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Bos-de Vos, Marina; Volker, Leentje; Wamelink, Hans

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Marina, M. Bos-de Vos* (corresponding author)[1]
Department of Management in the Built Environment
Faculty of Architecture and the Built Environment
Delft University of Technology
Julianalaan 134
2626 BL Delft, the Netherlands
m.bos-devos@tudelft.nl

Leentje, L. Volker[2]
Department of Management in the Built Environment
Faculty of Architecture and the Built Environment
Delft University of Technology
Julianalaan 134
2628 BL Delft, the Netherlands
l.volker@tudelft.nl

Hans, J.W.F. Wamelink
Department of Management in the Built Environment
Faculty of Architecture and the Built Environment
Delft University of Technology
Julianalaan 134
2628 BL Delft, the Netherlands
j.w.f.wamelink@tudelft.nl

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[1] Present address: Department of Product Innovation Management, Faculty of Industrial Design Engineering, Delft University of Technology, Landbergstraat 15, 2628 CE Delft, the Netherlands
[2] Present address: Faculty of Engineering Technology, University of Twente, Drienerlolaan 5, 7522 NB Enschede, the Netherlands, l.volker@utwente.nl

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Enhancing value capture by managing risks of value slippage in and across projects

Abstract

Project-based firms have to capture value from the projects in which they engage. This can be challenging as firms need to reconcile project goals and organizational goals while attempting to avoid the slippage of value to other actors. Drawing on interviews with architects and clients, this research reveals how architectural firms used the strategies of *postponing financial revenues in a project*, *compensating for loss of financial revenues across projects* and *rejecting a project* to accept or mitigate the slippage of financial value, and to avoid the potential slippage of professional value in projects. With these strategies firms attempt to enhance their overall benefits. The study contributes to the literature on project business by showing how a more nuanced conceptualization of value slippage is particularly helpful to theoretically explain and practically manage the value capture of project-based firms through both single project and project portfolio decisions.

Keywords

Architectural firms; portfolio management; project business; value capture; value slippage.

1.   Introduction

Project-based firms often encounter difficulties when attempting to capture value from the products and services that they deliver. Not only may their opportunities to capture value in a project be highly unpredictable and uncertain (Nightingale et al., 2011); value may also be captured by project-partners or other stakeholders over time and can easily slip away from the firm (Chang et al., 2013). Value capture, which is commonly defined as the difference between the revenues and the costs retained by a firm (Bowman and Ambrosini, 2000), is fundamental for businesses to survive (Teece, 2010; Zott et al., 2011). It has been argued that value slippage needs to be limited or avoided in order to enhance value capture and protect the profitability and viability of a firm in the long term (Lepak et al., 2007; Chang et al. 2013). This makes managing potential value slippage in projects a key business challenge for all project-based firms.

So far, there is little empirical evidence that explains how project-based firms manage value slippage risks in their projects to enable value capture (Laursen and Svejvig, 2016; Martinsuo et al., 2017). In their review of the literature on project value and benefits, Laursen and Svejvig (2016) identified four studies that address value capture of project-based firms. Only Chang et al. (2013) present empirical material that specifically makes a connection to value slippage. Laursen and Svejvig (2016) argue that a focus on value capture may help firms 'to move beyond the fairly simplistic understanding of benefits realization that seems to be ruling at the moment' (p. 744) and navigate the complexities of their daily project work. To assist firms in succesfully adopting a value capture focus, it is important to understand the process of value capture by these firms, including the challenges and opportunities related to the management of value slippage. This paper adresses this specific gap in the literature.

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In this research we aim to develop insights into how project-based firms manage value slippage in a broad range of project contexts to gain a better understanding of the value capture process of these firms and how it can be enhanced. Project-based firms differ considerably from other types of organizations, as they are specialized in delivering customized products and services for unique projects, rather than operating on the basis of repetitive production or routine activities (Artto and Kujala, 2008; Whitley, 2006). This requires them to explore different ways of capturing value across projects (Bos-de Vos, 2018; Nightingale et al., 2011). Moreover, project-based firms do not only depend on the capture of monetary value, but also on the creation and capture of non-monetary dimensions of value, such as project quality, client satisfaction, knowledge development, knowledge sharing and enjoyment, to realize sustainability in the long-term (Bos-de Vos et al., 2016; Eskerod and Riis, 2009; Martinsuo and Killen, 2014; Pinto et al., 1998). Hence, theories of value capture and value slippage that have been developed in the field of strategic management to explain profit generation by firms (e.g. Bowman and Ambrosini, 2000; Lepak et al., 2007; Pitelis, 2009) may fall short when trying to develop an understanding of the complex, multidimensional value capture processes of project-based firms.

Inspired by recent project portfolio management literature (e.g. Martinsuo, 2013), we investigate how firms manage value slippage in projects in relation to their project portfolio. A project portfolio perspective helps to oversee the broader scope of interdependent risks and opportunities across projects and to understand how responses in one project can contribute to the overarching business (Martinsuo, 2013; Olsson, 2008; Petit, 2012). Taking the firm as the level of analysis and the project as the unit of analysis, this study answers the following research question: *How do project-*

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based firms manage value slippage in projects and how are their strategies related to project portfolio decisions?

An exploratory interview approach was chosen as the method of inquiry. The field of architectural design served as the empirical setting. Due to the creative design element, the involvement of architectural firms in construction projects presents a particularly interesting context to study value slippage responses of project-based firms. Value is not known in advance but co-created during the project (Gillier et al., 2015). This often results in a plethora of value-related tensions and value slippage risks that need to be dealt with both in the interaction with other parties involved (Bos-de Vos et al., 2016) and in the firm (Martinsuo and Killen, 2014).

Results from 40 interviews with architects and clients reveal that architectural firms use three different strategies to respond to potential value slippage in their projects: *postponing financial revenues in a project, compensating for loss of financial revenues across projects* and *rejecting a project.* These show that firms sometimes intentionally *risk* or *accept financial value slippage* as it can be beneficial for firms in the longer term, and may dismiss projects in an attempt to avoid potential slippage of professional value.

This study contributes to the literature on project business (Artto and Kujala, 2008; Artto and Wikström, 2005; Kujala et al., 2010) in two significant ways. First, it adds to the theory development for value capture in project-based firms (Chang et al., 2013), Laursen and Svejvig, 2016) by providing an extended and more nuanced conceptualization of value slippage. Our study shows that value slippage is multidimensional and does not always need to be avoided, as has been pointed out in earlier research (Chang et al., 2013; Lepak et al., 2007). It needs to be managed consiously by firms to strenghen their value capture strategies. We argue that existing

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theories of value capture must be extended to encompass the dynamics involved in project business. Second, the study adds to the literature on portfolio management (e.g. Martinsuo, 2013; Olsson, 2008; Petit, 2012; Teller and Kock, 2013) by presenting a link between professional value and portfolio choices, thereby creating a broader picture of benefits capture and risk assessment in portfolios. We suggest that research on portfolio management may be enriched by further investigations of value capture and value slippage in and across projects from the perspective of multiple value dimensions. We further propose that project-based firms should consciously engage in identifying and responding to potential value slippage in their projects to strengthen their value capture strategies, manage these well over time, and enhance the benefits for both project and firm.

This paper is organized as follows. We first present a review of the literature, with a focus on value capture by project-based firms, value slippage and managing risks in project portfolios. In the subsequent section, the research methods, including the empirical setting, data collection and data analysis are presented. The results section then presents the three strategies that were used by architectural firms to respond to potential value slippage in projects. We conclude with a discussion of the original contributions to the literature on project business, drawing attention to the managerial implications of our research and addressing some limitations and directions for future research.

2.   Literature review

2.1.   Value capture

Value capture refers to the process by which firms retain a part of the value that they create (Zott and Amit, 2010). It is also referred to as value appropriation (e.g. Burkert et al., 2017; Mizik and Jacobson, 2003). In an organizational context, Pitelis (2009, p. 1118) defines value as 'the perceived worthiness of a subject matter to a socio-economic agent that is exposed to and/or can make use of the subject matter in question'.

Thus far, the research on organizational value capture that has been conducted in the field of strategic management focuses on profit generation by goods-producing or entrepreneurial firms (e.g. Lepak et al., 2007; Pitelis, 2009). In these studies, value capture is commonly defined as the difference between a firm's revenues and costs, and is conceptualized as the exchange of the utility of a good or service for money at a certain moment in time (Bowman and Ambrosini, 2000; Mol et al., 2005). This is often referred to as the exchange of 'use value' for 'exchange value' (Bowman and Ambrosini, 2000; Vargo et al., 2008). Bowman and Ambrosini (2000) define use value as the customer's subjective perception of the qualities or utility of a firm's activities, products or services. Exchange value is the price that the customer pays to the firm for these activities, products or services at the moment of exchange (Bowman and Ambrosini, 2000). Within this conceptualization of value, the value that is created consists of a certain quality and utility, while the value that is captured by the firm is purely monetary.

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2.2. Value capture of project-based firms

In the field of project management, value capture has only recently gained attention as a phenomenon that is important to study (Chang et al., 2013; Laursen and Svejvig, 2016). Scholars have explicitly called for more research on value capture in a project context, as the process is distinct from the process of value creation and may add new insights to the understanding of value management in projects and how project-based firms work (Laursen and Svejvig, 2016; Martinsuo et al., 2017).

Value capture studies are also relevant because project-based firms frequently encounter difficulties when attempting to capture value in their projects (Chang et al. 2013). Firms do not only need to manage value at project, portfolio, business and network levels (Martinsuo and Killen, 2014), they also have to anticipate unknown outcomes (Gillier et al. 2015). Nightingale et al. (2011, p. 226) argue that the value capture of these firms 'is often strongly influenced by uncertain and unpredictable future events' requiring firms to 'anticipate how to execute the project, how it will be valuable to the customer, how to appropriate value and how to disappropriate risks'. Projected or intended outcomes may be different than the value that is actually realized and captured. This makes it difficult to create a 'healthy' balance between use value and exchange value; especially since the multiple actors involved in a project all pursue different goals and have different perceptions of worth (Chang et al., 2013; Söderholm, 2008).

As value creation and capture goals may diverge across levels, project-based firms are often confronted with trade-offs between different values when pursuing value capture in a project-based interaction with a client (Bos-de Vos et al., 2016). Similar value trade-offs can exist within the firm considering that projects are not only the means by which project-based firms generate financial revenues (Arvidsson, 2009),

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but are also used to attain other, possibly competing, strategic objectives (Martinsuo and Killen, 2014). Firms largely depend on the creation and capture of non-monetary dimensions of value to reach organizational sustainability in the longer term. Examples of non-monetary value dimensions that have been discussed in project management literature include project quality, client satisfaction, learning and knowledge development, knowledge sharing, societal influence and enjoyment (Bos-de Vos et al., 2016; Eskerod and Riis, 2009; Martinsuo et al., 2014; Pinto et al., 1998; Thomas and Mullaly, 2007). Hence, project-based firms need to develop value capture strategies that enable them to reconcile different values within and across projects.

2.3. Value slippage

Because of the complexity and dynamics involved in the project-based value capture process, value may easily slip from one actor to another. Lepak et al. (2007) used the term 'value slippage' to explain why actors are not always able to capture the monetary equivalent of the value that they co-create. They argue that value slippage occurs in situations where the use value created is high but the exchange value is low. In these situations, clients or other stakeholders may benefit from the utility and/or quality of a product or service without adequate payment.

In line with Lepak et al. (2007), Chang et al. (2013, p. 1140) describe value slippage as 'a phenomenon that occurs when value is created but not captured [by the firm]'. The authors report findings from interview data with senior executives involved in Australian defence projects and present that other stakeholders outside the boundaries of the project also capture parts of the value that is created. They find that the newly created warships provide safety for naval personnel and peace of mind for the Australian public, even though these stakeholders were not actively involved in the

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value creation process. Svejenova et al. (2010) illustrated the concept of value slippage by reporting a case in which former employees and entrepreneurs made money by drawing inspiration, ideas and know-how from a chef and gastronomic innovator.

Especially the study of Svejenova et al. (2010) illustrates that value slippage can eventually be detrimental for a person or firm that creates value. Projects in which a firm has to bear the costs of value generation without being able to benefit from it financially may severely jeopardize firm profitability and viability (Chang et al., 2013; Lepak et al., 2007). Chang et al. (2013, p. 1140) therefore argue that value capture 'needs to be managed appropriately to avoid "value slippage"'. But how project-based firms should engage in such management is not clear. Specific insights into how practitioners manage risks of potential value slippage in their daily project work and the results of their strategies is needed to understand how value slippage may affect the value capture of firms, and to provide handles for managing the value capture process adequately.

2.4. Managing risks in project portfolios

Managing risks or uncertainties in projects has been a key point of attention in project management research (e.g. Ward and Chapman, 2003). In line with Petit (2012) we focus on risk management instead of the broader concept of uncertainty management. We adopt the definition as provided by Petit (2012, p. 540), and use the term 'risk' to refer to 'an uncertain event which might have positive effects (opportunities) or negative effects (threats)'. A risk can either be accepted or managed by using strategies of avoidance, transfer or mitigation (Project Management Institute, 2008). In risk avoidance, the risk is circumvented, for example, by terminating a project; risk

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transfer refers to a third party taking over the responsibility for the risk; and risk mitigation involves decreasing the probability or impact of the risk (Teller and Kock, 2013).

Existing literature on risk management in projects covers a broad range of risks, including risks related to cost, planning and quality from the traditional 'iron triangle' perspective on project success. Although a more value-centric view of projects has been propagated to better understand project business (Winter et al., 2006, Winter and Szczepanek, 2008), the management of value-related risks in projects remains relatively invisible. The management of value slippage has not yet been explored. Scholars do increasingly adopt a portfolio-wide perspective to study risk management, thereby contributing to the understanding of the interrelations between individual projects and firm portfolios (Teller and Kock, 2013).

Empirical work in this area indicates that portfolio management can help to oversee a potentially broader scope of risks beyond the project and deal with that in an appropriate manner. For example, Olsson (2008) found by means of an action research in a transport solutions firm that a portfolio approach can identify common risks and trends that transcend a single project, which may be important to consider from a business perspective and in future projects. In the study of Petit (2012), investigations of four project portfolios in two firms indicated that the management of portfolios facilitated processes and structures to mitigate the impact of different types of foreseen uncertainties on the performance of the organization.

These studies show how firms may benefit from managers that are able to navigate the complex web of interdependencies between projects and between the project and the firm. Theories and integrative frameworks that assist managers in dealing with the complexities of their daily project work are of great value in this

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respect. In the area of value capture these means are still lacking, due to the fact that scholars have only recently started to investigate value capture in a project context (Chang et al., 2013; Laursen and Svejvig, 2016). This research aims to provide input for theory development of project-based value capture by generating insights into how project-based firms manage risks of value slippage in projects and exploring how their strategies relate to the wider project portfolio.

3. Research methods

An exploratory qualitative approach was chosen due to its ability to gain insight into phenomena for which plausible existing theory and empirical evidence are lacking (Bluhm et al., 2011; Edmondson and Mcmanus, 2007), which is the case for value slippage management by project-based firms. Architectural firms involved in construction projects served as the empirical setting for the study. This type of firm primarily rely on various one-off projects as the basis of a successful business (Hobday, 2000; Turner and Keegan, 2000) and thus need to capture value in these projects for their survival. The project served as the unit of analysis to arrive at insights at the firm level. The unit of observation are individuals within architectural firms and client firms.

3.1. Empirical setting

Due to the background of the authors, this research was conducted in the Netherlands. Over the past few years, many organizations that are involved in the Dutch construction industry have either proactively changed or been forced to change their service delivery (Koolwijk et al., 2018). Contextual developments, such as the global economic recession of 2008, an increase in the procurement of integrated project deliveries, and

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the rise of new technologies, such as Building Information Modelling (BIM) and 3D printing, have challenged architectural firms to rethink the way they create and capture value in projects (e.g. Schoorl, 2011; Van Doorn, 2014). As a result, firms are confronted with new dynamics and challenges in their value capture processes.

Architectural firms have diverse strategic orientations, which influence how firms attempt to capture value in projects (Winch and Schneider, 1993). We adopt the categorization developed by Winch and Schneider (1993), distinguishing between strong-delivery firms, strong-experience firms, strong-idea firms and strong-ambition firms. Strong-delivery firms focus on 'delivering designs for relatively simple building types at less than average fees, but at a relatively high level of profitability through effective organization of the design process' (Winch and Schneider, 1993, p.471). Strong-experience firms deploy their experience for delivering high quality end-results for complex assignments. They 'can charge a premium on average fees, because their contribution to the project overall releases value for the client' (Winch and Schneider, 1993, p.471). Strong-idea firms focus on conception instead of realization. These firms 'can charge a premium on fees because of their reputation as architects within the profession for original and exciting ideas' (Winch and Schneider, 1993, p.471). Finally, strong-ambition firms are newly founded practices that are characterized by their high ambitions and limited amount of clients. These firms typically have to charge 'below average fees due to lack of reputation' and may also subsidize practice through engaging in other activities such as teaching. Strong-ambition firms ultimately transition towards one of the other categories as this strategy is not sustainable in the longer term (Winch and Schneider, 1993, p.471).

The values that architectural firms attempt to capture in projects are multidimensional and can be subdivided into monetary and non-monetary values.

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Building on the work of Bowman and Ambrosini (2000), we use the notion of 'exchange value' to refer to the monetary values (i.e. income, profit) that firms aim to capture in exchange for their products and/or service delivery. The notion of 'professional value' is used to refer to 'the qualities or utility of an activity, product or service perceived by [architectural firms] in relation to their needs, for example the aesthetics of a realized building or the expertise developed from the involvement in a certain type of project' (Bos-de Vos et al., 2016, p. 23). Professional values are important for realizing the firm's professional goals, such as building and maintaining a peer, market and expert reputation (Boutinot et al., 2015) or further developing the firm expertise and skills. In our previous study on architectural firms we proposed a framework of three overarching professional value capture goals: 'reputation, 'development', and 'work pleasure', which each represent multiple professional values. For example, prestige and project quality contribute to reputation, knowledge and innovation to development, and joy and appreciation to work pleasure.

Capturing value in construction projects is highly complex, as value is not determined in advance but designed during the project (Gillier et al., 2015) and the many actors involved often have diverging goals (Matinheikki et al., 2016; Van Marrewijk et al., 2016). The value capture of architectural firms is further complicated by the constant tension between realizing the own creative, professional and commercial goals (Løwendahl, 2005; Maister, 2012) and fulfilling different client, stakeholder and societal demands in projects. The fact that architectural firms are typically not in the position to design or influence the project's value co-creation process (Lieftink and Bos-de Vos, 2017; Manzoni and Volker, 2017), also complicates their value capture.

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3.2. Data collection

Semi-structured interviews were used as the method of data collection (Brinkman and Kvale, 2015). We chose to sample a broad selection of architectural firms that were involved in diverse projects in order to search the data for overarching patterns across firms, which were not exclusive to any particular project context. Using the purposeful sampling strategy of 'maximum variation' (Patton, 2005), we selected architectural firms with diverse strategic orientations (the sample includes several strong-delivery, strong-experience, strong-idea and strong-ambition firms), ages (firms were established between 1927 and 2013), sizes (firms consisted, at the time of the interview, of between 1 and 120 people) and geographic locations (firms had locations that were spread across the Netherlands).

In each interview a specific project was chosen to allow for gaining rich and concrete information on the value slippage management strategies of firms in that specific project. The projects in which the firms were involved differed in typology (projects included residential buildings, utility projects, hospitals, cultural buildings etc.), geographical location (project locations were spread across the Netherlands) and form of collaboration (projects included traditional and integrated project deliveries). All projects were ongoing for at least one year or were realized no longer than a year prior to the interview to ensure that the respondents were able to reflect on the value capture process.

We also conducted interviews with the clients in the project (clients represented public or semi-public clients, general contractors, and developers) and gathered archival documents, such as project descriptions, the firm mission and vision, and documentation on project outcomes, for validation purposes. In total, we conducted 25 interviews with architects and 15 interviews with their clients from January 2014 to

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January 2015. Table 1 provides an overview of the interview data that were collected. The interviews with architects are designated A1 to A25, the interviews with clients C3 to C25.

Table 1. Overview of interview data

Architect interview	Strategic orientation firm	Type of project	Form of collaboration	Type of client	Client interview
A1	Strong-delivery	Residential/utility building	Traditional	Developer	-
A2	Strong-delivery	Educational building	Integrated	Public / semi-public client	-
A3	Strong-experience	Hospital	Traditional	Public / semi-public client	C3
A4	Strong-experience	Educational building	Traditional	Public / semi-public client	C4
A5	Strong-experience	Hospital	Integrated	Public / semi-public client	-
A6	Strong-experience	Cultural building	Integrated	Contractor	C6
A7	Strong-ambition	Office building	Integrated	Private client	-
A8	Strong-idea	Residential/retail building	Traditional	Developer	-
A9	Strong-ambition	Cultural building	Traditional	Public / semi-public client	-
A10	Strong-experience	Sports facility	Traditional	Private client	-
A11	Strong-idea	Office/utility building	Integrated	Contractor	C11
A12	Strong-ambition	Cultural building	Traditional	Public / semi-public client	-
A13	Strong-experience	Urban area development	Integrated	Contractor	C13
A14	Strong-ambition	Office building	Integrated	Private client	-
A15	Strong-ambition	Residential building	Integrated	Private client	-
A16	Strong-experience	Residential building	Integrated	Contractor	C16
A17	Strong-experience	Residential/utility building	Traditional	Developer	C17
A18	Strong-experience	Residential building	Traditional	Public / semi-public client	C18
A19	Strong-experience	Residential/care building	Integrated	Contractor &	C19a
				public / semi-public client	C19b
A20	Strong-experience	Residential building	Traditional	Developer	C20
A21	Strong-experience	Residential building	Traditional	Contractor	C21
A22	Strong-experience	Urban area development	Traditional	Public / semi-public client	C22
A23	Strong-experience	Residential building	Traditional	Public / semi-public client	-
A24	Strong-experience	Residential building	Traditional	Public / semi-public client	C24
A25	Strong-idea	Residential/retail building	Integrated	Developer	C25

The 40 interviews were held at the interviewees' offices, they lasted between 45 and 120 minutes and were audio-recorded and transcribed verbatim. The interviews were all conducted by the first author. The other authors were present in several of

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these interviews to develop a common understanding of the topic under investigation. During the interviews we focused on asking truly open-ended, singular and neutral questions to encourage our respondents to talk freely about the topics of interest and avoid the imposition of predetermined responses (Patton, 2002).

A semi-structured interview guide was used (Patton, 2002), dividing the interviews into three parts. In the first part of each interview, we asked for information about the respondent, the firm, the project and how the architectural firm became involved in the project. Our introductory questions served to make the respondent feel comfortable, which we considered important for encouraging openness. In the second part, we explored the content of value co-creation and value capture in the project by focusing on the project goals, the goals of the firm in the project and to what extent the respondent felt that these project and organizational goals had been reached. We also asked architects to which extent they thought the organizational goals of the client were reached and vice versa. Asking this question to both parties allowed us to, already during the interviews, cross-validate actors' responses. Thirdly, we focused on the value capture process of the architectural firm in the project by questioning architects about how they had attempted to realize their strategic goals in the project and how they felt enabled or constrained in this process. We asked them to give specific examples to describe what had occurred and how they had responded. We also encouraged the respondents to contrast their activities in the specific project to other projects and discuss firm-level implications of their activities. Clients were asked questions about the same situations to gain additional detail from a client perspective. Comparing the accounts of both architect and client also allowed us to assess the accuracy of the answers given.

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3.3. Data analysis

The data analysis consisted of three iterative steps in which we continuously alternated between empirical data and literature to elaborate existing theory (Bluhm et al., 2011). The software program MAXQDA was used as a supporting tool. The transcripts of the architect interviews were used as the primary data source for the analysis. The transcripts of the client interviews and archival documents were used for validation purposes. They were consulted throughout the analysis process to see whether they supported or refuted emerging results. Preliminary results were discussed monthly with the larger group of researchers involved in this study, as well as with a group of architects and clients. These dialogic engagement practices were crucial to limit our biases and strengthen the validity of our results (Ravitch and Carl, 2015).

The first step in the analysis aimed at identifying situations in which the value capture process of architectural firms was discussed. We went through the interviews with architects line-by-line looking for specific actions and decisions that were related to the architect's value capture in the project. We used the overarching value capture goals 'reputation', 'development', 'work pleasure' and 'money', as well as the underlying values that may contribute to these goals (see Bos-de Vos et al., 2016, p.26) as a guide to identify situations in which interviewees talked about value capture and remained open to any potential additions to the framework. The resulting codes included, for example, 'accepting work for cost price', 'desire to build a reputation', 'fear of damaging client relationship' and 'initiating work to expand project portfolio'.

In the second step, we looked for patterns of relationships between the situations (Eisenhardt and Graebner, 2007), focusing on occurrences of value slippage and how these were responded to by firms. Inspired by the work of Langley (1999), we decided to visualise the value capture process for each situation that was identified in

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step 1, taking into account the value capture related activities, decisions and influences that were mentioned by our respondents (see Appendix, Figure 1 for an example). The resulting visual maps helped us to develop an understanding of how use value, exchange value and professional value – or actors' perceptions of these values – had evolved over the course of the project, and assisted us in moving from the raw data to a more abstract conceptualization (Langley, 1999). The second step of the analysis highlighted two types of value slippage-related risks that architects responded to: the risk of financial value slippage and the risk of professional value slippage. Further investigation revealed three types of tactics, which were used to manage the two value slippage risks and were initially labelled 'investing tactics', 'compensating tactics', and 'refusing tactics'. The investing tactics all revolved around taking the risk of financial value slippage in a project. Tactics underlying this category were coded 'moderating the investment in a project', 'increasing the investment in the project', and 'ensuring lock-in'. Compensating tactics were all used to accept financial value slippage in a project by relying on other projects. Underlying tactics were coded 'using a financial buffer to invest in a project', 'managing other active projects consciously', and 'negotiating profitability in other project'. The compensating and refusing tactics were chosen to avoid the slippage of professional value in a project. Refusing tactics consisted of the codes 'saying no to the client prior to commissioning', and 'withdrawing from an ongoing project'. The groups of tactics were ultimately categorized into three corresponding groups of value slippage management strategies, which we labelled as follows: 1) 'postponing financial revenues in a project', 2) 'compensating for loss of financial revenues across projects' and 3) 'rejecting a project'.

The third and final step focused on exploring the contextual conditions in which the different strategies were chosen and reasons underlying these choices. We made

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an overview that included additional information regarding the architectural firm (strategic orientation, age, size, location) and characteristics of the project (form of collaboration, type of client) for the different tactics that were found. The overview provided more contextualized information on by whom, when, and in which types of projects certain strategies were mostly used (see Appendix, Table 2 for a summary of our overview). By searching the interview transcripts carefully for phrases in which respondents explicitly and implicitly gave reasons for their behaviour – the latter by filtering out the Dutch equivalent of 'because', 'consequently', 'by means of' etc. – we were able to uncover information on why respondents considered using certain strategies, and in which ways they considered these strategies to be useful. In the results section, the three value slippage management strategies are presented in detail.

4.   Results

Architectural firms used three strategies to respond to the risk of value slippage: 1) postponing financial revenues in a project; 2) compensating for loss of financial revenues across projects, and 3) rejecting a project. Further examination of these strategies reveals that firms intentionally risked or accepted financial value slippage (i.e. a lower amount of exchange value than what they considered the generated use value to be worth) in projects by using the postponing and compensating strategies. They attempted to avoid the slippage of professional value (i.e. a lower amount of professional value than what they considered the generated use value able to realize) by using the rejecting strategy. In the sections below, we first describe the strategies and provide examples of the tactics used to carry out these strategies. We then present

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the underlying reasons of firms for pursuing the strategies. We conclude each section by discussing the implications for value capture and project portfolio management.

4.1. Strategy 1: Postponing financial revenues in a project

By postponing financial revenues in a project architectural firms invested money in the first phase of the project, aiming at capturing professional value and negotiating profitability of their financial investment in later phases of the project. Figure 2 illustrates how firms initially realized more use value (U) than the exchange value (€) they received in return. They accommodated their clients' need to keep the costs low in the initial phase. In both the initial project phase and the later project phases the use value (U) that was created by the architectural firm, also enabled the firm to capture professional value (P), which represented a key reason for firms to engage in this strategy. Thus, with the postponing strategy firms accepted that financial value slippage occurred in the first phase of a project. Although they aimed to reverse this slippage of financial value over the course of the project by increasing the exchange value in later phases, they took the risk of receiving less exchange value than the created use value was worth if the project did not continue. We therefore consider this a strategy with which architectural firms were *taking the risk of financial value slippage*.

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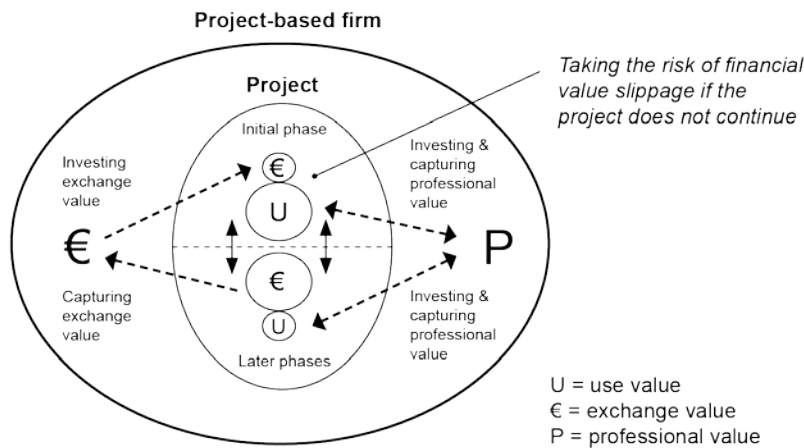
Figure 2. Postponing financial revenues in a project

4.1.1. *Examples of tactics used*

Moderating the investment in a project

The tactics that were used by architects to take the risk of financial value slippage in a project often revolved around attempts to moderate their investment in the project. A majority of architects mentioned negotiating revenue structures that either covered their expenses or would only lead to marginal losses during the first phase, and that would become profitable over the course of the project. For example, architects indicated to negotiate revenue structures that allowed a return-on-investment during the design or construction documentation phase. A few architects negotiated fees with different hourly rates per phase or revenues that grew when delivering a certain performance, such as creating more square metres in a project as explained by architect A21:

> It also happens that there is a dynamic fee. In these cases it is still unclear how many square meters of retail can be made. If we are able to realize additional retail area, our fee increases. It does not happen that often, but once in a while the client introduces a kind of 'push' […] and then we think: 'let's go for it'. So

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we start with a low fee and if we manage to make a lot of retail area, we end up with a high fee.

These architects also indicated to negotiate bonus structures based on specific incentives in a tender situation:

> We made an agreement with the contractor about a bonus. We would do the tender for cost price and if we won, we would receive a bonus. For them [it was] good because the work was initially cheaper. And for us [it was] good because we would get more with a bonus than what we would have if we had asked for our normal fee. (architect A13)

The excerpts above illustrate how some architects considered dynamic fees and bonus structures good ways to make up for the lack of sufficient financial revenues in the initial phase of a project. Moderating the investment in a project particularly occurred in commercial settings and tenders for large integrated projects, where 'general contractors realize that they need to pay [the architectural firm] if they wish to have a reliable partner for such a big tender' (architect A13). Most of the architects who specifically mentioned these kinds of revenue structures were actively applying the postponing strategy in their projects. They worked for different categories of firms. An architect of a strong-ambition firm, who did not have the intention to recoup his investment, unexpectedly received a bonus from the other actors involved in the project, as they considered his contribution to the project worth more than what he initially got paid. A few other architects saw potential in this way of doing business, but expressed to have trouble convincing other actors in the supply chain, or considered themselves as not being entrepreneurial enough. The above shows that the postponing strategy can be of interest to different kinds of firms, but needs to be seen as an acceptable way of doing business by the different actors that are involved in a project.

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Increasing the investment in the project

The results indicate that even when the conditions for value capture became more difficult, firms stuck to the strategy of postponing financial revenues by increasing their investment in the project. For example, most of the architects who used the postponing strategy mentioned that they had spent more time on a project despite the fact that they were unable to convince the client to pay for these extra efforts. Only occasionally this led to a renegotiation of the financial return in the proceeding phase of the project, as shown by an example of architect A13:

> At a certain time, we had to do something again and then something else. So, we said: 'There is no more money, we would love to do it but we had an agreement'. Well, then we eventually solved it without additional payment, by making our subsequent assignment larger if we won.

The excerpt illustrates how a few architects went along with the client's requests for additional work by negotiating an even greater return for the project's next phase. So although the costs were no longer covered, firms continued their work because of the potential future revenues. Hence, project-based firms may be willing to accept more financial risks and burdens in a project's first phase if they consider the chance to recover the outlays in subsequent phases of the job as realistic.

Ensuring lock-in

With the postponing strategy firms faced the risk that the project would not continue after the phase that they invested in. They thus needed to ensure lock-in so that they would indeed be commissioned for later project phases. While the architects who were involved in integrated project deliveries particularly aimed at making clear contractual

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arrangements with their clients, architect A21 attempted to ensure lock-in by acquiring work for non-professional clients:

> It mostly are clients who invest on behalf of pension investors or other wealthy parties. They are typically non-professional clients, who attempt to allocate as much responsibility as possible under one party. […] Then we started to clearly express [to these clients] that that [full responsibility over the design process] was our key quality. It not only makes the work more interesting and extensive, also with regard to volume, it also involves a business component.

Architect A21 and architects in other situations argued that convincing non-professional clients upfront of commissioning the architectural firm for the entire scope of activities allowed them to perform more interesting and financially attractive work. The data point out that the type of project and type of client influenced judgements about how beneficial or risky it could be for the firm to take the risk of financial value slippage in a specific project. While architects typically relied on the standard contracts when working directly for public and semi-public clients, or trusted in the power of the personal relationship when working with private customers, they often stressed the need for solid agreements with general contractors and developers, as these actors are focused on enhancing return on investment and are therefore more likely to replace the architect by another actor once a draft design has been developed.

4.1.2. Underlying reason

Ensuring professional continuity in commercial environments

The postponing strategy was mostly chosen in commercial settings and tenders for large projects as a means to ensure professional continuity. In tender situations, architectural firms were expected or asked by their clients to treat the initial assignment as an investment, even though the client had enough money to pay the architect an

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adequate fee. General contractors and developers seemed to believe that joint investments in tenders for integrated project deliveries represent crucial incentives to collaborating actors to give everything it takes to win a project. For example, developer C17 explained that he expected architectural firms to invest in a potential project, as they would automatically become part of the team in case of winning the tender. Although all architects expressed their dissatisfaction regarding the tough financial conditions that accompanied such tenders and attempted to be selective in the tenders in which they became engaged; they considered tenders to be necessary investments in future work. A majority of architects expressed how they considered postponing financial revenues in projects an opportunity to make money after the initial phase of investment and ensure the continuity of their firm:

> I am currently working on an offer in which we deliver services for a project for free but get a few hundred square meters property of that building. For example, an apartment or an office. In this project, we pre-invest in our entire scope of service delivery, but after that we will get an annual rental income of 50,000 euros for a period of 30 years. Well, if we would have ten of these projects, we would become a pretty stable firm. (architect A13)

The projects that architects engaged in by using the postponing strategy were also considered helpful for strengthening firm reputation and as a reference project for acquiring new work. Therefore, architects decided to invest money in the project's initial phase so that they could become involved in projects that they considered particularly worthwhile. Occasionally, architects helped their client to make an interesting project feasible by offering a lower fee:

> So, sometimes we say in an initial stage, 'Pay us half the hourly rate that we are asking; so, for an average fee of 100 euro, pay us 50 euro at this stage, but if it [the project] continues we want you to pay us 150 euro instead of 100 euro.' […] most of the time, those 50 euros cover our expenses, so we can just break even. But in that way, you

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> have to try to be inventive in how you persuade the client to cooperate in the exploration
> of a project and pay us for it. (architect A23)

By mentioning how architect A23 tried to 'persuade the client' in exploring a certain project, it is emphasized how, sometimes, architects proactively tried to get certain projects realized instead of merely clients asking them to be involved. So although most firms eventually required payment for their services, they were willing to co-invest and help the client initiating the project in order to acquire a new project. This indicates that firms deemed that the risk of financial value slippage in a project was particularly worthwhile when they considered the project an opportunity for future work that fitted well with their professional goals. Hence, firms deliberately chose to postpone financial revenues in projects that they found very interesting.

4.1.3. Implications

From the viewpoint of the firm's portfolio and depending on the risk taken, postponing strategies are only possible to a limited extent, as firms need a financial buffer to overcome the loss of financial revenues in the project's first phase and the further loss of financial revenues if the project does not continue. This suggests that firms can only engage in this strategy occasionally and need to make financial and collaborative agreements with the client that allow them to cover their expenses in the first phase and make a profit in later phases. Although a number of architects from strong-delivery and strong-experience firms gave examples of being able to do so, especially in integrated projects; many others considered this entrepreneurial way of operating particularly difficult. The empirical results show that especially strong-ambition firms easily overlooked and sometimes failed to benefit professionally and/or financially from using the postponing strategy. For example, in projects that firms initiated themselves

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on the basis of a professional ambition, the insurmountable interference of a commercial actor over the course of the project, constrained or even prevented them from capturing exchange value and professional value. This illustrates how important it is that, for each project, firms assess to what extent the project context and the benefits envisioned justify taking the financial risk in relation to the particular job.

4.2. Strategy 2: Compensating for loss of financial revenues across projects

With the strategy of compensating for loss of financial revenues across projects, architectural firms deliberately engaged in non-profitable projects by compensating for any financial revenues lost with the revenues of other projects. Figure 3 illustrates how firms invested money in Project A, with the exchange value (€) they expected or were able to generate from Project B. This was triggered by the extensive professional value (P) firms expected to generate from Project A. Figure 3 shows that the use value (U) that is co-created in Project A exceeds the associated exchange value (€), while in project B the exchange value exceeds the generated use value, enabling firms to use the profitability of Project B to invest in Project A. The compensating strategy indicates how, in certain projects, firms were willingly and knowingly *accepting financial value slippage*.
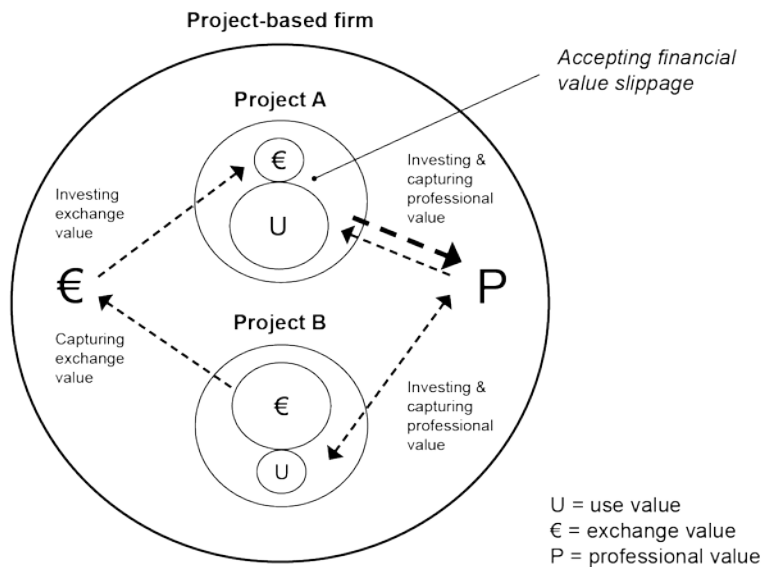
Figure 3. Compensating for loss of financial revenues across projects

We found that non-profitable projects represented a substantial part of the portfolio of many firms. For example, architect A9 mentioned that one-third of his firm's portfolio, and sometimes even more, consisted of housing projects that did not generate any profit. This implies that the compensating strategy is often used on a regular basis and strongly embedded in the management of a firm's entire portfolio.

4.2.1. Examples of tactics used

Using a financial buffer to invest in a project

A large majority of firms was found to engage in non-profitable projects, in which the exchange value was considered to be less than the worth of the use value that was co-created through their activities. They sometimes compensated the slippage of financial value that resulted from this with the financial buffer they had built up through other projects. For example, architect A20 and his partners assessed the financial

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reserves that their firm had built up with past work to decide whether or not to engage in a project which they assumed would not generate any profit:

> Of course we do multiple projects. Well, this was a project that we certainly wouldn't make any profit with. A relatively long development trajectory and a marginal fee. But we look at our entire portfolio and consider: 'Can we afford to miss out on a few thousand euros?' And that's how it goes.

A few architects explicitly mentioned how they were actively working on creating a financial buffer so they could, in the near future, even invest in initiating projects themselves without needing a client or commercial partner to be involved in the process. They expected that this would give them more freedom to deliver a project with substantial use value and professional value which could also enable generating more exchange value. An example was given by architect A15, who attempted to enlarge his capital resources with ongoing projects so he could initiate and develop new projects without needing a project developer:

> Look it's about money. If we can double our fee by performing these activities [taking over the entire sales process], I would gladly keep performing them. If we can build a financial buffer with these projects, with which we can take risks, we will also start developing ourselves. Then I can dare to do even more by ourselves. […] I would prefer to do it all by ourselves. We also have conversations with other nice architectural firms to take a much big step together. To realize a more interesting, even larger 'do-it-yourself-building' without the involvement of a developer.

The excerpt highlights how architects compensated missed project revenues over a longer period of time so they would have the opportunity to engage in projects that they considered to be more worthwhile from a professional perspective. Hence, a financial buffer was perceived an opportunity to avoid the potential loss of professional and financial revenues in future projects.

Managing other active project(s) consciously

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A few firms also attempted to compensate for the loss of financial revenues in a project by managing other active projects more consciously. For example, architect A16 told how his investment in a unique, sustainable residential project required him to operate differently in his next assignment:

> It's about business and emotions, and sometimes [our] emotions win. Of course. But then we try to compensate that in another project. That's really it. So in the next project we need to be stricter, we need to steer more and we need to work more efficiently. It appears that these kinds of projects [refers to the sustainable project] are of a type that just requires everybody to invest.

Although this particular tactic was mentioned as an intention by multiple architects, we did not find evidence in the data to conclude that architects were indeed able to realize their intention. On the contrary, architects repeatedly pointed out that managing the time spent in projects represented one of their biggest struggles, as projects are never finished. For example, architect A5 said that regardless of the situation: 'I am always inclined to do more than we get paid'. Bad time management in projects was also pointed out as one of the biggest pitfalls of architectural firms for capturing value by the majority of clients. This suggests that engaging in the compensating strategy with this particular tactic is extremely vulnerable, especially for firms that do not manage to stop designing when the project enters the engineering phase.

Negotiating profitability in other project(s)
Finally, architects negotiated a profitability in other active projects to compensate for a loss of financial revenues. For example, the architectural firm of A21 systematically used utility projects to compensate for the loss of financial revenues in housing projects. They had always used this strategy in order to stay involved in the housing sector:

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> […] in the past, it was already the case that utility projects frequently financed the housing projects. It is extremely difficult to make a proper return on a residential project, because the housing market is under a lot of pressure. While in retail projects, the fee of the architect is not an important part of the overall financial component of the development at all. (architect A21)

Architect A21 was also applying this type of compensating strategy at the time of the interview:

> So, we evaluated the quality of our contribution very commercially and asked the client to pay a commercial value. This was not in proportion to the hours we spent, but that doesn't matter at all, because he was willing to pay for it.

The quote illustrates how certain projects present opportunities to negotiate a higher fee when the generated use value in the project is worth much more to the client than the time that the architectural firm needs to spend on it. Hence, it can be concluded that calculating fees on the basis of hours spend or activities performed, which seemed still the common practice among all architects in our sample, may not be the most suitable option for each project. The clients generally argued that architects need to be much more assertive in presenting reasons to be paid their full worth. A few clients particularly emphasized in the interviews that they were fully willing to pay for the commercial value that resulted from the architectural firm's involvement.

> The architect's fee is, I wouldn't say a pittance, but it is only a small part of the total investment that we make in a project. And still it gets a lot of consideration, while I would personally say 'spend a bit more on that […] because the added value that the architect can have will pay off anyway'. At the same time, it's the factor that is most difficult to grasp. Because, does it matter for the revenues of the building, which are important for the financial feasibility of its 50 year operation, if you hire architect X or architect Y? That's difficult to pinpoint, but there is definitely a difference; otherwise there would not be any difference between different buildings. (client C24, developer from a housing association)

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The excerpts above imply that the compensating strategy is not always considered necessary by clients or may be more easily facilitated by the clients of other projects. Thus, firms may benefit from carefully mapping out the conditions of their projects and associated clients so they can take advantage of the opportunities that are present.

4.2.2. Underlying reasons

Capturing professional value in capital-scarce environments

The compensating strategy was often used in projects that were characterized by tight budgets, such as social housing or projects for private clients, where firms envisioned ample possibilities to capture professional value. Architectural firms then pursued the compensating strategy because they saw no opportunity to negotiate a higher fee, but also did not want to miss out on the project:

> The time spent with private clients is really a lot more than with commercial projects. In other words, we don't make a profit in private projects. We do private projects because we can develop ourselves by doing them and because we really like it, but it gets paid for by other projects. (architect A9)

Architects emphasized that, in certain situations, it is simply impossible to be paid their actual worth. For example, they said that some clients did not have the expertise or experience to understand how much time it takes to come up with a project solution. Architects argued that certain clients, such as private or other non-professional clients, are unable to foresee the benefits that will result from the architectural firm's involvement. They believed that attempts to negotiate a higher fee would only lead to relational tensions and could even jeopardize their involvement in the project. As a result, architects deliberately did not insist on full payment. Thus, the architects were willing to 'take their losses', or invest in a project, as they envisioned other benefits from their involvement in that particular project. An example concerns architect A14,

who had immediately agreed to invest in a project because he expected his investment to pay off in terms of knowledge development:

> We knew beforehand that it wasn't a regular assignment. We knew that both of us [the client and the architectural firm] needed to invest. We also knew that for us it was a matter of developing yourself as an architect, but also of doing further study. You know, if you look at it very plainly, the BNA [professional association] expects you to get your credits every year. Do I need to pay the BNA to follow two or three courses there, or do I do it in the project, because a client asks me to do it?

The compensating strategy supported architect A14 in developing his expertise and also helped him to achieve his professional training credits.

More than half of the firms also used the compensating strategy in projects where financial resources were lacking altogether, such as self-initiated projects that did not directly involve a paying customer. Many architects believed that initiating projects would help them to claim a more comprehensive role in the design, engineering and construction process and thereby help them to capture professional value, mainly in terms of reputation, by safeguarding and improving the project's quality. This illustrates how firms prioritized professional value dimensions over monetary value when compensating for loss of financial revenues across projects. Although financial value clearly slipped to the client, this did not necessarily led to actors perceiving the project as unsuccessful. On the contrary, the architects in our sample often seemed to consider the professional value that they gained by accepting a 'lack of' exchange value, worth the financial value slippage.

Capturing a surplus of professional value over time

The non-profitable projects that architects engaged in with the compensating strategy, often appeared to revolve around attempts to capture a surplus of professional value in the long term by realizing an extensive amount of use value. Architect A16 said:

> I know for sure that project X [refers to a famous Dutch project], has also cost a lot of money. It's one of those crazy, unique buildings. Like us, firm X [refers to the architectural firm] spent way too much time on their project. But it also gave them a huge emotional boost around the entire globe. So investing in becoming famous is part of entrepreneurship. Doing something that really adds value once in a while. Some people pay charities, we try to do it in our work.

Especially architects of strong-ambition firms highlighted how sometimes non-profitable projects could provide a significant 'boost' to their portfolio. Architects expressed how projects that required the use of the compensating strategy frequently represented unique value capture opportunities, that are sometimes difficult to find in other, more 'regular' assignments. For example, architect A12 explained how she deliberately applied for a cultural project that would require a substantial investment in money and traveling time because she assumed that it would enable her firm to take 'a new step' and acquire public sector work:

> We applied for that Regional Visitor Center, which was very far away. We said to each other: 'okay, it's far away, but if we get it we have a public building that will help us to take a new step'. […] And yes, that worked, because we now have a museum due to this project which we could bring up as a reference project.

The architects thus considered the experiences that resulted from these specific projects to be very lucrative in the long term because they enhanced their firm's reputation, helped them to further develop their expertise and expand their portfolio. In many occasions the compensating strategy actually resulted in the subsequent acquisition of larger and/or more prestigious projects:

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So, the identity of our firm, being a firm that is really good in transformations, is due to those ambitions of private clients, such as 'I'm going to buy a church and I'm going to live in it' or 'I'm going to buy a water tower and I'm going to live in it'. And eventually that resulted in the references needed to transform [a national monument]. (architect A9)

Architects who accepted financial value slippage in projects often argued that their firm would not have been selected for a certain project without having those non-profitable assignments in its portfolio. So the involvement of firms in non-profitable projects through pursuing the compensating strategy may contribute to the development of expertise and reputation and, as such, may be very valuable for developing or strengthening a competitive advantage and generating future work. The increased competitive advantage also seemed to enhance the firms' ability to negotiate more exchange value in future projects. This reveals the positive impact that the strategy of compensating for loss of financial revenues across projects can ultimately have for the overall value capture of a firm.

4.2.3 Implications

When accepting financial value slippage by using the compensating strategy, a well-orchestrated and carefully managed balance between 'compensation' and projects 'to be compensated' on the portfolio level seems particularly crucial. Even for firms that are able to create such a balance, the strategy involves considerable risks, as delays or complete abandonment of projects can severely damage the balance between different projects, and seriously impact the firm. Accepting financial value slippage in a project also confronts firms with an important challenge with regard to time. The financial and professional 'inputs' and 'outputs' of the project need to be consciously managed throughout the entire project process to ensure that the professional benefits

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pursued continue to outweigh the financial investments required. For example, the costs associated with the firm's time investment need to be kept under control, while the professional value that is envisioned has to remain within reach. This all highlights the need to continuously manage value slippage across projects and over time.

4.3.   Strategy 3: Rejecting a project

By using the strategy of rejecting a project, architects dismissed work of which they expected that the professional value that could be captured was not of sufficient interest for their firm, or of which the co-created use value could eventually harm the firm's reputation or other kinds of previously retained professional value. Figure 4 shows how firms rejected a project when the created use value (U) would not contribute to the capture of professional value (P), but only require an investment of professional value. With the rejecting strategy firms were thus *avoiding potential professional value slippage* in projects. Figure 4 also illustrates that firms were prepared to instantly lose any possibility of capturing exchange value (€) from the project, when the project required a financial investment (left side of Figure 4) and even in projects that did not require any financial investment (right side of Figure 4). Although the rejecting strategy may seem to be an overreaction and unhealthy for business, as firms do not generate any income in the project, it does allow firms to realize their professional ambitions in the long run. Without the rejecting strategy, firms would have ended up working on each project that they crossed paths with, even the projects that did not align with their professional goals.

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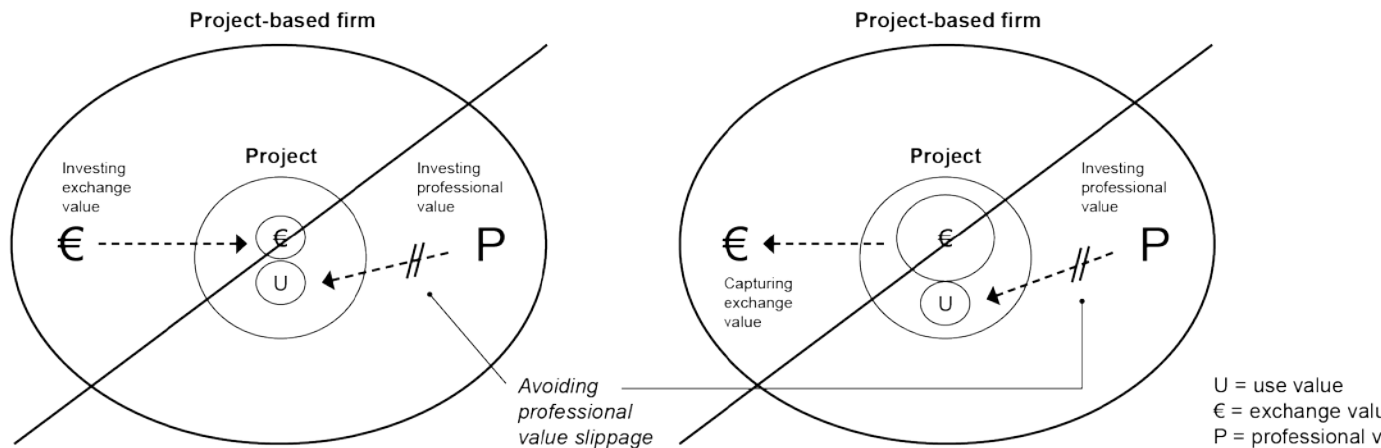
Figure 4. Rejecting a project

4.3.1. *Examples of tactics used*

Saying no to the client prior to commissioning

Saying no to the client prior to commissioning was one of the tactics used by many of the firms to avoid professional value slippage in projects. We found situations in which the architects, just after the request for a proposal, explained to the client that they could not be involved in the project or, in the case of a tender, decided not to compete for selection in a project. In these situations, the architects often were of the opinion that they needed to deliver more or better services than the client requested in order to reach their professional goals. For example, architect A20 mentioned how his firm backed out of a competition for a school when the client decided to hire another party for the engineering work:

> If a client says: 'I'm not sure if I will commission you for the construction drawings', we immediately have a firm discussion. […] For us, the construction engineering phase is actually not financially lucrative at all, so it is smarter to give it away. But then you also give the project away [similar to other respondents, the architect is referring to control over project quality] […] The other day, we handed back a project. We withdrew from the competition because they [the client] excluded the construction drawings from our

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assignment. Then we said: 'Let's leave that school for what it is'. We don't want to be involved in that discussion, we know that it will result in one big misery. We know that the client will continue the design with a drafting firm and just change all kinds of things.

Most architects explicitly mentioned how the involvement of a drafting firm endangered the capture of professional value by the firm, because if a drafting firm took over their engineering work, they would never be able to realize the level of quality that they aspired to and depended on to protect their reputation. In some cases architects simply did not feel how the project would add professional value to their firm.

Withdrawing from an ongoing project

A few firms also used the rejecting strategy as a last resort when already engaged in a project. Architects withdrew from an ongoing project when the project had evolved in such a way as to endanger or potentially endanger the professional value that the firm aimed to capture. An example was given by architect A19, who protected the work pleasure of his employees by using the rejecting strategy:

> If we do not feel happy in a certain situation, we leave. And that is something we really do. It has to fit us and the people that work for us. If our employees are bullied by a client we leave. [In this project] we were not able to work with that [project management] firm. And it wasn't fair to our people either. We simply said 'let's quit, this is enough, let's get out'. And we will keep doing that, even if we really need the money..

The excerpt shows how architects sometimes resigned from a project when the conditions of the project became critical for capturing sufficient professional value, in this case work pleasure. In situations where the created use value clearly outweighs exchange value – which include all projects 'to be compensated' and the initial phase of postponing projects – rejecting a project along the way does not only avoid

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professional value slippage, it also results in financial value slippage. In this regard, it seems particularly important to make timely go/no-go decisions for projects that are not clearly contributing to the firm's professional goals to avoid unnecessary losses on financial investments in a project. In addition, taking time to negotiate sufficient professional value and exchange value in a project may also pay off.

4.3.2. Underlying reasons

Avoiding limited professional value capture in projects

The rejecting strategy seemed particularly useful in projects where firms could only capture a limited amount of professional value. In contrast to the data presented in the section on the compensating strategy, architects did not always want to compensate for the loss in financial revenues when they were not properly rewarded for their involvement in financial terms. This was often the case when architects recognized a clear mismatch between the project goals and their firm's professional ambitions, including the level of quality they pursued and their work pleasure:

> We get a lot of requests through the internet. But the majority of those is not our kind of client. So we already make clear during the first telephone conversation that this is not going to work out. […] By saying 'yes' to all assignments offered by private clients, you sometimes face the risk that A) you don't produce quality, B) you don't enjoy the work, and C) that your business suffers from the work financially. (architect A9)

The excerpt illustrates that architects, mostly intuitively, evaluated whether a project would contribute to their professional and commercial goals in deciding whether to reject a project or not. This is also supported by an excerpt from the interview with architect A12:

> Our goal is to become a brand that people choose when they want to have this kind of project: good materials, decent details, a beautiful project that people will write and talk about. That's the ultimate goal. And that implies that we also have to reject certain projects.

Strong-ambition firms seemed particularly keen on using the rejecting strategy to avoid a limited amount of professional value capture in their projects. These firms primarily focused on developing a distinctive reputation among peers and experts to consolidate their position in the field. For example, architect A15 said: 'I always stay true to my own professional identity. I won't design in each and every style. I simply *can't* design in each and every style.' Some strong-experience firms relied more on a market reputation of being a trustworthy and pleasant partner to collaborate with. Architects of these firms – even though they were confronted with limited professional value capture opportunities in a project – tried to avoid the rejecting strategy, as they did not want to damage their market reputation. Architect A16 even seemed afraid to use the rejecting strategy as clients might perceive it as indicating weakness in their firm. Especially architects of larger firms and firms that consisted of multiple disciplines preferred to put themselves in difficult positions to make the project work, rather than to disappoint the client and risk missing out on potential future work. This indicates that the rejecting strategy may become more difficult to apply as firms grow in size and have more diversified project portfolios.

Protecting professional resources

We noticed that the rejecting strategy was even used in situations where architects faced appropriate payment, but feared that the professional value that they had built up over the years would be endangered by the project. For example, architect A15 considered rejecting a project because he believed that the developer involved would

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use his network, ideas and knowledge in the wrong way and for the wrong purposes. All architects seemed very cautious about engaging in projects that might not result in a certain quality level. Many architects expressed that engaging in 'marginal designs', such as large scale, 'copy-paste' residential projects, would eventually destroy their firm's reputation:

> So, if [the client] says: 'I would like to have one hundred semi-hooded 1930s houses', I [may] think 'that's a quick earn', but after that my office is done. So, I don't do it. (architect A9)

Architects argued that they had to develop and protect a high-quality brand in order to compete for interesting and fulfilling work. Thus, firms attempted to avoid professional value slippage as they feared that it would seriously damage their reputation and unique selling points and ultimately destroy their ability to capture financial and professional value in future projects. This shows that the rejecting strategy was not only pursued because architects expected a project to prevent the capture of sufficient professional value, but also because they wished to protect the professional value that they had captured with other partners in earlier projects.

4.3.3. Implications

The fact that firms do not generate any income or other value by rejecting a project implies that they need to have sufficient work within their portfolio and a solid financial basis to be able to engage in the rejecting strategy. The empirical data provided evidence that under certain contextual conditions, such as the financial crisis that was ongoing at the moment of the interviews, firms may really need a project to keep their portfolio full and their employees working. In these situations, firms face the choice of accepting the project and the limited professional value that is associated with it, or dismissing the project and laying off staff to survive as a firm. Examples of firms choosing for the first and firms choosing for the latter,

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indicate that the rejecting strategy is particularly useful for firms with a clear professional ambition that are willing to face and act upon the organizational implications of following that ambition.

5 Conclusions and discussion

5.1. Conclusions

In this study, we investigated how project-based firms manage risks of value slippage in projects in relation to the wider project portfolio. It was found that architectural firms apply the strategies of 1) *postponing financial revenues in a project*, 2) *compensating for the loss of financial revenues across projects,* and 3) *rejecting a project* to deal with two types of potential value slippage: the risk of financial value slippage and the risk of professional value slippage. The strategies indicate how architects' decision making in projects is strongly influenced by the extent to which they perceive potential risks of value slippage in a project as harmful or beneficial for the firm in the longer term. Other projects in a firm's portfolio can provide a financial buffer that allows taking financial risks in an interesting project and, thereby, enhance the capture of professional value by the firm, increasing the opportunities to negotiate additional exchange value in future work. They can also serve as a benchmark to prevent a firm from engaging in work that leads to a decline in value capture over time. Based on our results, it can be concluded that the different value slippage risks that firms face in projects do not only pose severe threats, they also provide opportunities for enhanced value capture when they are managed well in and across projects.

5.2. Theoretical contributions and managerial implications

We offer two important contributions to the literature on project business (Artto and Kujala, 2008; Artto and Wikström, 2005; Kujala et al., 2010). First, this study contributes to theory development for value capture in project-based firms (e.g. Bos-de Vos et al., 2016; Chang et al., 2013; Laursen and Svejvig, 2016) by providing an extended and more nuanced conceptualization of value slippage and empirical evidence indicating that value slippage is multidimensional and important to manage in and across projects. Second, this study adds to the literature on project portfolio management (e.g. Martinsuo, 2013; Olsson, 2008; Petit, 2012; Teller and Kock, 2013) by presenting a link between professional value and portfolio choices, thereby creating a broader picture of value management and risk assessment in portfolios.

In our previous study on value capture in project-based business, we called 'for a better balance between use value, professional value and exchange value to ensure client and user satisfaction, architect satisfaction and firm profitability' in a project (Bos-de Vos et al., 2016, p. 32). By making value capture related decisions in projects from a portfolio view, firms may risk or accept that certain values slip away in one project to reach enhanced and/or other values at the portfolio level. For example, investments in non-profitable projects may eventually lead to the acquisition of prestigious projects that are, over time, able to generate enhanced professional and financial value for the firm. Hence, elaborating on our earlier work (Bos-de Vos et al., 2016), we show that firms will not always realize an optimal balance between professional and financial value in their projects, but also accept or actively pursue 'off-balance' projects to attain higher end goals at the organizational level and over the longer term.

This emphasizes the importance of acknowledging value capture and value slippage in project business as multidimensional, multilevel and longitudinal

processes, thereby echoing existing work in other areas of project business (e.g. Artto et al., 2016; Martinsuo and Killen, 2014), and extending previous work on value capture and value slippage from the field of strategic management (e.g. Bowman and Ambrosini, 2000; Lepak et al., 2007; Pitelis, 2009). Although the notion of value slippage has, thus far, been used to refer to losing out on financial value, which should be avoided by firms (e.g. Chang et al., 2013; Lepak et al., 2007), our empirical study indicates that value slippage has a more elaborate meaning in project business. Through applying the conceptual distinction between use value, exchange value and professional value (Bos-de Vos et al., 2016), we found that firms may also encounter issues of professional value slippage in their work, which led us to distinguish between 'financial value slippage' and 'professional value slippage'. It is shown that this conceptual distinction between financial and professional value slippage can add new insights to our understanding of value-related processes and the relationship between project and firm in project business: value slippage does not always need to be avoided as has been argued by Lepak et al. (2007) and Chang et al. (2013), but can also be beneficial for firms' value capture in the long-term when applied well in relation to the overall project portfolio.

Building on the insights of our study, we argue that value capture studies in the field of project business can build on, but also need to develop beyond traditional value capture theories that have been developed in the field of strategic management (e.g. Bowman and Ambrosini, 2000; Lepak et al., 2007; Pitelis, 2009). They should include a multidimensional (i.e. including monetary and non-monetary values), multilevel (i.e. including project, portfolio and firm level) and lifecycle (i.e. including phases prior to, during and post project collaboration) perspective in order to arrive at a detailed understanding of project-based value capture processes and the dynamics they

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involve. Although existing research on value creation and value capture has started to consider other dimensions of value, such as social wealth (Thompson and MacMillan, 2010) or strategic value (Martinsuo and Killen, 2014), most of the research on value capture remains focused on financial revenues and profit generation (e.g. Lepak et al., 2007; Pitelis, 2009). This financial orientation towards business is still dominating project management research, as is, for example, illustrated by the common consensus that project portfolio management is oriented towards maximizing the financial value of the portfolio for the firm (e.g. Cooper et al., 2002) and the adoption of the traditional, monetary perspective towards value capture of project-based firms (e.g. Laursen and Svejvig, 2016). We argue that it is important to include non-monetary dimensions of value, such as professional value, in studies of project business. Our results underline the impact of professional value on the management of value slippage by architectural firms, adding additional insights to earlier work in this area (Bos-de Vos et al., 2016) and providing great opportunities for further research on other types of project-based firms.

Although value capture has only recently been identified as a valuable area of study in project management literature (Laursen and Svejvig, 2016; Martinsuo et al., 2017), our study highlights the potential benefits of integrating insights from value capture into other areas of project management. Better understanding the value capture of project-based firms can shed new light on why firms select certain projects and emphasizes the benefits of adopting a portfolio-wide approach for risk management (e.g. Olsson, 2008; Teller and Kock, 2013) and the management of value slippage in particular.

This study could assist owners, managers and employees of architectural firms to better understand and oversee their value capture in projects. By uncovering how

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value slippage can be intentionally risked, accepted or avoided by firms, our results suggest that practitioners can have an active role in dealing with value slippage. Through raising awareness of the notions of financial and professional value slippage in projects and the potential effects for firms, the study assists in the development of a more conscious, integrative approach to the management of the capture of value in and across projects.

5.3. Limitations and directions for future research

This study has several limitations that need to be mentioned and that open up interesting directions for future research. First, as this study specifically focused on architectural firms in the Netherlands, we cannot infer that the results are generalizable to architectural firms in other countries or to other types of project-based firms. Although it is likely that architectural firms and other types of professional firms around the globe have to deal with risks of financial and professional value slippage, different contextual conditions may lead to different results. Therefore, further research on value capture by different types of firms and in different cultural settings is highly recommended. We suggest to focus on firms that must capture different value dimensions (e.g. monetary, professional and social value) to attain multiple strategic goals, in order to profoundly extend or challenge already existing theories on value capture, and thereby elaborate theory in ways that both account for and can support the challenges that many contemporary firms face.

Second, due to the explorative aim of this study, the amount of data for specific categories of firms and specific types of projects remains limited. Although our results suggest that strategies may be more useful for certain firms or in certain situations, the underlying reasons for and effects of choosing different strategies need to be studied

in more detail to further develop theory on value capture and value slippage in project settings. We recommend using methodological approaches that allow observing how value capture opportunities emerge and unfold over various phases of a project's lifecycle and in relation to actors reasoning. Processual studies (Langley, 2007) would be of particular interest.

Third, we decided to focus on studies of value capture, risk management and portfolio management from the fields of strategic management and project management. Related areas of study, such as value co-creation, benefits management, project selection, and decision-making; and insights from different fields, such as service literature, could add valuable insights and new angles for future studies of value capture. Further scholarly inquiry at the intersection of value capture and other areas op project management could pave the way towards integrating knowledge into managerial tools for supporting the value capture process within the broader scope of project management activities. With our study, we hope to inspire researchers to engage in further exploring the topics of value capture and value slippage in project settings. We believe that value capture studies could not only be strengthened by, but also significantly contribute to the understanding of related topics and related fields.

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Conflicts of interest

None

References

Artto, K., Ahola, T., & Vartiainen, V. (2016). From the front end of projects to the back end of operations: Managing projects for value creation throughout the system lifecycle. *International Journal of Project Management, 34*(2), 258-270. https://doi.org/10.1016/j.ijproman.2015.05.003

Artto, K., & Kujala, J. (2008). Project business as a research field. *International Journal of Managing Projects in Business, 1*(4), 469-497. https://doi.org/10.1108/17538370810906219

Artto, K. A., & Wikström, K. (2005). What is project business? *International Journal of Project Management, 23*(5), 343-353.

Arvidsson, N. (2009). Exploring tensions in projectified matrix organisations. *Scandinavian Journal of Management, 25*(1), 97-107. https://doi.org/10.1016/j.scaman.2008.09.002

Bos-de Vos, M. (2018). *Open for Business: Project-Specific Value Capture Strategies of Architectural Firms.* A+ BE| Architecture and the Built Environment, (13), 1-234. https://doi.org/10.7480/abe.2018.13

Bluhm, D. J., Harman, W., Lee, T. W., & Mitchell, T. R. (2011). Qualitative research in management: A decade of progress. *Journal of Management Studies*, 48(8), 1866-1891. https://doi.org/10.1111/j.1467-6486.2010.00972.x

Bos-de Vos, M., Wamelink, J. H., & Volker, L. (2016). Trade-offs in the value capture of architectural firms: the significance of professional value. *Construction Management and Economics, 34*(1), 21-34. https://doi.org/10.1080/01446193.2016.1177192

Boutinot, A., Ansari, S. S., Belkhouja, M., & Mangematin, V. (2015). Reputational spillovers: evidence from french architecture. *Strategic Organization, 13*(4), 284-306. https://doi.org/10.1177/1476127015597581

Bowman, C., & Ambrosini, V. (2000). Value creation versus value capture: towards a coherent definition of value in strategy. *British Journal of Management, 11*(1), 1-15. https://doi.org/10.1111/1467-8551.00147

Brinkman, S., & Kvale, S. (2015). *Interviews: Learning the Craft of Qualitative Research Interviewing*. Los Angeles, CA: SAGE.

Burkert, M., Ivens, B. S., Henneberg, S., & Schradi, P. (2017). Organizing for value appropriation: Configurations and performance outcomes of price management. *Industrial Marketing Management, 61*, 194-209. https://doi.org/10.1016/j.indmarman.2016.06.007

Chang, A., Chih, Y.-Y., Chew, E., & Pisarski, A. (2013). Reconceptualising mega project success in Australian Defence: Recognising the importance of value co-creation. *International Journal of Project Management, 31*(8), 1139-1153. https://doi.org/10.1016/j.ijproman.2012.12.005

Cooper, R.G., Edgett, S.J., Kleinschmidt, E.J. (2002). Portfolio Management: Fundamental to New Product Success. In: Belliveau, P., Griffin, A., Somermeyer, S. (Eds.), *The PDMA Toolbook for New Product Development*. John Wiley & Sons, New York.

Edmondson, A. C., & Mcmanus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review, 32*(4), 1246-1264. https://doi.org/10.5465/amr.2007.26586086

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: opportunities and challenges. *Academy of Management Journal, 50*(1), 25-32. https://doi.org/10.5465/AMJ.2007.24160888

Eskerod, P. & Riis, E. (2009). Value creation by building an intraorganizational common frame of reference concerning project management. *Project Management Journal, 40*(3), 6-13. https://doi.org/10.1002/pmj.20123

Gillier, T., Hooge, S., & Piat, G. (2015). Framing value management for creative projects: An expansive perspective. *International Journal of Project Management, 33*(4), 947-960. https://doi.org/10.1016/j.ijproman.2014.11.002

Hobday, M. (2000). The project-based organisation: an ideal form for managing complex products and systems? *Research Policy, 29*(7), 871-893. https://doi.org/10.1016/S0048-7333(00)00110-4

Koolwijk, J.S.J., van Oel, C.J., Wamelink, J.W.F. & Vrijhoef, R. (2018). Collaboration and Integration in Project-Based Supply Chains in the Construction Industry. *Journal of Management in Engineering, 34*(3). https://doi.org/10.1061/(asce)me.1943-5479.0000592

Kujala, S., Artto, K., Aaltonen, P., & Turkulainen, V. (2010). Business models in project-based firms–Towards a typology of solution-specific business models. *International Journal of Project Management, 28*(2), 96-106. https://doi.org/10.1016/j.ijproman.2009.08.008

Langley, A. (2007). Process thinking in strategic organization. *Strategic Organization, 5*(3), 271-282. https://doi.org/10.1177/1476127007079965

Langley, A. (1999). Strategies for Theorizing from Process Data. *Academy of Management Review*, 24(4), 691-710. https://doi.org/10.5465/amr.1999.2553248
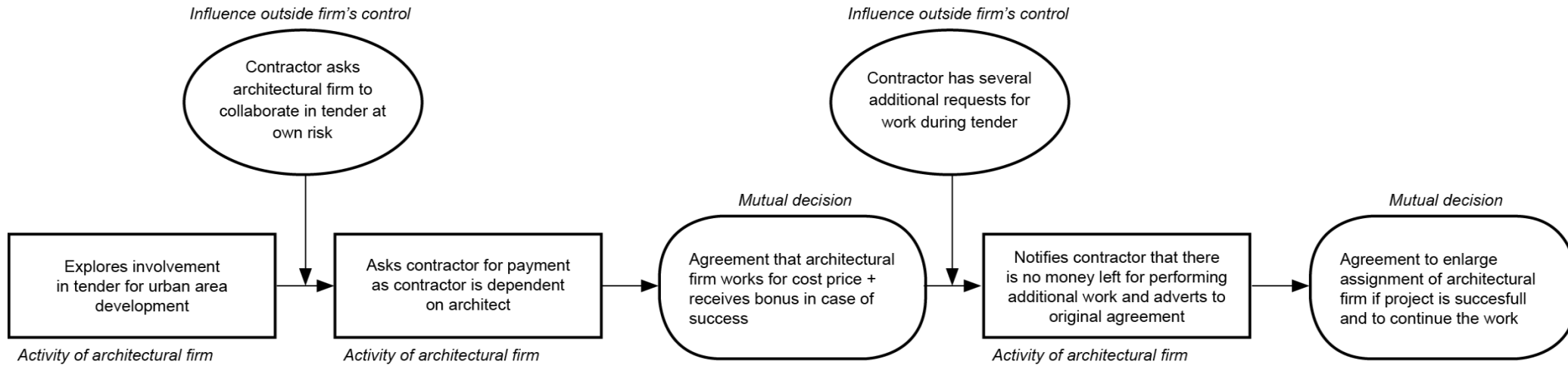
Laursen, M., & Svejvig, P. (2016). Taking stock of project value creation: A structured literature review with future directions for research and practice. *International Journal of Project Management, 34*(4), 736-747. https://doi.org/10.1016/j.ijproman.2015.06.007

Lepak, D. P., Smith, K. G., & Taylor, M. S. (2007). Value creation and value capture: a multilevel perspective. *Academy of Management Review, 32*(1), 180-194. https://doi.org/10.5465/AMR/2007.23464011

Lieftink, B., & Bos-de Vos, M. (2017). *How to claim what is mine? Boundary work of professionals in inter-organizational projects*. Paper presented at the SSE/Saïd Business School Conference on Professional Service Firms, Stockholm, Sweden, 9-11 July 2017.

Løwendahl, B. (2005). *Strategic Management of Professional Service Firms* (3rd ed.). Køge, Denmark: Copenhagen Business School Press.

Maister, D. H. (2012). *Managing the Professional Service Firm*. New York, NY: Simon and Schuster.

Manzoni, B., & Volker, L. (2017). Paradoxes and management approaches of competing for work in creative professional service firms. *Scandinavian Journal of Management, 33*(1), 23-35. https://doi.org/10.1016/j.scaman.2016.10.002

Martinsuo, M. (2013). Project portfolio management in practice and in context. *International Journal of Project Management, 31*(6), 794-803, https://doi.org/10.1016/j.ijproman.2012.10.013

Martinsuo, M., & Killen, C. P. (2014). Value Management in Project Portfolios: Identifying and Assessing Strategic Value. *Project Management Journal, 45*(5), 56-70. https://doi.org/10.1002/pmj.21452

Martinsuo, M., Klakegg, O. J., & van Marrewijk, A. (2017). Call for papers: Delivering value in projects and project-based business. *International Journal of Project Management, 35*(8), 1655-1657. https://doi.org/10.1016/j.ijproman.2017.09.010

Matinheikki, J., Artto, K., Peltokorpi, A., & Rajala, R. (2016). Managing inter-organizational networks for value creation in the front-end of projects. *International Journal of Project Management, 34*(7), 1226-1241. https://doi.org/10.1016/j.ijproman.2016.06.003

Mizik, N., & Jacobson, R. (2003). Trading Off Between Value Creation and Value Appropriation: The Financial Implications of Shifts in Strategic Emphasis. *Journal of marketing, 67*(1), 63-76. https://doi.org/10.1509/jmkg.67.1.63.18595

Mol, J. M., Wijnberg, N. M., & Carroll, C. (2005). Value Chain Envy: Explaining New Entry and Vertical Integration in Popular Music*. *Journal of Management Studies, 42*(2), 251-276. https://doi.org/10.1111/j.1467-6486.2005.00496.x

Nightingale, P., Baden-Fuller, C., & Hopkins, M. M. (2011). Projects, Project Capabilities and Project Organizations. In: *Project-Based Organizing and Strategic Management* (pp. 215-234). Emerald Group Publishing Limited. https://doi.org/10.1108/S0742-3322(2011)0000028012

Olsson, R. (2008). Risk management in a multi-project environment: An approach to manage portfolio risks. *International Journal of Quality & Reliability Management, 25*(1), 60-71. https://doi.org/10.1108/02656710810843586

Patton, M. Q. (2005). Qualitative Research: Wiley Online Library.

51

Petit, Y. (2012). Project portfolios in dynamic environments: Organizing for uncertainty. *International Journal of Project Management, 30*(5), 539-553. https://doi.org/10.1016/j.ijproman.2011.11.007

Pinto, J. K., Rouhiainen, P., & Trailer, J. W. (1998). Customer-based project success: exploring a key to gaining competitive advantage in project organizations. *Project Management, 4*(1), 6-12.

Pitelis, C. N. (2009). The Co-Evolution of Organizational Value Capture, Value Creation and Sustainable Advantage. *Organization Studies, 30*(10), 1115-1139. https://doi.org/10.1177/0170840609346977

Project Management Institute (2008). The Standard for Portfolio Management, Second Edition. Project Management Institute, Newtown Square (PA).

Ravitch, S. M., & Carl, N. M. (2015). *Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological*. Thousand Oaks, CA: SAGE Publications.

Schoorl, F. (2011). *Toekomsten - scenario's voor architectenbureaus en architectenbranche (Futures – Scenarios for Architectural Firms and the Architect Profession)*. Amsterdam: BNA, available at https://www.bna.nl/

Söderholm, A. (2008). Project management of unexpected events. *International Journal of Project Management, 26*(1), 80-86. https://doi.org/10.1016/j.ijproman.2007.08.016

Svejenova, S., Planellas, M., & Vives, L. (2010). An Individual Business Model in the Making: a Chef's Quest for Creative Freedom. *Long Range Planning, 43*(2), 408-430. https://doi.org/10.1016/j.lrp.2010.02.002

Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning, 43*(2–3), 172-194. https://doi.org/10.1016/j.lrp.2009.07.003

Teller, J. & Kock, A. (2013). An empirical investigation on how portfolio risk management influences project portfolio success. *International Journal of Project Management, 31*(6), 817–829. https://doi.org/10.1016/j.ijproman.2012.11.012

Thomas, J. & Mullaly, M. (2007). Understanding the value of project management: first steps on an international investigation in search of value. *Project Management Journal, 38*(3), 74–89.

Thompson, J. D., & MacMillan, I. C. (2010). Business models: Creating new markets and societal wealth. *Long Range Planning, 43*(2), 291-307. https://doi.org/10.1016/j.lrp.2009.11.002

Turner, J. R., & Keegan, A. (2000). The management of operations in the project-based organisation. *Journal of Change Management, 1*(2), 131-148. https://doi.org/10.1080/714042464

Van Doorn, A. (2014). *BNA dienstenkaarten 2014. Nieuwe rollen en verdienmodellen voor architectenbureaus (BNA servicemaps 2014. New roles and revenue models for architectural firms)*. Amsterdam: BNA, available at https://www.bna.nl/

Van Marrewijk, A., Ybema, S., Smits, K., Clegg, S., & Pitsis, T. (2016). Clash of the Titans: Temporal Organizing and Collaborative Dynamics in the Panama Canal Megaproject. *Organization Studies, 37*(12), 1745-1769. https://doi.org/10.1177/0170840616655489

Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal, 26*(3), 145-152. https://doi.org/10.1016/j.emj.2008.04.003

Ward, S. & Chapman, C. (2003). Transforming project risk management into project uncertainty management. *International Journal of Project Management, 21*(2), 97-105. https://doi.org/10.1016/S0263-7863(01)00080-1

Whitley, R. (2006). Project-based firms: new organizational form or variations on a theme? *Industrial and corporate change, 15*(1), 77-99. https://doi.org/10.1093/icc/dtj003

Winch, G., & Schneider, E. (1993). The strategic management of architectural practice. *Construction Management and Economics, 11*(6), 467-473. https://doi.org/10.1080/01446199300000052

Winter, M., Andersen, E. S., Elvin, R., & Levene, R. (2006). Focusing on business projects as an area for future research: An exploratory discussion of four different perspectives. *International Journal of Project Management, 24*(8), 699-709. https://doi.org/10.1016/j.ijproman.2006.08.005

Winter, M., & Szczepanek, T. (2008). Projects and programmes as value creation processes: A new perspective and some practical implications. *International Journal of Project Management, 26*(1), 95-103. https://doi.org/10.1016/j.ijproman.2007.08.015

Zott, C., & Amit, R. (2010). Business Model Design: An Activity System Perspective. *Long Range Planning, 43*(2), 216-226. https://doi.org/10.1016/j.lrp.2009.07.004

Zott, C., Amit, R., & Massa, L. (2011). The business model: recent developments and future research. *Journal of Management, 37*(4), 1019-1042. https://doi.org/10.1177/0149206311406265

Appendix A

Retrospective accounts of initial phase for an urban area development tender (architect A13)

Influence outside firm's control

Contractor asks architectural firm to collaborate in tender at own risk

Influence outside firm's control

Contractor has several additional requests for work during tender

Mutual decision

Mutual decision

| Explores involvement in tender for urban area development | Asks contractor for payment as contractor is dependent on architect | Agreement that architectural firm works for cost price + receives bonus in case of success | Notifies contractor that there is no money left for performing additional work and adverts to original agreement | Agreement to enlarge assignment of architectural firm if project is succesfull and to continue the work |

Activity of architectural firm   *Activity of architectural firm*   *Activity of architectural firm*

Example of visualization of value capture process

Appendix B

Overview of value slippage management strategies

Architect interview	Strategic orientation firm	Strategy 1: Postponing financial revenues in a project	Strategy 2: Compensating for loss of financial revenues across projects	Strategy 3: Rejecting a project
A1	Strong-delivery		Investing in development of a modular 'concept house' that is quality based instead of finance-based to compete with contractors	
A2	Strong-delivery	Collaborating with supply and demand-side actors in self-initiated consortium to deliver a complete package to the client, increasing all actors' margins with money earned from product optimizations, and agreeing in advance on extensive scope of activities		
A3	Strong-experience			
A4	Strong-experience			
A5	Strong-experience		Investing in initiating housing project for private clients to gain more control over and bigger role in these projects	
A6	Strong-experience	Negotiated a share of the profit in a large integrated tender by means of a success fee		
A7	Strong-ambition	Invested in redevelopment of office building with the intention to benefit financially after completion, but were not able to recoup investment because of interference of commercial actor		Does not want to do another project that requires them to act as a developer, because they did not enjoy this and want to focus on their core business
A8	Strong-idea		Investing more time in high-end projects & engaged in non-profitable housing project in developing market to improve people's living conditions	
A9	Strong-ambition		Used revenues of other projects to engage in non-profitable, private housing project because they like them & *occasionally considering investment in developing own projects, but does not want to risk laying off employees*	Rejecting private housing projects that will not lead to the aspired level of quality (such as semi-hooded 1930s houses), work pleasure and financial revenues
A10	Strong-experience			Did not want to work with some clients because they did not respect her ideas
A11	Strong-idea	Agree to work for cost-price in large integrated tenders, negotiate a bonus that turns it into a regular fee in case of success, and agree on a predetermined scope of activities in case of success		
A12	Strong-ambition		Invested in visitor centre to expand portfolio with public buildings	Rejecting projects that do not match the desired high quality image they would like to have

A13	Strong-experience	Negotiated bonus agreement in DBFMO tender for an urban area development & delivering initial work for free in housing projects while attempting to secure rental income by negotiating ownership of a small part of the property		
A14	Strong-ambition	*Did not consider using this strategy, but received an unexpected bonus from involved parties after project completion (at the initiative of the client)*	Invested in innovative office project for private client to further develop professional expertise	
A15	Strong-ambition		Creating a financial buffer to invest in initiating housing projects themselves and thereby claim a larger scope of activities in these projects	Rejecting projects that are not in line with own design style & *considers rejecting project for developer to protect professional resources*
A16	Strong-experience	*Considers using this strategy, because they see opportunities to negotiating additional fees in integrated project deliveries, but considers firm lacking skills to do that well*	Invested in unique, sustainable project by innovating for cost-price as a way to learn & *intends to work more efficiently in next projects*	*Only using this strategy in exceptional cases because of fear to disappoint clients or exclude markets, rather makes a 'mediocre building'*
A17	Strong-experience			Rejecting projects that are not attractive for turnover and reputation
A18	Strong-experience	Offering fees based on square meters, which generate more financial revenues when they are able to realize more square meters in commercial projects		*Limiting rejection of projects as non-ideal projects can also provide good learning experiences*
A19	Strong-experience			Withdraw from two ongoing projects to protect work pleasure of employee and professional values of firm
A20	Strong-experience		Accepted a miss out on financial revenues in a housing project by using the financial buffer of other projects & investing in initiating small apartment buildings together with residents to enlarge scope of activities and increase quality of houses	Withdrew from competition for a school to ensure that they would not be engaged in a project where aspired quality level could not be reached (because client decided to hire another party for the engineering work)
A21	Strong-experience	Negotiating dynamic fee for retail projects, in which fee increases when they are able to create more square meters	Compensating for the loss of financial revenues in social housing projects by negotiating profitability in retail projects	
A22	Strong-experience		Using flexible approach to hourly fee, increased fee for certain projects and lower fee for others	
A23	Strong-experience	Negotiated lower hourly rate for exploring opportunities and higher hourly rate in case project continues		Saying no to projects more often when clients want to hire architectural firm only for design and for a very low fee, which is not financially viable for the firm
A24	Strong-experience			Rejecting projects that do not match the stature of the firm
A25	Strong-idea			Does not want to be involved in projects that do not match their signature