7 Discussion

This research aimed to investigate how architectural firms capture value in the projects in which they are involved, and how architectural firms might be supported in developing strategies for value capture. Section 7.1 provides a summary of the key findings of the research, first with respect to the understanding of architectural firms' project-based value capture developed in the dissertation (§7.1.1) and second in relation to the toolkit for facilitating the development of project-specific value capture strategies (§7.1.2). Section 7.2 discusses the significance of the findings for research on organizational value capture, the management of architectural firms and business model design processes, before presenting suggestions on directions for future research. Then, Section 7.3 presents the practical implications of the research for collaborative work in creative projects, and for architectural firms and other firms that are involved in these projects. In Section 7.4, the implications for education are discussed. Finally, I will reflect on the research approach and the relevance of the results in Section 7.5.

§ 7.1   Summary of key findings

§ 7.1.1   Project-based value capture

This research enhances the understanding of value capture by architectural firms that operate in project contexts and pursue the capture of multiple dimensions of value from these projects. It addressed the research question: *How do architectural firms capture value in construction projects?* The research investigated the strategies that architectural firms employ to negotiate role boundaries in a project setting (Chapter 2); value capture strategies used in the project-based interaction with a client (Chapter 3); and strategies used to attain firm goals in a project (Chapter 4); as well as ways in which firms deal with identity-strategy tensions to arrive at project-specific value capture strategies (Chapter 5).

The investigation of case-based interviews with architects and clients from 24 construction projects, showed that architectural firms use different strategies to negotiate the boundaries of their roles in inter-organizational projects, based on different perceptions of what their professional expertise means in the context of collaboration with other project actors. Firms that perceived their professional expertise as not being valued, attempted to reinstate their role boundaries and to return to the established situation. Firms that believed that their expertise was constantly changing, bent their role boundaries to take on activities and responsibilities which were tailored to project demands. Finally, firms pioneered new role boundaries and pursued an active break with the established situation if they considered their expertise was more broadly applicable. Different roles in projects therefore seem to generate different opportunities and constraints for firms to capture value. Roles that match a firm's professional and commercial ambitions, whether small or comprehensive, traditional or novel, enable the capture of financial and professional value by firms. Roles that diverge from a firm's ambitions require additional efforts to ensure that organizational goals are attained. This complicates the capture of value from the projects, as firms have to navigate between the different commercial and professional goals that they pursue.

By delving into how architectural firms attempted to capture value for organizational purposes in project-based interactions with their clients, it was found that hierarchy in the different value capture goals of architectural firms played a crucial role in the value capture strategies of firms. It also provided evidence of how firms, in their interaction with a client, continuously reconstructed their value capture strategies around the possibilities and constraints for the appropriation of professional value capture goals concerning reputation, development and work pleasure, even if achieving such goals required spending more time than they were paid for or providing certain activities for free. The chapter revealed how architectural firms are often willing to sacrifice the capture of financial value when they recognize that their professional goals might be endangered, emphasizing the importance of professional value in the value capture of architectural firms.

Further investigation of strategies used to attain firm goals in a project showed how firms' value capture in projects was also largely dependent on their willingness to take financial and professional risks in a project. The research demonstrated how firms took the risk of financial value slippage or accepted that value might slip away in projects that they considered crucial for attaining their longer-term goals. Projects that could have generated monetary value but were considered a liability for the firm's professional goals were generally rejected. This indicates that project-based value capture is largely influenced by the risks a firm is willing to take. The chapter revealed that firms may not necessarily aim for optimally balanced value capture in each project, but may also accept or pursue 'off-balance' projects to attain higher end goals at the organizational level and in the long term.

An investigation of architectural firms' strategy-making in practice revealed how the three aspects of expertise, goals and risks that influence role negotiation and value capture strategies were all associated with professional identity. It was found that actors, when specifically addressing their firm's expertise, goals and risks in a project, continuously attempted to reflect their shared understanding of professional identity in their value capture strategies. Although actors jointly considered strategic alternatives in the strategy process, they often feared that strategic alternatives might be at odds with their professional values and beliefs, which made them more likely to stick with proven strategies.

Building on the insights generated into the different types of strategies that firms used to capture value in a project and the wayd in which these strategies are developed, the research highlights four important aspects that underlie project-based value capture strategies of architectural firms: 1) the professional expertise of the firm, 2) the hierarchy in different organizational goals, 3) the financial and professional risks the firm is willing to take in the project, and 4) the professional identity of the firm.

§ 7.1.2   Project-specific value capture strategies

The insights into project-based value capture can also be used to facilitate the development of project-specific value capture strategies by architectural firms and other organizations. In this respect, the research project answered the second main research question: *How can architectural firms be supported in developing strategies for value capture?* by providing a toolkit for value capture (Chapter 6). This section discusses how the development of project-specific value capture strategies can help firms: 1) to acquire and perform roles in projects that are in line with their professional identity, and 2) to capture both financial and professional value on the basis of that role.

First, project-specific value capture strategies are crucial for ensuring that a firm's role or position matches its professional identity. Studying the processes through which value capture strategies were constructed and reconstructed by architectural firms revealed that firms largely relied on known and proven business 'recipes' or gravitated towards these in their strategizing process. Thereby, they expressed and safeguarded their professional values in relation to a project, even when this project largely required them to diverge from the traditional role on which their experiences with such business approaches are based. At the same time, firms were often inclined to adapt their value capture strategies to the requirements of a specific project to ensure that the

value co-creation in the project proceeded in a manner that allowed them to realize their professional goals. Firms generally did not want to disappoint or annoy their clients and also did not want to jeopardize their own reputation, development and/or work pleasure.

The reluctance of architectural firms to be creative and innovative in their value capture strategies may hinder them in exploring and finding alternatives that are equally or even better equipped to realize their financial and professional goals within the conditions of a specific project. It may also reinforce the undervalued and marginalized position that architectural firms currently often occupy in projects (e.g. Ahuja et al., 2017). The value capture toolkit developed in this research can help firms to identify and detail the specific value capture conditions of a certain role in a project and thereby support a more conscious decision to engage or not to engage in a project.

Second, developing project-specific value capture strategies by finding an equilibrium for the four key aspects – expertise, goals, risks and professional identity – that influence value capture, may support firms in the capture of both financial and professional value on the basis of the role they play in a given project. Strategies should be focused on the pursuit of multiple strategic goals, including financial and professional goals, and therefore revolve around multiple value dimensions. To attain these different strategic goals, decisions regarding the firm's activities and responsibilities in the project are crucial. From a firm perspective, certain activities or responsibilities may be necessary to realize professional goals, while payment for these is fundamental to capture monetary value. In addition, decisions with regard to resources and partners play a key role in attaining intended goals with the available expertise. While the 'right' resources and partners enable firms to create the project quality to which they aspire – which is crucial to capture professional value – a lack of resources or involvement with the 'wrong' partners can seriously complicate the capture of professional value. Decisions with regard to resources and partners are thus strongly related to the financial and professional risks the firm is willing to take in a project. Collaboration agreements and the revenue model adopted by firms in relation to a project determine when and how much financial and professional value they can actually appropriate in the specific collaboration with other project actors.

Making strategic decisions for a specific project facilitates firms to take advantage of specific opportunities offered by the project or deal with the specific risks that a project entails. Substantiating different strategic decisions in relation to one another in a structured manner may help firms to arrive at more consciously developed value capture strategies that are more encompassing and can be better managed over the course of a project. The board game that is part of the value capture toolkit provides a way to do this. It not only addresses the key aspects and relationships that are

important to consider, it also stimulates joint discussion and deliberation. As such, it may help firms to engage in new strategies for a project while safeguarding the professional values that are at stake.

§ 7.2 Theoretical implications and suggestions for future research

The insights into project-based value capture and project-specific value capture strategies of architectural firms developed in this dissertation are particularly relevant to research on: organizational value capture; the management of architectural firms; and business model design processes. The theoretical implications of the research for these three research domains are presented below, with suggestions for future research also provided.

§ 7.2.1 Implications for research on organizational value capture

The findings of this research contribute to the understanding of organizational value capture (Bowman and Ambrosini, 2000; Lepak et al., 2007; Pitelis, 2009) by providing insights into the dynamics of project-based value capture by architectural firms.

Building on the seminal work of Bowman and Ambrosini (2000) and Lepak et al. (2007), who used the classic distinction between 'use value' and 'exchange value' to develop an understanding of the content and process of value capture across multiple levels of analysis, this research added 'professional value' as a third dimension in this interaction, taking both the financial and professional goals of architectural firms into account. This multidimensional conceptualization of value generated specific insights into how the pursuit of professional value capture influenced a firm's financial value capture. Firms intentionally sacrificed the capture of financial value for the capture of professional value both in their ongoing interaction with the client (Chapter 3) and in relation to their own strategies for the project (Chapter 4). This shows that non-monetary dimensions of value not only play an important role in the value capture of firms with multiple strategic goals, but also shape the amount and processes of financial value capture by firms. This indicates that the study of value capture by organizations with multiple strategic goals requires the development of value capture theory around the capture of multiple value dimensions beyond the purely monetary dimension.

Existing value capture research has predominantly focused on how inter-organizational dynamics and dynamics between an organization and its employees influence organizational value capture and may unintentionally lead to value slippage, which should be avoided at all times (Chang et al., 2013; Lepak et al., 2007). This research contributed to this literature by uncovering how dynamics between different values and between the project and the organization influence firm value capture, and by providing fine-grained analyses of how value slippage – which is conceptualized as falling apart into financial value slippage and professional value slippage – can be both beneficial and harmful to firms and, as such, intentionally risked, accepted or counteracted by firms.

This research thereby adds to the literature on organizational value capture by highlighting the role of individual actors in the value capture process. Chapters 2, 3 and 4 revealed that the evolution of a firm's value capture over time is not only triggered by unexpected events (e.g. Chang et al., 2013), but also due to the deliberate use of chosen strategies. The findings of these studies highlighted how conscious strategic actions and decisions within projects, as well as when deliberating on projects, influenced the value capture of firms. By unpacking the underlying reasons for engaging in these strategies, the research showed that value capture-related decisions are indeed driven by objective organizational goals, but also largely influenced by the individual and shared values and beliefs of professionals. In this respect, the research adds to the literature on organizational value capture by emphasizing the important link with professional identity. This suggests that studies that delve deeper into human actions related to value capture, for example by adopting a practice perspective (Nicolini, 2009), have significant potential to enrich the understanding of organizational value capture.

The investigation of the value capture of architectural firms in projects revealed that organizational value capture is influenced by a firm's role in a project (Chapter 2), the hierarchy in multiple organizational goals (Chapter 3), and the role of a project in the firm (Chapter 4). In addition to firm-wide differentiation strategies (Pitelis, 2009), such as the existence and management of rare, inimitable, non-substitutable and valuable resources (Sirmon et al., 2007; Sirmon et al., 2011), or firm revenue models (Amit and Zott, 2012; Zott et al., 2011), strategies may be dependent on collaboration with other organizations. Thus, they can transcend the boundaries of an individual firm and can take multiple forms within one organization. The client-firm and project-firm strategies for value capture that are described in this dissertation thus underline that it is important to study organizational value capture across different levels of analysis (Lepak et al., 2007) to fully comprehend the process and dynamics involved.

The findings illustrate that a project-oriented and multidimensional perspective may be particularly useful to further developing existing value capture theories to encompass the complexities and dynamics that contemporary organizations must increasingly deal with, such as working in temporary, boundary spanning organizations (Sydow and Braun, 2018) or pursuing multiple strategic goals simultaneously (Thompson and MacMillan, 2010).

§ 7.2.2   **Implications for research on the management of architectural firms**

This research also contributes to the understanding of the management of architectural firms by systematically unravelling the project-specific business processes in such firms. Previous work on the management of architectural firms, which has been remarkably scarce, has often focused on generating typologies of firms based on unique features of their business approaches or management strategies (Canavan et al., 2013; Coxe et al., 2005; Winch and Schneider, 1993). This research offers a more nuanced understanding of architectural business, by highlighting that the business approaches of architectural firms vary on the basis of a wide spectrum of interrelated choices, which in turn span multiple dimensions of value and multiple levels of organizational activities. In addition, it has been shown that these business approaches may even differ across projects.

This suggests that not only projects but also architectural firms are highly heterogeneous and dynamic. However, as the findings also revealed that the heterogeneous and dynamic nature of a firm's project-specific business approach is caged within historically established professional ideals and beliefs, firms may pursue very similar approaches and struggle in explicitly expressing their competitive advantages. This underlines the importance of developing project or solution-specific business models (Kujala et al., 2010; Wikström et al., 2010), and also suggests that research on the management of architectural firms might benefit from more project-specific insights.

Although these insights draw on empirical research in architectural firms, they are likely to be of interest for studying other project-based firms, creative firms and professional service firms. As architectural firms are exemplary of all three types of organizations, the understanding of value capture by architectural firms developed here adds to the literature in each of these specific subfields.

Business related research is still fragmented in these fields (e.g. Laursen and Svejvig, 2016; Martinsuo et al., 2017) and largely focused on developing theories around the management of business rather than investigating how businesses are run on a daily basis. While important contributions in these fields are either focused on firms' financial performance, dominated by a human resource perspective (Bowman and Swart, 2007; Swart et al., 2015), or aimed at explaining business related paradoxes (DeFillippi et al., 2007; Lampel et al., 2000; Manzoni and Volker, 2017); this research provides a more integrated understanding of the dynamics that underlie these businesses and how these are shaped by and in turn shape the value capture strategies of the actors involved.

§ 7.2.3 Implications for research on business model design processes

Currently, scholarly interest in the 'modelling' and 'designing' of business models is growing (e.g. Baden-Fuller and Mangematin, 2015; Palo and Tähtinen, 2013), as it has been recognized that the actions of practitioners to represent their business in a simplified form and to evaluate strategic alternatives on the basis of that overview can spur business model innovation and potentially result in increased firm performance (Aversa et al., 2015; Zott and Amit, 2007). By unpacking the processes through which project-specific value capture strategies of architectural firms are collaboratively constructed and reconstructed by means of the development of a business model, this research provides two main contributions to the literature on business model design processes.

First, by uncovering dynamics in the value capture of architectural firms that arguably would have remained invisible if the focus had been at the overarching level of the firm, this research emphasizes that it is important to investigate the business modelling efforts of actors at the project level when studying project-based firms. This is in line with earlier research, which has shown that business models can exist at the level of a single project (Kujala et al., 2010; Wikström et al., 2010), can vary from project to project (Sabatier et al., 2010), and can emerge bottom-up (Mutka and Aaltonen, 2013). The case-based interviews and observations of case-based strategy meetings also revealed how business model designs were continuously adapted over time. For example, additional activities were performed to attain professional goals, thereby sacrificing the capture of monetary value. This suggests that to understand the business modelling processes of project-based firms, studies need to adopt both a project-specific orientation and process approach.

Second, the research shows how professional identity enables and constrains the business modelling and evaluating efforts of organizational members. By uncovering organizational advantages and disadvantages of the mutually shaping relationship between professional identity and business model strategizing, the research calls for more consideration of identity in the business model literature. Although scholarly attention has been given to how the reciprocal relationship between strategy and identity can potentially support or jeopardize organizational outcomes (Anthony and Tripsas, 2016; Tripsas, 2009), identity remains surpisingly invisible in the literature on business model design. The findings suggest that future research on business model design processes in organizational settings may benefit from taking into account the multiple identities involved.

§ 7.3 Practical implications

The empirical findings of this research and the value capture toolkit that was developed based on these findings add to the overall understanding of architectural business. By unpacking the dynamics involved in the project-based value capture of architectural firms and the complexities associated with the development of project-specific value capture strategies, this research has important practical implications for collaborative work in inter-organizational projects and for architectural firms and other organizations that are involved in these projects.

§ 7.3.1 Implications for collaborative work in inter-organizational projects

This research provides architects and other project actors with insights and tools to collaborate in inter-organizational project settings. It helps architects to adopt more business-minded approaches in their projects. The current lack of such an approach was often criticized by the clients we interviewed, as it causes disturbance in the value co-creation process, which also affects collaboration in a project. Moreover, the research helps clients, partners and other actors who are involved in inter-organizational projects to gain a better understanding of the underlying rationales behind each other's business strategies in projects. This may contribute to the development of shared goals and consequently enhance collaboration.

Adopt a value-centred approach in project work

Practitioners who collaborate in projects on a daily basis are either formally trained or have developed an implicit awareness of the importance of working in a manner that ensures projects are delivered on time, within budget and according to quality standards. The current consensus among project management scholars is that these established criteria of project success, often referred to as 'the iron triangle', provide only a single-sided view of project success (Atkinson, 1999; Shenhar et al., 2001). Clearly, this suggests the importance of taking into account other criteria, such as benefits, stakeholder satisfaction and impact, which largely revolve around the value that is co-created in the project (Laursen and Svejvig, 2016). This implies that project success and value co-creation are intrinsically linked, and suggests that project actors need to adopt value-centred approaches to perform their work in projects (Laursen and Svejvig, 2016). This may not only lead to enhanced project success, but may also contribute to the realization of organizational and stakeholder benefits. By focusing closely on practices of value capture in projects, this research provides practitioners with valuable insights regarding the dynamics that underlie these practices. These insights can be used in the development of value-centred project approaches that are able to address both project and organizational goals.

Customize your approach

The aim of this research is not to provide a one-size-fits-all approach, but to inspire practitioners to develop their own approaches on the basis of the generic information and toolkit that are provided. The more these approaches are tailored to the characteristics and needs of a specific project context, as well as the characteristics and needs of the organizations involved, the more likely it is that these approaches will enhance both project success and organizational benefits. As Chapters 2 to 5 have shown, using overly generic business approaches for projects readily leads to unexpected disruptions, disagreements among partners, or important aspects being overlooked.

Create shared understanding

Collaboration in the development of a value-centred approach is crucial. Discussions about the benefits that are pursued or the approach that is taken and why these are important enhances the shared understanding among project actors with respect to the most suitable value-centred approach for a given project, irrespective of whether these discussions are purely informative or aimed at collaboratively constructing the

approach. Awareness of, and respect for each other's expertise, goals and risks enables actors to monitor and manage the evolution of value over the project's lifecycle. The project-specific value capture toolkit that was presented in Chapter 6 can provide project actors with simple, integrative frameworks to achieve this goal.

§ 7.3.2 Implications for architectural firms

By means of the knowledge and toolkit generated in this research, architectural and other firms may become better equipped to enhance the conditions for value co-creation and capture in the projects in which they are involved. The outcomes of the research will enable firms to assess potential projects in a more structured and integrative way and thereby avoid conditions that might be detrimental. This supports firms in improving their value capture strategies for specific projects and consequently their overall performance.

Develop project-specific value capture strategies

The strategies used by architectural firms to capture value in projects are often based on previous experience and/or intuition and may be redeployed in a rather ad-hoc manner. Considering the fast pace and disruptive nature of ongoing changes in the field and at the societal level, such as the devaluation of established professional roles, this ad-hoc strategy-making seems particularly vulnerable. In order to perform work in viable and professionally satisfactory ways, practitioners may benefit from more conscious and structured strategic decision-making. This research provided a toolkit for developing project-specific value capture strategies. The toolkit aims to inspire practitioners to not only design the project itself, but also their value capture strategy for the project. The toolkit provides architectural firms with opportunities to enhance their value capture from projects and to more consciously analyse and enhance their competitive advantage through their projects (Shenhar, 2004).

Continuously improve your strategies

The development of a project-specific value capture strategy is not a one-off activity that only needs to be performed at one specific moment in time. It is an activity that requires constant attention and adaption to deal with changing project conditions. In comparison to the innovation of firm business models, project-specific business

models and the strategies they incorporate require continuous attention, as projects constantly and rapidly change. Systematically engaging in continuous redevelopment of value capture strategies over the entire lifecycle of a project, and for multiple projects, has a number of benefits. It enables firms to create a strong shared understanding of their value capture strategies among their employees. This helps to ensure that employees who are involved in a project are aware of the opportunities and restrictions linked to the project-specific strategy and take these into account in their daily work, thereby contributing to the reshaping of strategy when project conditions change. Continuous redevelopment of project-specific value capture strategies also helps to identify and reflect on tensions as they arise in a project, how these are handled and how they play out over time. This enables firms to learn from their previous strategies in projects and optimize their strategies in future work.

Dare to be bold and creative

This research has clearly highlighted the importance of proven 'recipes' in the project-specific value capture strategies of architectural firms and revealed that these strategies were often chosen because architectural firms considered them more beneficial than alternative strategies. However, this research also showed that project-specific value capture strategies are often not thought through very systematically or in great detail. This implies that alternative strategies could be as appropriate as, or potentially even more appropriate than, established strategies. While firms that engaged in alternative value capture strategies in their projects often encountered many difficulties along the way, they also often substantially benefitted from their work, as it added to the development of their competitive advantage and organizational identity. This also seemed to be the case for firms that actively rejected projects which did not entirely match their ambitions (Chapter 4). Thus, the research findings suggest that bold and creative decisions in project-specific value capture may strengthen organizational identity and increase competitive advantage.

§ 7.4 Implications for education

The insights into the characteristics and challenges of architectural business and the value capture toolkit also have implications for the education of architectural students and practising architects. Although professional education increasingly includes business-oriented courses, business aspects remain largely absent in the graduate

curriculum (Cuff, 1992) and there is 'still a significant gap between the vision of the architect's role, as characterised in schools of architecture and the reality of practice' (Worthington, 2000, p. 22).

Teach a basic understanding of architecture as business

Many respondents in this research argued that they had learned how to run a business the hard way. They emphasized that there is a substantial gap between education and practice in this area, which they were only able to overcome by attracting outside expertise or through mentoring. However, it is generally thought that integrating a comprehensive number of business courses into the educational curriculum would not make sense; architectural faculties are not business schools. Moreover, it might even be at the expense of carefully designed programmes that teach and develop students' integrative thinking and design abilities.

However, the current gap between education and practice could be substantially decreased by teaching students a basic understanding of architectural business. Currently, students only start to comprehend the scope of what architectural work entails once they start working in practice. Professional ideologies of creativity and innovation as they are taught in architecture schools are often difficult to fulfil in daily work, leading to disappointment among architects (Styhre and Gluch, 2009) or tensions in the relationship with the client (Vough et al., 2013). Having an overview of how architectural business works, including the paradoxes that practising architects have to deal with to become and remain successful professionals and entrepreneurs/ managers, would no doubt deliver more business-conscious and business-minded architects. This could significantly enrich graduates' abilities to design and benefit from their own business processes when collaborating in the complex, dynamic inter-organizational project settings of everyday architectural practice.

Train business skills

Furthermore, this research shows how architects often need specific business skills or expertise to address the value capture challenges that accompany certain project-specific roles. Not all architects need to have the same skill sets, as they are involved or specialized in different kinds of projects with different kinds of actors. Therefore, an educational programme which allows architects to develop different skill sets would be highly recommended. Ideally, this programme would be focused on graduate architects who are already active in practice. At present, the BNA and BEP are already offering such programmes. However, the courses that are currently offered often concentrate

on very specific topics, when what is required is a fundamental understanding of what is important in running a business, insights into possible ways to acquire the necessary skills to do this, and an open mind when doing so.

Foster a business attitude

Architects often fear that their professional values, beliefs and goals will be endangered by certain business-related decisions. This fear seems to be grounded in a strong professional ethos of providing services that contribute to 'the higher good' , which is deeply embedded in architectural education and the entire professional community. While architects are used to dealing with paradoxes in their everyday work and typically keep these paradoxes 'alive' in order to reach the optimal solution for a project, they are surprisingly quick in resolving the professional-business paradox that they encounter in their value capture strategies by prioritizing the professional side. Based on this insight, I suggest that fostering a business attitude in education might help architects to become more aware of the paradox, better able to cope with it and better able to reflect on the implications of their actions and decisions. Fostering a business attitude does not necessarily require business-related courses. Inviting top managers from famous architectural firms to be involved in architectural programmes will also help students gain an implicit understanding of the need to develop a professional business attitude.

§ 7.5   Reflection on the research approach used

One important overall aim of this research was to gain insights into the project-based value capture of architectural firms that are relevant to both theory and practice. Currently, research that bridges gaps between academia and practice seems to be flourishing. There is not only a trend towards increased funding opportunities for practice-oriented research, but academic interest in research that is relevant to practice and society has also significantly grown (Alvesson and Sköldberg, 2017; Schultz and Hatch, 2005; Van de Ven, 2007). However, criticism of the methods of conducting such research remains persistent and some have questioned whether scientific research can ever be practical (McKelvey, 2006). In the following sections, I present some important reflections on the appropriateness of my approach and the relevance of my findings.

Scientific relevance and limitations of the practice-based research approach

The methodological approach of this research involved a number of biases, which I would like to address in this section. First, I had a strong bias due to my own background in architectural practice. The multidisciplinary research team of the futurA project was instrumental in avoiding the potential negative effects of my own practical bias. During the entire process of research design, data collection, data analysis and data interpretation, I consulted with members of the team on a regular basis. Due to the various backgrounds and affiliations of the team members, I learned how to pursue the academic rigour that is crucial for generating results that are relevant to academia, without having to give up my practice-oriented approach.

To avoid biases arising from mainly mirroring the views of the consortium partners who might pursue their own agendas, I decided not to focus on specific issues in firms or specific cases, but investigated the more generic difficulties and complexities of project-based value capture across multiple organizations and projects. Another kind of bias that accompanied the involvement of our consortium partners was related to the types of firms they represented. Because participation in the futurA project as a consortium partner required a financial contribution to the project funds, the participating organizations were all medium to large-sized established firms. Therefore, some additional firms, including some small-sized and recently established firms, were included in the data collection process to ensure a good representation of the Dutch architectural field in the research samples.

As the research design was aimed at revealing higher level concepts that could be helpful to practitioners, there was a possibility of overlooking highly insightful and innovative findings that may stem from focused, 'pure' academic work. However, since my goal was to do relevant rather than ground-breaking research, I do not consider this to be a significant issue. In fact, it might be argued that the design-oriented research even contributed to greater depth and focus in the empirical research, as it continuously encouraged me to reconsider what the important issues were.

Finally, I focused on the involvement of architectural firms in construction projects and particularly investigated the Dutch context. This raises questions about the generalizability of the findings to other creative and/or professional domains, to other firms that work in projects, and to other countries. Although project-based value capture in these contexts is undoubtedly very different at a detailed level, I believe that the research provides insights that are relevant to these different domains on a more general level. This is supported by the fact that the presentations of my research in different academic communities were all followed by productive and supportive discussions.

Practical relevance of this research

Scientific research is a long process that requires multiple rounds of analysis to arrive at the results and then many rounds of peer-review to have these results disseminated. Therefore, practitioners usually wait a long time before they actually become familiar with and are able to make use of the research findings. This endangers the validity of the results, as they may easily become outdated for practice over an extended timeframe. In this respect, McKelvey (2006, p. 826) argued that 'practitioners need immediate help'. To address this specific issue, the overarching research project, futurA, was designed around a series of 'Living Lab' workshops with our consortium partners to ensure close practitioner involvement during the entire process. In this way, the select group of consortium members regularly received updates about preliminary findings, which they thus already started to become familiar with and use during the interactive workshops that we organized. This enabled them to benefit from their involvement in and funding of the project, while it also enabled us to keep up to date with the current status quo in the field and develop our studies accordingly to ensure that our research results would not be outdated. Preliminary results were also regularly disseminated to a broader audience of practitioners through our project website (www.future-architect.nl), blogs, discussion groups and workshops.

Since the research was designed to investigate overarching patterns across multiple projects and firms, it provides insights into the abstract phenomena of value capture, rather than specific practitioner problems. Schultz and Hatch (2005) argued that practitioners are not interested in an account of the complexities involved in their projects and organizations, as they are more than aware of these. Instead, they particularly need help to 'make sense of it all', which in turn enables them to take appropriate and effective action (Schultz and Hatch, 2005, p. 338). By means of the value capture toolkit, this project attempted to make these higher level abstract concepts and results applicable in practice. My experience as a practising architect with an ability to make choices based on intuition helped tremendously in the development of the toolkit alongside the research. The results and toolkit are intended to spur debate among a wide group of practitioners rather than to focus on the needs of a specific individual or group.

While some practitioners might find the results and toolkit valuable for and/or readily applicable within their organization or project, others will no doubt feel the opposite. This, for example, became clear during the strategy workshops. While one respondent acknowledged that the partners in his firm would never see the value nor take the time to use the project-specific value capture framework, another respondent contacted me afterwards because he immediately wanted to implement the approach in his firm.

Academia and practice are two worlds apart with regard to reasoning and language. The structured methodology and vocabulary employed by academics is typically at odds with the ways in which practitioners are used to working (Bartunek, 2007). This may lead to immediate irrelevance of the results for practice. The close involvement of practitioners was crucial to address this issue. In particular, the blunt feedback of practitioners who were not involved in the consortium helped to find the right words and visuals to get our message across. As one practitioner pointed out, 'if the tool doesn't look good, no architect will use it, no matter how relevant the contents'. This comment was crucial in realizing that it did not matter what we as a research team considered a good fit with practice, we needed the outside 'user' perspectives to enhance the use potential and relevance of our results. This insight led us to develop a practice-oriented book, for which we hired a communications expert and graphic designer.

To conclude, the time and enthusiasm that the BNA and the practitioners involved devoted to this research project throughout the entire four years underline its practical relevance. At the beginning of the research, when many architectural firms were struggling with the effects of the financial crisis, a number of architects mentioned that the research was 'just what is needed'. Although many of the practitioners involved were working at full capacity during the final stages of the research, they were still very interested in being involved and curious to hear the results. A number of participants emphasized how the toolkit had enabled them to gain a better overview of their project strategies, while some even applied preliminary versions within their own projects and organization. This shows that the topic of this research is highly relevant. I hope that this dissertation has opened up new perspectives to studying architectural practice and may inspire others to engage in further investigations of value capture by creative professional service firms.