more varied than that of most other public and private project financiers. However, the general purpose and character of the Agency's administrative work compares well with most other government authorities engaging in project funding: Sida's main task is to allocate and transfer financial resources so that they eventually come to the target group's benefit. To this end, the Agency establishes contractual arrangements with implementing partners (public and private organizations of different nationalities) who normally enjoy considerable independence in the way they staff and run the project.

The role of the Swedish government in this model is that of a project sponsor deciding on the budgetary frame for Sida's operations. According to the basic principle of task division within the public sector by which 'the politicians decide and the administration executes', the government is also formally responsible for developing Swedish aid policy. Therefore, Sida's overall distribution of resources is based on a set of multi-year strategies that are derived from the geographical and thematic priorities for the allocation of the Swedish aid budget. This may include "special attention" to certain kinds of recipient organizations, notably bodies within the United Nations. In some countries, Agency operations are also bound by high-level agreements between Sweden and the recipient government outlining the preferred contents of the cooperation program. On a longer term, the Swedish government can also influence Sida's operations by deciding on the organizational structure of the agency, affecting for example the location of field personnel. Sida is thus a vivid example of a "politicized" multi-project organization, and a rich case to study because of the multitude and diversity of the projects under simultaneous management.

Timing issues in the context of development aid

Before moving on to the study design, something can be said about the study of project timing outcomes in general, and the influence of donor organizations on such outcomes in particular, within the specific context of development aid. Within the development cooperation discourse, both these issues are controversial. Not only is the aim for project completion a key ideological component of aid provision, but the question of who can legitimately influence project plans and performance is also highly topical (Krohwinkel-Karlsson, 2008b). The significance of project timelines has deep roots in a long-standing discussion about

how aid interventions should be constituted to eventually make themselves obsolete. In brief, the arguments can be described as having moved from a reliance on self-generated sustainability (in the 1960s) to an increasing emphasis on temporal management tools and explicit exit strategies (1980s and forward).

In recent decades, the idea of designing aid as a set of temporary activities has been largely retained, the responsibility for setting the actual schedules and deadlines has shifted from donor to recipient organizations. In particular, the notion of developing county "ownership" of aid-generated processes has decreased the influence of funding agencies on project implementation. This trend has proceeded in two steps, whereby agencies first resigned from assuming practical executive positions, and then more recently have sought to avoid acting on their own initiative in the production of project proposals. As a result of these two organizational reforms, Sida's current role (like that of most other Western development agencies) is portrayed similarly to that of an investment manager, in that its core activities consist of planning, monitoring and evaluating Swedish financial contributions into the development-oriented activities of other actors (Sida 2005a).

One practical implication of this self-defined role is that decisions affecting project operations and performance ideally are undertaken only as responses to external initiatives. For example, when it comes to project scheduling, Sida guidelines posit that the partnering organization should set its own deadlines for implementation and reporting. And while it is acknowledged that delays might be inevitable – especially in the larger and more complex projects – any changes are to be triggered by counterpart needs and requests so as not to erode the partner's sense of ownership (Sida 2005a; 2005b). One consequence of this desired division of responsibilities is that Sida officers perceive their involvement in the temporal management of projects to be quite limited. In fact, a pilot survey among Agency personnel prior to this study found that delays were considered to be the most common type of deviation from project plans (more so than meeting qualitative, quantitative and budgetary targets). Delays were also the type of deviation that the administrators felt they could do the least about (Krohwinkel-Karlsson, 2008a).

The view that timing changes occur frequently, but that the causes of such changes are only in exceptional cases to be found at the level of the umbrella organization, can be seen as a reflection of the above-described knowledge gap about how and under what circumstances individual project outcomes can be associated with the overarching goals and strategies of a continuing parent organization. There is thus a need to shed light on these issues with regard to multi-project organizations in general, and in the empirical setting of development cooperation agencies in particular.

Methodological design of the study

The research design and data collection of this study was guided by the question of "how variations in parent organization priorities impact on the extent to which

and why projects are delayed". Following Tashakkori and Creswell (2007), this is a typical research question of a 'mixed' nature, involving both quantitative and qualitative elements. From a pragmatist position, this calls for the use and integration of quantitative and qualitative methods (Morgan, 2007; Patton, 1988).

In its operationalization, the research question was broken down into two separate sub-questions which each informed the design of a separate study phase. The first phase analyzed variation in the propensity for projects to be extended in time, while the second phase explored variations in how extension decisions are justified. In technical terms, the first phase consisted of a large (N=3632) quantitative analysis of project completion timing, assessing the relationship between various project characteristics (including indicators of political priority) and extension lengths in a so-called survival model. The second phase added qualitative information on extension decision justifications for a subsample of cases (N=107), and examined how priority characteristics and outcome types combine using a set-theoretic approach also known as qualitative comparative analysis or QCA; (Ragin, 1987; 2000). This paper first compares, then synthesizes the results from the two phases with the purpose of arriving at an enriched and more nuanced understanding of the research topic.

Study phase 1: Survival analysis of project extension lengths

The aim of this study phase was to get a general understanding of what kinds of Sida projects were most susceptible to delay. It assessed whether extended projects shared common characteristics related to their priority status within the Agency's project portfolio. Five indicators of project priority were specified, together with a number of task-specific controls. I then explored whether and how these variables were associated with the likelihood of duration extension.

Data source and study sample

The analysis was based on project-level statistics from Sida's financial management system. The data set comprised all development aid projects supported by Sida that were in any stage of implementation in the period between 1998 and 2005, and included a wealth of information on project characteristics such as size, time period, target country, sector, implementing partner and more. In addition, changes in any of these characteristics over time could be tracked.

In the statistical analysis, projects initiated prior to 1998 and/or with an original end date later than 2005 were excluded. Furthermore, a small number of projects with negative extension times (that is, completed ahead of schedule) were disregarded. Left for analysis were those Sida-funded projects that had been approved and managed between 1998 and 2005, that were originally intended to be terminated before 2006, and that had not been terminated prematurely. The analysis comprised a total of 3632 projects meeting these selection criteria.

Analysis model

Survival analysis was used to assess the influence of certain project characteristics on project delay. The Cox proportional hazards model (Cox, 1972) was applied. This technique models the probability that a case will experience the event of termination given that the case has survived to that time. The dependent variable is the hazard rate; in this case, the likelihood that a project will be completed given its current duration. Explanatory variables are assumed to be linearly related to the log of the hazard function. Within the studied data set, this means that project characteristics with positive coefficients are associated with a reduced likelihood of delay, while characteristics with negative coefficients are associated with an increased likelihood of delay (project extension).

Measurements

Outcome variable: Extension lengths

The outcome variable in this study was defined as the time interval between the original end date of a project, and its revised termination date – that is, the length of project extension – measured in months. The original completion date was set equal to the end of agreement date, as registered at project inception. The revised completion date was set equal to the most recently filed end of agreement date. Projects for which the end of agreement date had remained the same over the observation period were considered as implemented on time. Consequently, these cases entered the analysis with an outcome variable value of '0'.[2]

Covariates: Project characteristics

Project delays, in this paper, are treated as events situated within a continuing parent organization, in which the maintenance of several simultaneous projects is standard operating procedure. In such multi-project organizations, competition for strategic commitment creates dependencies even among projects that appear to be separate and autonomous. Moreover, the allocation of project resources is dependent on overarching organizational goals and strategies. In particular, I have hypothesized that a project's priority status in relation to such higher-level contingencies is likely to affect individual extension decisions.

Due to the complexity and overlap of goals and strategies at several levels within Sida's organization, a ranking of projects with respect to their overall priority status within the Agency's portfolio was not considered meaningful. Rather, five different covariates covering different aspects of priority were defined. As a result of the studied organization's public status, most of the variables have a connotation to the policy context in which Swedish development cooperation is embedded.

Strategic_Objective is a dummy variable equal to 1 for projects that were classified as significantly contributing to one or more of the three main Swedish policy goals on crosscutting issues in development cooperation: environment, gender and human rights. (The Swedish government requires such projects to be separately accounted for in Sida's annual report, which means that they are

traceable in the financial management system.) The variable is an indicator of the project being consistent with important strategic considerations within the Swedish aid policy and being representative of areas in which Sweden (and Sida) is commonly recognized as having special competencies.

Strategic_Country is a dummy variable equal to 1 for projects implemented under a specific country strategy. Such political strategies for selected recipient countries are elaborated by the Swedish government on a rolling five-year basis. The variable indicates that Sweden has a long-term commitment to cooperation with the country in question, and may imply more certainty regarding the future direction of the cooperation program.

Strategic_Agreement is a dummy variable equal to 1 for projects included in a so-called Development Cooperation Agreement between Sweden and a recipient country government. Development Cooperation Agreements are bilateral memoranda of understanding outlining the size and scope of the cooperation program, normally on a three-year basis. The signing of such an agreement normally involves a reservation of funds in Sida's operational planning for the coming year. The variable indicates that a project is of strategic importance to both the donor and recipient.

Strategic_Partner is a dummy variable equal to 1 for projects whose recipient organizations were known to Sida through prior cooperation or were engaged in several projects simultaneously. The variable indicates that preceding or concurrent projects had been initiated with the same counterpart (international organizations involved in several projects were considered by their recipient country branches). The variable is a proxy for Sida's familiarity with and commitment to a partner and may also reflect a political interest in continuous support to certain (types of) organizations.

Strategic_Office is a dummy variable equal to 1 for projects administered by one of Sida's fully delegated offices located at Swedish embassies in select recipient countries. At the time of the study, 15 foreign offices out of 40 had been given increased authority to make decisions about aid activities in their respective counties. The allocation of administrative responsibility close to the field is a complementary indicator of Sweden's strategic commitment to the country in question.

In addition the focal variables above, a number of task-specific project characteristics that are commonly believed to affect timing outcomes or project survival in general were included as control variables. Specifically, aspects of project complexity, geographic location, sector, type and nationality of counterpart were controlled for. All covariates reflect characteristics at the time of project inception.

Results

Table 1 presents the outcome of the analysis of project survival beyond original completion date.[3] As the numbers illustrate, the analysis was strongly supportive of earlier findings regarding the pervasive influence of project complexity in

terms of initial project size, duration and task heterogeneity on timely completion outcomes. In line with common understanding, projects in the infrastructure and natural resources sectors also stood out as particularly prone to delay. In contrast, there was weaker support for effects related to the general investment climate and partner characteristics.

Table 1: Results of survival analysis

	Variable	B	(S.d.)	Exp(B)
1	Strategic_Objective	0.038	(0.042)	1.039
2	Strategic_Country	-0.358***	(0.095)	0.699
3	Strategic_Agreement	-0.403***	(0.070)	0.668
4	Strategic_Partner	-0.153***	(0.038)	0.858
5	Strategic_Office	0.041	(0.078)	1.042
6	Original_Project_Size	-0.005***	(0.002)	0.995
7	Original_Project_Duration	-0.015***	(0.002)	0.985
8	No_of_Project_Components	-0.051***	(0.013)	0.950
9	LDC	0.135**	(0.059)	1.145
10	Private_Partner	-0.027	(0.047)	0.973
11	Swedish_Partner	0.085**	(0.039)	1.088
12	Americas	0.012	(0.062)	1.012
13	Asia	-0.002	(0.061)	0.998
14	Europe	-0.097	(0.071)	0.907
15	Transnational	0.095	(0.058)	1.100
16	Education	-0.089	(0.099)	0.915
17	Infrastructure	-0.364***	(0.086)	0.695
18	Business	-0.117	(0.081)	0.890
19	Natural_Resources	-0.167***	(0.066)	0.846
20	Democracy	0.012	(0.058)	1.012
21	Other	-0.139	(0.080)	0.870
	N	3632		
	-2 Log-likelihood: overall model	45432.98		
	-2 Log-likelihood: model with variables 6-21 only	455513.74		
	Likelihood ratio test statistic for the contribution of variables 1-5 to model fit4	80.77***		

Note: *** = $p \leq 0.01$; ** = $p \leq 0.05$ (two-tailed tests).

Turning to the effects of the variables of 'focal interest' (covariates 1 to 5), an interesting pattern was evident. As discussed previously, mainstream project management has tended to associate project priority with increased managerial effort, which arguably should decrease the likelihood of deviations from plans. However, the results of this study suggest the reverse to be true, as I found strong negative relationships between indicators of Sida's strategic commitment on both country, agreement and partner level and the probability of timely project completion (the variables Strategic_Country, Strategic_Agreement, and Strategic_Partner were all significant at the 1 per cent level). Notably, the inclusion of a project in a development cooperation agreement increased the relative

risk of delay by more than one-third. Likewise, projects implemented in countries for which Sweden had specific country strategies were 30 per cent more likely to be extended. The intensity of partner involvement in terms of previous engagement with Sida also appeared to have a negative effect on timely completion (14 per cent relative risk). In contrast, the aggregate effect of Sida's cross-cutting policy objectives (Strategic_Objective) was insignificant, as was the variable relating to the allocation of management responsibility within the Agency (Strategic_Office).

In sum, the survival analysis demonstrated that political priority-setting influenced the likelihood that the duration of aid projects would be extended. More specifically, it showed that certain priority indicators significantly *increased* the probability of project delays at Sida. However, by its reliance on static project characteristics for explaining timing outcomes, the survival model did not explanain *why* project extensions were being granted. The next study phase was designed to do provide this information.

Study phase 2: Qualitative comparative analysis of extension justifications

The aim of this study phase was to systematically study the content and form of extension justifications, in order to gain a deeper understanding of the reasons why Sida projects were rescheduled. Different extension types were identified, focusing specifically on the distinction between externally and internally generated delays. I then investigated whether and how the configuration of priority status indicators varied among projects extended for different purposes.

Data source and study sample

The analysis relied on project-specific documentation from Sida's archives about projects that experienced a delay during 2005. Extended projects were identified based on duration time changes filed in Sida's financial management system during the calendar year 2005. Subsequently, written documentation about the individual extension events was retrieved, most frequently though direct requests to the individual desk officers responsible for each project. The main kinds of documents considered were Sida's internal extension decisions (including justifications) along with formal requests and approvals of extensions by way of mail correspondence between an implementing partner and Sida).

For the analysis, a delimitation was made to studying projects with original budgets larger than SEK 3 million and with original durations exceeding 24 months. These thresholds were chosen because at Sida larger and longer projects are subject to more formalized administrative procedures, notably in terms of documentation and assessment. After a number of instances of erroneously filed extensions were eliminated, 107 cases remained for analysis.[5]

Analysis model

A set-theoretic approach known as qualitative comparative analysis was used to examine the relationship between extension justifications and project priority. The technique uses Boolean algebra, a notational system based on verbal logical operators, to determine how different combinations of simultaneously present or absent attributes result in observed outcomes.[6] By this terminology, OR denotes that either one of any two considered attributes is present; AND/OR means that at least one of the attributes is present; and (BUT) NOT refers to the simultaneous absence of attributes. The use of Boolean operators thus enables an analysis of how variables combine that goes beyond simple correlations and two-way interaction effects.

The project attributes in focus were those priority indicators that had been found to significantly increase the probability of delay an aggregate level as identified in the preceding survival analysis. Outcome categories were defined based on the different justifications for project extension found in the reviewed project documentation (see definitions below). In addition to observing the frequency with which different priority indicators combined in the sample, I assessed whether certain attribute combinations were significantly more common among projects rescheduled for certain reasons.

Outcome categories: Extension types

A key argument in this paper has been that previous accounts of project delays have suffered from an inadequate focus on the implementation level, thus failing to take into account the overarching organizational contexts in which many projects are embedded According to Sida's internal guidelines on project administration (Sida, 2005b), any decision to extend and ongoing agreement should be triggered by a request from the implementing partner. In practice, however, the management of project extensions within the Agency frequently deviates from the stipulated procedure. In my reading of Sida's extension justifications, this was highlighted by mapping (i) the type of proposal proceeding the extension decision (external proposal, internal proposal or no proposal), (ii) the nature of the cause for extension (iii) the nature of the feedback from project activities considered in the extension decision (negative, lacking or ambiguous feedback), and (iv) the anticipated accomplishment during the extension period. Based on a reiterative reading of the archival material, the following three stylized justifications for project reschedulings were identified:

Implementation related extensions were typically associated with delays in project operations in the field. Requests were most often put forward by the grant recipient in a formal proposal detailing the managerial conditions and/or environmental factors that had affected project progress negatively and outlining a catch-up plan for the anticipated extension period.

Contractual extensions related to deficiencies in the agreed relationship between Sida and the grant recipient, frequently in the form of delayed or incomplete reporting (on the part of the implementing partner) or a tardy third-party audit. These extensions were commonly not accompanied by a formal proposal

or extension plan, but were rather granted to allow for the fulfillment of formal obligations.

Administrative extensions were justified with reference to unexpectedly time-consuming processes of project planning, monitoring and evaluation within Sida, often phrased in terms of a need to assess ambiguous project feedback or to provide for a smooth transition in view of a possible next phase of the project. In some cases, mention was made of the need to adjust to external procedures affecting agency work (for example, an ongoing country strategy process). In contrast to the other extension types, the impetus for Administrative extensions can be described as relating to internal processes at the funding agency.

Attributes: Project priority indicators

Those indicators of project priority that appeared in the survival analysis to strongly increase the overall likelihood for extension were reconsidered as attributes in the qualitative comparative analysis. More specifically, the three priority indicators Strategic_County, Strategic_Agreement and Strategic_Partner were important. The variables were defined the same as in the previous study phase.

Results

In the analysis, attributes were related to one another by logical operators (rather than simple indications of absence/presence) in so-called groupings. In exploratory contexts like this, researchers typically use an iterative logic to determine which groupings are of relevant interest for comparison across outcome types. In this study, I considered first the presence of any one of the three attributes under consideration (row 1, baseline), then all groupings defined by the presence of one or two of a pair of attributes, and the simultaneous absence of the third attribute (rows 2 to 4), and finally a paired, negated grouping that appeared as particularly significant judging from the results of the two previous steps of the analysis (row 5).

Table 2 summarizes the frequencies of the four focal attribute groupings across extension categories. As shown, the proportions of projects covered by either of the priority indicators Strategic_Country, Strategic_Agreement or Strategic_Partner were very stable across extension types. In other words, there were only minor differences between the projects contained within the various categories when the three attributes were considered together. However, when indicators of priority were combined using negations, a more nuanced pattern emerged. Most notably, the analysis suggested that projects extended for Administrative reasons could be distinguished from projects extended on Implementation-related or Contractual grounds.

Specifically, the data showed that projects extended for Administrative reasons were more often of strategic importance by way of inclusion in a development cooperation agreement or being implemented by a strategic partner, while at the same time being situated in geographic locations *lacking* coverage by a

Swedish country strategy. This particular combination of attributes characterized almost 8 out of every 10 projects within the Administrative extension category (row 4).

Table 2: Results of qualitative comparative analysis

		Implementation Proportion	Contractual Proportion	Administrative Proportion
1	Strategic_Country AND/OR Strategic_Agreement AND/OR Strategic_Partner	0.79	0.81	0.81
2	Strategic_Country AND/OR Strategic_Agreement BUT NOT Strategic_Partner	0.09	0.11	0.07
3	Strategic_Country AND/OR Strategic_Partner BUT NOT Strategic_Agreement	0.40	0.41	0.26
4	Strategic_Agreement AND/OR Strategic_Partner BUT NOT Strategic _Country	0.62	0.67	0.78
5	Strategic_Agreement BUT NOT Strategic_Country	0.26	0.30	0.52**
	N	53	27	27

Note: ** = $p \leq 0.05$ (asymptotic significance of chi-square test with 1 degree of freedom).[7]

Two further observations were (i) that the grouping that excludes the attribute Strategic_Agreement (row 3) was less well represented among the projects in the Administrative extension group compared to the other extension types; and (ii) that this difference in grouping frequencies among output categories disappeared when Strategic_Partner was excluded (row 2). Thus, a further refinement of the findings regarding the singularity of Administrative extensions was achieved by considering the grouping frequency of Strategic_Agreement BUT NOT Strategic_Country (row 5). This analysis showed that more than half of all projects extended for Administrative reasons were executed within the frame of a development cooperation agreement but in the absence of a country strategy, compared with less than one-third of the projects within the other extension categories. The result of a chi-square test supported the contention that this pattern did not occur by chance.

The differing combination of this particular pair of attributes is intriguing when considered alongside the findings from the survival analysis regarding the general relationship between organizational priorities and project delay. While the first phase of the study showed that projects implemented within the framework of a country strategy were, in general, more likely to be extended, a reassessment of these findings in light of the second phase's results pointed to the following pattern: *Although country priority increased the overall propensity for*

extension, the implementation of a project outside a country strategy appeared to increase the likelihood of delays originating within Sida itself. The integrated discussion below considers the results from both study phases from an empirical as well as theoretical perspective.

Integrated observations and conclusions

This paper has addressed the topic of "projectified politics" by looking at to what extent, and why, projects financed by a national development aid agency are delayed. Using a rich data set from Swedish Sida, I have mapped patterns of project extension beyond original end dates, and examined how such reschedulings were justified and valued within the Agency. While many other studies concerning delays have focused on the complexities involved in the implementation of distinct project assignments, this study has put its emphasis on the organizational policy context in which projects are embedded. Drawing on the concept of multi-project organizing, I have sought to highlight interdependencies between individual projects and longer-lasting organizational structures and processes – in this case closely related to political will and commitment – as key features for understanding project performance.

The analysis suggested that the importance and timing of an aid project in relation to the overarching policies that its funding agency abides by, are central aspects to understanding the phenomenon of project duration extension. A survival analysis of project extension lengths showed that during the study period, Sida was more likely to extend projects that enjoyed a high priority status within its portfolio. Political commitment to certain geographic areas, bilateral agreements with select recipient governments, and recurrent engagement with certain contractual partners were all found to significantly increase the propensity for projects to run overtime. From a mainstream project management perspective, the direction of these relationships is surprising, since the accumulated view within the managerial tradition holds that more experience and greater levels of planning should increase the probability of projects achieving timely performance. The results align well, however, with research within the behavioral tradition, which has indicated that extensive commitment – especially when taken for granted and continuing – may increase the propensity for investors to "wait and see".

While it is outside the scope of this paper to discuss in detail the potential mechanisms behind each of the studied priority indicators, a general conclusion appears to be that projects for which the sustained supply of resources is ostensibly secured by way of a long-term political strategy or agreement are more likely to be granted an extension. Moreover, prior positive experiences with certain contractual partners and institutional environments may have contributed to trust-based tolerance of slippage in project implementation. Thus, an initial interpretation of this study's findings is that multi-project organizations are more trusting, and at the same time more patient, for results to be realized in relation to their priority projects.

These conclusions were developed in the subsequent study of extension justifications. Here, I found that a significant proportion of the extensions granted were associated with Sida's own administration (notably, the reassessment of projects to evaluate their fit with new political frameworks and associated allocation targets). This finding contrasts starkly with much of the previous project management literature, in which delays have commonly been reduced to task-specific reasons at the implementation level and are typically seen to involve an element of negative feedback from the project activities. In relation to the discussion above, one interpretation is that not only are multi-project organizations more concerned that priority projects eventually demonstrate results; but they were also be more inclined to allocate administrative resources to achieve these results.

In the qualitative comparative analysis, I found that projects rescheduled for administrative reasons differed in their priority status: frequently, these projects were *not* covered by an overarching country strategy, though prioritized in another dimension. In general terms, these results suggest that internally generated project delays are more common in the absence of well-defined political frameworks. A possible explanation is that when general directions for portfolio composition are lacking, disparities in the organization´s consideration of future allocations must be resolved during the course of individual project assessments, arguably leading to a more time-consuming procedure. Possibly, limited strategizing at the political level may also increase the possibilities for administrators to influence the content, methods and other parameters of individual projects. These findings suggest that the utility of some project extensions does not lie primarily in adjusting operational deadlines while waiting for results, but rather in providing the scope and time for a multi-project organization to address internal uncertainties or inconsistencies resulting from strategic vacuum. In this sense, the conclusions in this paper are akin to Stinchcombe and Heimer's (1985) postulation that "the analysis of administrative delays is really the analysis of delays in policy-making" (pp. 319-320).

A conclusion from this study is that project schedule modification can be described as a tool for coordination between the portfolio of time-limited commitments and the longer-term goals and strategies of the studied organization. The need to synchronize project cycles with overarching policy-making processes was as a recurrent reason for Sida to adjust project scheduling. Interestingly, this reason also appeared as an internally legitimate justification of actively engaging in project quality enhancement, though the expressed intention was to outsource operational planning and implementation to external partners. In the last section of this paper, I draw these conclusions into a general discussion about the challenges of projectified politics, notably the dilemma of how to reconcile short-term efforts with lasting results and the question of which role the political administration should take on to maximize the quality of intervention results.

Implications in the context of projectified politics

The use of temporary economic incentives to reach specific goals is an increasingly popular form of organizing public policy. A growing plethora of public agencies are administering project grants aimed at various target groups. A main argument behind the imposition of time limits in the provision of financial support is that it enables objectives to be reached more efficiently and effectively. At the same time, that projects are defined by clear organizational and temporal boundaries is also seen to facilitate the designation of responsibilities and measurement of results.

Formally, funding agency decisions on whether to conclude or prolong the period of financing should rest on an individual assessment of the feedback from each funded project. This study, however, has shown that the temporariness of incentives is in part decided by political rather than project-specific criteria. At the studied agency, ambiguities in overarching political strategizing arguably increased the amenability of project schedules. While most donors oppose the idea of perpetual support to individual recipients, national policies more often than not signal a continuous commitment to aid provision in general. The incongruity between the temporal logics applying to the operational and strategic processes within aid administration may partly explain the vagueness regarding the appropriate time horizons and levels of rigidity according to which time limits should be imposed. Simply put: as long as aid projects are funded as part of the portfolio of a continuing umbrella organization, their outcomes will inevitably be affected by the longer-term policies by which this organization abides.

These findings are especially relevant with regard to the recent calls for a better understanding of the interrelationships between temporary policy interventions and longer-term organizational goals and strategies. While the discussions on the pros and cons of the project model seem so far to have been more located in development aid than within most other (national) policy areas, there is reason to expect that the problem description put forward in this paper is valid also for other public agencies with similar functions in project funding and administration.

As the conclusions presented above were drawn from the empirical study of one specific multi-project organization, it is evident that more research is needed to validate the stability of the results across other types of organizations. In particular, it would be relevant to study public bodies that use a wider variety of policy tools, and where the meaning and importance of intervention "timing" may differ significantly from that of Sida. It would also be interesting to compare this study's findings with other sectors where temporary economic incentives are in use, but where views differ on the appropriate role of the public administration in affecting the content and design of interventions. In arguing that funding agency influence on project plans is directly linked to the issue of how (and when) the administration can add value, this paper may prompt discussion not only about the hidden impact of civil servants' work, but also the hidden

potential that such work has for raising the quality and sustainability of public project outcomes.

On this note, an interesting venue for future research would be to compare the risk of impact/opportunities for contribution of the political administration under the different models by which time-limited public financing is offered (e.g. competitive tendering according to specified criteria, periodic calls for project proposals, ad-hoc assessment and granting, etc.). This may include variations in the importance given to the project tool in relation to other tools for pursuing political goals and strategies. It may also be of interest to contrast instances in which the underlying political mandate is in itself time-limited, with cases in which projects are financed in view of a more permanent political objective.

Finally, the study presented here may also have implications for the evaluation of temporary policy interventions. My observations highlight how a superficially simple and clear-cut measure of performance such as project delay can have ambiguous interpretations when considered in a multi-level context. Flexible deadlines provide opportunities for organizations to accommodate unexpected occurrences during project implementation. However, one conclusion from this study is that in a politicized context an equally important trigger for reschedulings is found in the administrative challenges that lie outside of specific project tasks. At the studied agency, a variety processes whose nature can be described as either exploitative (aiming at the completion of original project plans) or explorative (opening up for adjustments of plans to accommodate higher-level policies) were found to lead up to the uniform outcome of project duration extension. Consideration of such equifinality may be vital to include in future evaluations of the effectiveness and efficiency of projectified politics.

References

Atkinson, Roger (1999) Project management: cost, time and quality, two best guesses and a phenomenon, its time to accept other success criteria, *International Journal of Project Management,* 17 (6): 337-342.

Bensaou, Ben M. & N. Venkat Venkatraman (1995) Configurations of interorganizational relationships: A comparison between US and Japanese automakers, *Management Science,* 41 (9): 1471-1492.

Bowen, Michael G. (1987) The escalation phenomenon reconsidered: Decision dilemmas or decision errors?, *Academy of Management Review,* 12 (1): 52-66.

Brockner, Joel (1992) The escalation of commitment to a failing course of action: Toward theoretical progress, *Academy of Management Review,* 17 (1): 39-61.

Cox, David R. (1972) Regression models and life tables, *Journal of the Royal Statistical Society,* 34: 187-222.

Cyert, Richard M. & James G. March (1963/1992) *A behavioral theory of the firm*, Prentice Hall, Englewood Cliffs.

Drummond, Helga (1996) *Escalation in decision-making: The tragedy of Taurus*, Oxford University Press, New York.

Ekstedt, Eskil, Rolf A. Lundin, Anders Söderholm, & Hans Wirdenius (1999) *Neo-industrial organising*, Routledge, London.

Engwall, Mats (1995) *Jakten på det effektiva projektet*, Nerenius & Santérus, Stockholm.

Engwall, Mats (2002) The futile dream of the perfect goal, in Kerstin Sahlin-Andersson & Anders Söderholm (eds), *Beyond project management*, Liber, Stockholm.

Engwall, Mats & Anna Jerbrant (2003) The resource allocation syndrome: the prime challenge of multi-project management?, *International Journal of Project Management,* 21 (6): 403-409.

Eskerod, Pernille & Katarina Östergren (2000) Why do companies standardize project work, *Project Management,* 6 (1), 34-39.

Flyvbjerg, Bent, Nils Bruzelius & Werner Rothengatter (2003) *Megaprojects and risk: An anatomy of ambition*, Cambridge University Press, Cambridge.

Gareis, Roland (1989) Management by projects: the management approach for the future, *International Journal of Project Management,* 7 (4): 243-249.

Grabher, Gernot (2002) Cool projects, boring institutions: temporary collaboration in social context, *Regional Studies,* 36 (3): 205-214.

Hobday, Michael (2000) The project-based organisation: an ideal form for managing complex products and systems?, *Research policy,* 29 (7-8): 871-893.

Jensen, Christian, Staffan Johansson & Michael Löfström (2007) *Projektledning i offentlig miljö*, Liber, Malmö.

Kadefors, Anna (1995) Institutions in building projects: implications for flexibility and change, *Scandinavian Journal of Management,* 11 (4): 395-408.

Keil, Mark (1995) Pulling the plug: software project management and the problem of project escalation', *MIS Quarterly,* 19 (4): 421-447.

Keil, M., & Montealegre, R. (2000) Cutting your losses: Extricating your organization when a big project goes awry, *Sloan Management Review,* 41 (3): 55-68.

Krohwinkel-Karlsson, Anna (2008a) *Lär sig Sida mer än förr? En jämförande studie av attityderna till lärande inom Sida idag och för tjugo år sedan*, Swedish Agency for Development Evaluation, Karlstad.

Krohwinkel-Karlsson, Anna (2008b) *The soft time constraint: Studies of project extension within an aid agency*, Stockholm School of Economics, Stockholm.

Krohwinkel-Karlsson, Anna (2009) *Oändliga projekt? Om projektförvaltningens tidsproblematik*, EFI, Stockholm.

Lindkvist, Lars (2004) Governing project-based firms: promoting market-like processes within hierarchies, *Journal of Management and Governance*, 8 (1): 3-25.

Lundin, Rolf A., & Anders Söderholm (1995) A theory of the temporary organization, *Scandinavian Journal of Management,* 11 (4): 437-455.

Midler, Christophe (1995). "Projectification" of the firm: the Renault case, *Scandinavian Journal of Management,* 11 (4): 363-375.

Miller, Danny, Peter H. Friesen & Henry Mintzberg (1984) *Organizations: A quantum view,* Prentice-Hall, Englewood Cliffs.

Morgan, David L. (2007) Paradigms lost and pragmatism regained, *Journal of Mixed Methods Research,* 1 (1): 48-76.

Morris, Peter W. G. & George H. Hough (1987) *The anatomy of major projects: A study of the reality of project management*, Wiley, Chichester.

Murphy, Kathleen J. (1983) *Macroproject development in the Third World: an analysis of transnational partnerships*, Westview Press, Boulder.

Mähring, Magnus & Mark Keil (2008) Information Technology Project Escalation: A Process Model, *Decision Sciences*, 39 (2): 239-272.

Naudet, Jean-David (2000) *Finding problems to fit the solutions: Twenty years of aid to the Sahel*, OECD, Paris.

OECD (1989) Sustainability in development programmes: A compendium of evaluation experience, *Seleced Issues in Aid Evaluation 1,* OECD, London.

Odén, Bertil (2006) *Biståndets idéhistoria: Från Marshallhjälp till millenniemål*, Studentlitteratur, Lund.

Packendorff, Johan (1995) Inquiring into the temporary organization: New directions for project management research, *Scandinavian Journal of Management,* 11 (4): 319-333.

Patton, Michael Q. (1988) Paradigms and pragmatism, in David M. Fetterman, *Qualitative approaches to evaluation in education,* Sage, Newbury Park.

Payne, John H. (1995) Management of multiple simultaneous projects: a state-of-the-art review, *International Journal of Project Management,* 13 (3): 163-168.

Pinto, Jeffrey K & John E. Prescott (1988) Variations in critical success factors over the stages in the project life cycle, *Journal of Management,* 14 (1): 5-18.

PMI (2004) *A guide to the project management body of knowledge*, Project Management Institute, Upper Darby.

Ragin, Charles C. (1987) *The comparative method: Moving beyond qualitative and quantitative strategies*, University of California Press, Berkeley.

Ragin, Charles C. (2000) *Fuzzy-set social science*, University of Chicago Press, Chicago.

Ragin, Charles C., & Bradshaw, York W. (1991) Statistical analysis of employment discrimination: A review and critique, *Research in Social Stratification and Mobility,* 10: 199-228.

Rihoux, Benoît (2006) Qualitative Comparative Analysis (QCA) and related systematic comparative methods, *International Sociology,* 21 (5): 679-706.

Ross, Jerry & Barry M Staw (1993). Organizational escalation and exit: Lessons from the Shoreham nuclear plant, *Academy of Management Journal,* 36 (4): 701-732.

Sahlin-Andersson, Kerstin & Anders Söderholm (2002) *Beyond project management: New perspectives on the temporary-permanent dilemma*, Liber, Stockholm.

Sida (2005a) *Sida at work: a guide to principles, procedures and working methods*, Swedish International Development cooperation Agency, Stockholm.

Sida (2005b) *Sida at work: a manual on contribution management*, Swedish International Development cooperation Agency, Stockholm.

Staw, Barry M. (1976) Knee-deep in the big muddy: a study of escalating commitment to a chosen course of action, *Organizational Behavior and Human Performance,* 16 (1): 27-44.

Staw, Barry M. & Jerry Ross (1978) Commitment to a policy decision: A multitheoretical perspective, *Administrative Science Quarterly,* 23 (1): 40-64.

Staw, B. M., & Ross, J. (1987) Behavior in escalation situations: Antecedents, prototypes, and solutions, *Research in organizational behavior,* 9: 39-78.

Stinchcombe, Arthur L. & Carol Heimer (1985) *Organization theory and project management: Administering uncertainty in Norwegian offshore oil*, Norwegian University Press, Oslo.

Sydow, Joerg, Lars Lindkvist, & Robert DeFillippi (2004) Project-based organizations, embeddedness and repositories of knowledge: Editorial, *Organization Studies,* 25 (9): 1475–1489.

Tashakkori, Abbas & John W. Creswell (2007) Editorial: Exploring the nature of research questions in mixed methods research, *Journal of Mixed Methods Research,* 1 (3): 207-211.

Whitley, Richard (2006) Project-based firms: new organizational form or variations on a theme?, *Industrial and Corporate Change,* 15 (1): 77-99.

Wikström, Kim (2000) *Det aldrig återupprepades teori: tankar och idéer om industriella projekt*, Åbo akademis förlag, Åbo.

Williams, Terry M. (1995) A classified bibliography of recent research relating to project risk management, *European Journal of Operational Research*, 85 (1): 18-38.

Williams, Terry M. (1999) The need for new paradigms for complex projects, *International Journal of Project Management,* 17 (5): 269-273.

Notes

[1] The data presented in this study was originally collected as part of my dissertation "The Soft Time Constraint: Studies of project extension within an aid agency" (Krohwinkel-Karlsson 2008b). The framing and analysis in this paper, however, extends from the more narrow focus of the dissertation on timing issues in development aid in particular.

[2] Out of the studied projects, about half had been completed later than originally planned, or were operating beyond their original timetable. The mean extension time was just below the average duration of project agreements (around 14 months). This means that once projects are extended, they tended to survive about twice as long as initially planned.

[3] The results of the survival analysis should be interpreted as follows, taking one of the control variables as an example: The 6th row of table 1 presents the statistics for the variable Original_Project_Size when entered into the Cox model. The coefficient for Original_Project_Size is -

0.005, with an observed significance at the 1 per cent level. The negative sign of the coefficient indicates that the variable is related to increased survival times; that is, projects with larger initial investment amounts were more likely to be extended than smaller projects. The column labeled Exp(B) represents the ratio of the hazard rate for cases that are one unit apart in terms of the values od theindependent variable. For example, a SEK 1 million increase in Original_Project_Size decreases the likelihood of timely termination by 0.5 per cent, since the ratio of the hazard rate for cases that are SEK 1 million apart is 0.995. For covariates that are dichotomous, Exp(B) is simply the ratio of the estimated hazard rate for a case displaying the characteristic, to a case without the characteristic.

[4] The test statistic is calculated as 2(LogLik(overall model) – LogLik(reference model)) and follows approximately a chi-square distribution with m degrees of freedom, where m is the number of additionally included covariates.

[5] A comparison of the sample characteristics (variable mean values) between the studied sample and a random sample of similarly large and long (and delayed) projects drawn from the population studied in phase one revealed no significant differences.

[6] In statistical terms, the method starts with a group of attributes (X1, X2, … , Xn) and an outcome Y. For example, if Y occurs when both X1 and X2 are present simultaneously but X3 is not, this relationship is expressed as Y = X1 AND X2 BUT NOT X3.

[7] The chi-square test is a nonparametric procedure for assessing the observed frequencies in a specified number of categories against the null hypothesis that observations are equally distributed between the categories. The applied test shows that there is strong statistical evidence (about 95 per cent certainty) that the attribute combination Strategic_Agreement BUT NOT Strategic_Country is more common among projects in the Administrative extension group than among projects in the two other functional groups taken together.