Value constructs in multi-stakeholder environments that influence project portfolio decision making

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Abstract: A key goal for project portfolio management (PPM) is to maximize strategic value across the portfolio. In certain industries, particularly in the context of non-commercial sectors, the 'value' generated by the portfolio may not always fit with typical PPM frameworks that emphasize financial value. Furthermore project and portfolio 'value' are complex phenomena due to the multiple and sometimes contradicting expectations demanded by multiple stakeholders that participate in and influence the ways that PPM decisions incorporate value. This paper draws on organization, business, stakeholder and project management literature to consider different perspectives of value, and integrates stakeholder theory and sensemaking in its investigation of value in multi-stakeholder portfolio environments. It highlights the key question 'Value for whom, value by whom' and proposes that multiple case-studies of a diverse sample of project-based organizations would be useful to address this question. A Hybrid Delphi study using expert panels is also proposed to triangulate the findings.

Keywords: project portfolio management, value, stakeholders, sensemaking, decision making

Introduction

As activities in organizations today become increasingly project-focused, studies on the management of projects, multiple projects, programs and project portfolios are viewed as highly relevant to the success of an organization. The Australian Institute of Project Management (AIPM) defines project portfolio management (PPM) as: *"the centralized management of one or more portfolios of projects, which includes identifying, prioritizing, authorizing, managing and controlling projects, programs and other related work, to achieve specific strategic business objectives." (AIPM 2011).* Additionally, PPM involves an ideation process, screening, identifying, authorizing, selecting, controlling, concurrent reprioritizing and terminating projects where required; whilst evaluating the associated risks, resources and priorities, and developing strategies in line with portfolio and organizational objectives (Archer and Ghasemzadeh 1999, Cooper, Edgett et al. 1999, Reyck, Grushka-Cockayne et al. 2005) and includes structures, processes and people (Killen, Hunt et al. 2008). As such, PPM helps balance projects, resources and demands in order to integrate the portfolio with organization strategies. PPM can be viewed from many different perspectives including portfolio methodologies (Cooper, Edgett et al. 1999), decision processes, tools and techniques (Archer and Ghasemzadeh 1999, Reyck, Grushka-Cockayne et al. 2005), strategic orientation (Artto and Dietrich 2004, Meskendahl 2010), a process of internal development and change (Brown and Eisenhardt 1997, Elonen and Artto 2003), a dynamic capability (Killen and Hunt 2010) and more recently as strategic value creation and management (Thiry 2002, Winter and Szczepanek 2008, Eweje, Turner et al. 2012, Killen, du Plessis et al. 2012, Martinsuo and Killen 2014).

Since a key goal for PPM is to maximize strategic value across the portfolio, references made to value are highly relevant perspectives in relation to value creation and strategic organizational management (Winter and Szczepanek 2008). This paper adopts a value perspective (Thiry 2002, Winter and Szczepanek 2008) in its orientation of PPM.

Improving the understanding of 'value' has become especially important as PPM is being adopted across a wider range of industries, many in non-commercial areas where the 'value' generated by the portfolio does not fit with typical PPM frameworks that emphasize financial value. Organizations of all types look to PPM for guidance as they struggle to cope with reduced funding and increased governance requirements for transparency and reporting in complex multi-actor environments (Blomquist and Muller 2006, Klakegg, Williams et al. 2009, Mosavi 2014). These issues give rise to questions such as how value is determined in different types of portfolios, and whose perspective(s) of value are adopted in these contexts? Research shows that decision-making involves multiple stakeholders with multiple goals and expectations (Bourne 2009, Bentzen, Christiansen et al. 2011, Bourne 2011, Beringer, Jonas et al. 2013). Project 'value' is a complex phenomenon due to the multiple benefits expected from projects and the multiple stakeholders that participate in and influence the ways that PPM decisions incorporate value. For example, the types of values that decision makers and stakeholders focus on may differ depending on organizational strategies and goals (Winter and Szczepanek 2008). This multiplicity of influences could lead to complex decision

choices, potential compromises and inconsistencies in reality. However, these issues have not been studied and addressed in-depth. This conceptual paper considers the various stakeholders' constructs of 'value' to explore the different dimensions of value as a means to understand PPM decision-making processes beyond the commercial assumptions of value common to PPM.

This area is important for investigation because not every project portfolio may have an immediate or tangible commercial outcome in terms of revenue generation or a commercial value. Most PPM studies tend to be orientated towards commercially economic or performance-based outcomes including research and development (R&D) (Bard, Balachandra et al. 1988, Stewart 1991, Balachandra and Friar 1997, Chien 2002, Engwall and Jerbrant 2003, Behrens, Ernst et al. 2014), a process of internal development and change (Brown and Eisenhardt 1997, Elonen and Artto 2003) and new product development (NPD) (Cooper, Edgett et al. 2004, Killen, Hunt et al. 2007, Oh, Yang et al. 2012). Drawing on Allee's (2000b) ideas of value management and value networks, no research on value to date has been found to consider and compare tangible and intangible value dimensions in the context of project portfolios. This includes commercial and non-commercial project portfolios in private, public and non-profit sectors involving corporate social responsibility, community development or public services. Furthermore, discussions around how value is constructed, measured, managed and compared in projects and portfolios within these sectors are still unclear.

This paper introduces the importance of considering several dimensions of value and the ways that multiple stakeholders could influence project portfolio decisions. It is organized as follows. It commences with a review of value perspectives including those of different stakeholders. Next, it highlights how stakeholder theory and sensemaking concepts contribute to integrating value in project portfolio decision making. This is followed by an exploration of the implications of value dimensions and multi-stakeholder management relevant to project portfolio management. Next, it suggests several pertinent questions for further research. The paper proposes possible research avenues to address the research questions. The conclusion reiterates the significance, importance and implications of research in this area.

Project portfolio management, value and decision making

Projects in organizations today are less likely to be analyzed in isolation, and are increasingly linked to broader business agendas and organization strategies, and thus managed as part of the portfolio of an organization's projects (Artto and Dietrich 2004, Müller, Martinsuo et al. 2008). Project Portfolio Management (PPM), as a simultaneous management of a collection of projects as one entity is gaining more interest and importance in both theory and practice. By adopting a portfolio-level perspective, PPM enables organizations to strategically and holistically manage the project portfolio as part of the strategic programs (Vereecke, Pandelaere et al. 2003, Lycett, Rassau et al. 2004). Early

literature on PPM appears to hold a dominant theoretical view of rational processes and mechanisms for decision-making, following on from its history of being aligned with project management theory and practices. Research on portfolio management can be traced back to a securities portfolio selection by Markowitz in 1952 in the financial sector (Markowitz 1952). Value was only considered from a singular dimension, that is, the financial investment perspective. The formation of the expectations and beliefs of value from multiple dimensions was not explored.

Therefore, central to criticisms of current PPM decision-making practices is that it is very much preoccupied with financial processes and rational models. For instance, the paper by Cooper et al (Cooper, Edgett et al. 2001) states that portfolios relying largely on financial measures are less likely to show portfolio success compared to those who use multiple methods, particularly scoring metrics and strategic approaches. Yet in practice, financial methods of evaluation tend to be the preferred approach. Dominant PPM approaches also tend to overemphasize economic analyses of value (Kester, Griffin et al. 2011). The views of current PPM processes are deemed insufficient for decision-making. On one hand, they over-emphasize economic analyses of value incorporating quantitative modelling methods that could in fact be unreliable if the data is not accurate (Kester, Griffin et al. 2011). The issue with using formal and rational decision approaches over others is that it may lead to the neglect of explorative initiatives being pursued and result in an unintended imbalance of short-long term and high-low risk projects to be achieved (Cooper, Edgett et al. 2001). Moreover, potentially good projects and ideas could be overlooked or terminated (Engwall and Jerbrant 2003, Blichfeldt and Eskerod 2008). On the other hand, a less formal approach to decision-making could lead to potential biases and affects the planning and allocation of resources in PPM (Blichfeldt and Eskerod 2008).

In practice, decision-making in PPM involves a complex, inter-related and often inter-dependent group of people, with different perspectives and capabilities, and with implicit and explicit agendas. The practice of PPM is considered a dynamic, iterative decision process where projects are constantly being reviewed, updated and revised (Cooper, Edgett et al. 1997). PPM also involves a process of negotiation and bargaining involving multiple stakeholders internal and external to the organization (Christiansen and Varnes 2008, Martinsuo 2013) and there are multiple perspectives on short and long term (strategic) value that influence the ways that value is managed and delivered by projects. Recent PPM decision-making literature has started to consider practice-based issues that include human factors (Elonen and Artto 2003, Killen, Hunt et al. 2008) and informal approaches to activities (Olausson and Berggren 2010) including resource allocations (Blichfeldt and Eskerod 2008) or legitimacy challenges (Gutiérrez and Magnusson 2014). It is thus suggested that portfolio decision-making is 'much more complex than just selection and termination decisions,' (Kester et al 2011, p. 642). Additionally, decision-making procedures are likely to be affected by multiple stakeholders and the assessment of value (Brunsson 2007). Increasingly researchers are extending the understanding of project portfolio value to recognize aspects such as preparing for the future or taking advantage of opportunities (Voss and Kock 2013). However, there is a lack of research that explores the use of wider

dimensions of strategic value, such as social, environmental or knowledge value, in project portfolio decision-making. Thiry and Deguire (2007) state that the creation of real value for organizations is poorly understood and call for a coherent approach to aid in the management of value in project based organizations where multiple stakeholders influence the process. A question that arises, is 'Value by whom, value for whom'?

Perspectives of value and its dimensions

The term value has several meanings and is used in many ways. What is of value is a matter of perspective (Elias 1998).

> *"The value of a given item may differ according to whether it is viewed from the standpoint of the seller, the buyer or the user. Even different concepts of value may exist between different users (depending on time, place, situation or availability of substitute items.)…but if a product does not fulfil a user's need, then it has no value, regardless of its price (Elias 1998)."*

Over the years, a wide number of theoretical perspectives have been used to study value in organizations including value engineering and value management, stakeholder theory, value chain model theory (Porter 1980), and value as viewed from a systems and networks perspective (Allee 2000a, Biem and Caswell 2008). In this section, value will be identified and explored from different perspectives to investigate its connections with the field of PPM decision-making.

Value engineering and value management

Value and its management have been described as a balancing act between the "satisfaction of many differing needs and the resources used in doing so." (BSEN 2000). From a value engineering perspective, Elias (1998), identifies 7 categories of values - 'economic, moral, aesthetic, social, political, religious and judicial values' (Elias 1998) yet, discussions about value engineering are ultimately, still largely concerned with economic value. Subsequently, 'value engineering' is often associated with value management concepts.

Value management concepts are well recognized and applied in the disciplines of project management (Kelly and Male 1988, Prasad 1997, Thiry 2002), marketing management (Bradley 1995, Ulaga and Chacour 2001, Prahalad and Ramaswamy 2004), portfolio and corporate inventory management (Michalski 2008, Maizlish and Handler 2010) and investment management (which is different from project portfolio management) (Irani 2002), intellectual capital (Petrash 1996) or strategic management (Moore 1995, Kaplan and Norton 2001, Stoker 2006, Male, Kelly et al. 2007) studies. These studies are often focussed on devising a systematic process for productivity though value engineering and increasing economic and customer value in order to gain competitive advantage (Kelly and Male 1988).

From project management studies about value, there are several angles of value management to highlight. For example, VM as a management style that is process-driven

(Male, Kelly et al. 2007) or value creation as a strategic planning process leading to competitive advantage (Winter and Szczepanek 2008). Male et al (2007) posit that value management can be embraced as a management style following a process-driven, structured, consultative inquiry methodology. The discussions highlight the necessity for a participatory, multi-disciplinary representative group of people working together to establish and improve value in the products, services, projects, programs, administrative processes, organizations and systems. However, the term 'value' is not still clearly defined, and therefore, what dimensions of 'value' are to be managed is less clear.

The tangible and intangible dimensions of value

Allee defines value as '*a tangible or intangible good or service, knowledge, or benefit that is desirable or useful to its recipients so that they are willing to return a fair price or exchange'* (Allee 2000a). Allee (2000b) challenges the commonly addressed perspectives of value revolving around monetary assets, alliances and relational capital, intellectual, human and structural capital and offers alternative forms of value in terms of intangible assets (viewed as unseen and often unappreciated) including corporate social responsibility and environmental sustainability. For example, knowledge can be exchanged for tangible goods, services or money; or intangible value like customer loyalty (Allee 2000b).

Other writers posit that the intangible and non-financial benefits including indirect project costs need to be considered in evaluating infrastructure investments in Information Technology (IT) and Information Systems (IS). In the context of Information Technology (IT) and Information Systems (IS) portfolio investments, some writers argue that decision-makers need to consider both tangible and intangible values including the broader considerations of human and organizational impacts in evaluating a project investment (Hochstrasser 1990, Irani 2002).

Value from a systems and networks perspective

The complexity of value exchange arises when one expands one's views of value to a systems perspective. As Allee (2000b) states, *'every person, every organization, every country and every society are engaged in creating, exchanging, contributing or gaining some type of value in every act that they undertake'* (p. 29). Overall, the author identifies the value domains as: business relationships, human competence, internal structures, social citizenship, environmental health and corporate identity (Allee 2000b). Allee explores the conversion of intangible assets into negotiable forms of value by the virtue of the impact of intangibles on value networks (Allee 2000a) and subsequently map the value network including intangibles (Allee 2008) and address the collaboration, innovation and value creation at a global telecom whilst stressing importance of intangible value and the power of networks. What is important in Allee's study of value is that she attempts to expand the idea of value to include intangible assets and previously neglected social and economic contributions. The writer states that *'at the macro-economic level this new thinking allows us to more fully appreciate intangible assets such as the social fabric of a country, and the real value of healthy ecosystems, as well as beginning to appreciate indigenous people and subsistence agriculture as being of genuine*

economic importance' (Allee 2008). Nogeste and Walker (2005) suggest that inexplicit intangible outcomes could be cross-referenced into explicit tangible outputs. Whilst the study was limited to the perspectives of those delivering projects and not its recipients, and specifically addressed outcomes, benefits and outputs, rather than 'value' per se, what is important is that expanded perspectives of value are increasingly recognized in the literature.

In line with the perspectives of intangible value and the power of networks, long-term value creation and knowledge sharing is argued as important from an alliance or partnership portfolio perspective. An alliance portfolio is an alternative way of viewing business relationships (Parise 2003) and implies that multiple partners work collaboratively to achieve business goals. From Parise's ideas about multiple players or partners in a portfolio driving the achievement of organizational goals, one can infer that that new rules for PPM and decision-making may be similarly required to meet the challenges of increasingly complex and dynamic portfolio settings when there are often multiple and inter-dependent stakeholders involved.

Stakeholder theory and stakeholder perspectives of value

Stakeholder theory considers how managers articulate the shared sense of the value they create, and how core stakeholders are connected (Freeman 1984, Freeman 2004). It also propels managers to consider the types of stakeholder relationships required in order to deliver on their purpose (Freeman 2004). In essence, stakeholder theory is about purpose and human relationships. Unless stakeholders are defined and identified, it would be almost impossible for managers to consider delivery on their intentions of value.

Depending on how widely or narrowly stakeholders are defined, this can have an impact on portfolio decisions. In one instance, stakeholders can be identified simply as shareholders (Freeman 2004) or any group or individual that is able to affect or be affected by the achievement of the organization's objectives (Freeman 1984). However, there is heterogeneity within stake-holding groups and roles that extend beyond customers or employees. For instance employee levels may differ (shop workers and middle managers), customers segments (online customers, over-the-counter customers, purchasers of shampoo or luxury goods consumers), owners, bondholder seniority, supplier tiers or various community groups with conflicting objectives (Jones 1995, Sundaram and Inkpen 2004). An alternate definition of stakeholders can be viewed as primary or secondary stakeholders (Clarkson 1994, Mitchell, Agle et al. 1997). Clarkson (1994) defines primary stakeholders as those who voluntarily *'bear some form of risk as a result of having invested some form of capital, human or financial, something of value, in a firm'*. Primary stakeholders are said to include capital suppliers (shareholders) employees, other resource suppliers, customers, governments, community residents, and the natural environment (Clarkson 1995, Hillman and Keim 2001). Mitchell et al (1997) position primary and secondary stakeholders as owners and non-owners of the firm; as owners of capital or owners of less tangible assets; as actors or those acted upon; as those existing in a voluntary or an involuntary relationship with the firm; as rights-holders, contractors, or moral claimants; as resource providers to or

dependents of the firm; as risk-takers or influencers; and as legal principals to whom agent-managers bear a fiduciary duty' (Mitchell, Agle et al. 1997).

Stakeholder theory states that managers need to consider the legitimate interests of individuals, groups and communities who are affected or impacted by their organization's activities (Freeman 1994, Donaldson and Preston 1995), particularly the primary stakeholders that can have an impact on an organization's performance, strategic value generation and long term success. An organization can therefore be viewed as interdependent relationships among primary stakeholders (Chakravarthy 1986, Clarkson 1995, Donaldson and Preston 1995). Alternatively, Irani (2002) classifies stakeholders as strategic (directors and senior management) and operational (those whose job functions are affected by the IT/IS investments). In Kleersnijder and Berghout's (2010) project portfolio research on non-profit organizations, the planning and prioritization model consists of eight layers that seem to involve different stakeholding groups that exist to ensure transparency and governance utilizing the different stakeholder roles in the portfolio. Thus it can be observed that different organizational and portfolio contexts seem to identify stakeholder groups quite differently.

Stakeholders have differing and often conflicting viewpoints of value and competing goals and this could differ in sectors and portfolio contexts. Hillman and Kleim (2001) state that firms often have multidimensional goals that include social goals. They highlight the conflicts that often exist between social goals and shareholder wealth creation as there is an opportunity cost and opportunities for increasing shareholder value may decrease. Jones (1995) argues that different stakeholder sub-groups might have distinct and competing interests, and implies that some stakeholders may be instrumentally more important than others. Despite the conflicting demands of different stakeholders, Freeman (2004) argues that value creating is necessary for effective stakeholder management. Accordingly, stakeholder theory attempts to address the question of which groups of stakeholders deserve or require management's attention. Additionally, stakeholder saliency is likely to differ from issue to issue and from time to time (Mitchell, Agle et al. 1997).

Stakeholder management is a never-ending task of balancing and integrating multiple relationships, conflicting demands and multiple objectives (Freeman and McVea 2001) and closely paralleled to the characteristics of project portfolio management in its multiple-stakeholder focus although its presence in the PPM literature is still scant (Winter, Smith et al. 2006, Thiry and Deguire 2007). The challenge is that, in many instances, intangible value can be difficult, if not impossible to quantify (Hochstrasser 1990, Irani 2002), and this is said to be even more challenging in non-profit organizations (Kleersnijder and Berghout 2010). Many of the 'softer' benefits of technology and capital projects may be difficult to quantify (Aggarwal, Edward et al. 1991, Farbey, Land et al. 1993, Lefley and Sarkis 1997, Irani 2002).

Furthermore, criticisms exist for research that are often conducted in a 'value-neutral' setting (Boehm 2003), where every project, mechanics and the people implementing and evaluating the processes and outcomes are treated as equally important, and that these processes are largely logical activities, and PPM mechanisms are seen as separate from the

people influencing and/or making the decisions, those implementing the solutions and the recipients of the outcomes of the decisions made (Boehm 2003). There is hence a need to consider multiple stakeholder perspectives and involve stakeholder representatives from competing value systems in managing value (Male, Kelly et al. 2007).

Articulating value for different stakeholders

In any discipline of value, it is therefore crucial to be able to articulate the value that stakeholders will receive from the goods and services. Elias (1998, p. 393) states that '*value is determined by the buyer, not the seller; by the user, not the producer.*' This is often described as the value proposition, and often considers the customer as the key stakeholder, although there are other stakeholder perspectives including the public and the non-profit stakeholders. These views are discussed in the following section.

Customer-centric value

A value proposition is a clear statement of the benefits that the end consumer gets from using the products or services the network provides (Parolini 1999). Traditionally, the value proposition is expected to capture the relationships between the suppliers' offerings and immediate customer's needs. In consumer marketing, Prahalad and Ramaswamy (2004) observed that the meaning of value and the value creation process are shifting speedily from a product- and firm-centric view to personalized consumer experiences. They posit that consumers today are more likely to "co-create" value with firms, a view similar to Winter and Szczepanek's (2008) where there is a shift from product-centric projects and portfolios to focus on customer and value centricity.

As a strategic planning process where projects are linked to business strategy, Winter and Szczepanek (2008) study the various foci of value at three different levels of a business namely, at the strategic group level (shareholder value); business unit, program or portfolio level (provision of customer service, unit sales and profits) and project levels (improving service and quality). They argue for the move away from both the 'traditional product-centric view' (for example capital assets, systems or facility) and the 'traditional project management triangle' of specifications, cost and time to a 'value-centric perspective' (for example business strategy, organizational effectiveness and stakeholder benefit realization) (Winter and Szczepanek 2008). The researchers draw on Normann's (2001) views of customer value-creation to apply the same logic from organizations to projects by positing that long term measures of project and program success are strongly linked to customers' positions in relation to their own markets. This is deemed relevant and more sustainable for projects and programs in the 21st century. They also imply a representational shift from singular to multi-disciplinary projects and emphasize the importance of considering multiple perspectives in project and program management, of which the underlying message is the same for project portfolio management.

However, the traditional view of value proposition is critiqued as it targets end consumers and not intermediate supply chain partners (Biem and Caswell 2008). Biem and

Caswell's (2008) value network analysis model involves a firm's understanding of how its offering is positioned in terms of the final customer value, and how other nodes affect that final proposition. Accordingly, value is not simply added, but can be mutually created and recreated among actors (including customers) and the nodes in the business networks (Ramirez 1999, Prahalad and Ramaswamy 2004, Biem and Caswell 2008). Yet, these studies consider the customer the main stakeholder, and are focussed only on profit organizations and commercially-driven projects and portfolios. Still unexplored within the body of PPM literature are the less tangible or intangible value dimensions in multi-stakeholder environments beyond the customer stakeholder, how these value constructs differ in commercial and non-commercial portfolios that could also be found in the public and non-profit sectors.

Concerning the development of project portfolio decision-making methodologies in non-commercial and non-profit organizations, value is argued to be more intangible and difficult to determine in such portfolio types and hence investment decisions may need to look beyond investment efficiencies and returns on investment (Kleersnijder and Berghout 2010).

Public value perspectives

In the public services sector, value is often determined by the citizens and often identified as improved services, enhanced trust or social capital, or diminishing or eradicating social problems (Horner and Hazel 2005). For Kelly, Mulgan and Muers (2002), services, outcomes, and trust, legitimacy and confidence in government provide the basis for guiding decision-makers in considering the value they create. O'Flynn (2007) highlights the multiplicity of goals and objectives, multiple accountability systems including citizens as overseers of government, customers as users and taxpayers as funders, and implies that the dominant focus of public value creation may be in managing relationships and engaging in negotiation.

Another example of how value could be said to be complex and often less well-defined is value in the health system. In Porter's view (2010) of value should "always be defined around the customer, and in a well-functioning health care system, the creation of value for patients should determine the rewards for all other actors in the system." Whilst value is defined around the customer and the patient in the example of the health system, it is also measured by the processes and encompasses all the services and activities that jointly determine success in meeting the patient's needs. The writer suggests that a proper unit for measuring value needs to include all services or activities that contribute to the success in meeting a set of patient needs and is largely results and outcomes based. Porter states that value depends on results and outcomes achieved, not inputs. Additionally, accountability for value should be shared among the providers involved, hence there are multiple actors in the value generation and realization dimensions (Porter 2010). This reinforces the importance of considering multiple stakeholders and decision makers involved in creating and realizing value.

Other stakeholder value dimensions

From the perspectives of ethical quality as a value dimension, Palomino et al (Palomino, Baron Gomis et al. 2011) state that ethical value could be appreciated by stakeholders for example through good ethical and moral reputation and incorporating values orientated around employee quality of work-life (Palomino, Baron Gomis et al. 2011).

Other less tangible value perspectives and metrics consider employee workplace quality and the ability of the organization to engage the best available human capital (Fombrun 2001, Trevino and Nelson 2010); firm competencies in accessing superior resources and financial backing compared to other companies, having lower costs than competitors (Fombrun 2001), the media and other social establishments (Fombrun 2001); commanding a greater number of sales and production contracts (Fombrun 2001, Trevino and Nelson 2010). It could be deduced nevertheless that in many of these scenarios, the underlying motive is still towards enhancing financial and economic outcomes.

The need to look beyond tangible and financial constructs of value in PPM

Following the lead of business and organizational studies where most considerations of stakeholder groups are said to have advanced beyond customers to include suppliers, partners and other business stakeholders (Clarkson 1995, Donaldson and Preston 1995, Neely, Adams et al. 2002), in project portfolio management studies, it is only recently that researchers are considering the impacts of customer integration on PPM (Voss 2012). Nevertheless, Allee (2000b) argues that these expansions of stakeholder types are still focussed on those with direct financial transactions with the organization. In practice, the focus is still on the customer. Allee (2000b) calls for an extended outlook of possible value dimensions among different stakeholders.

Early PPM research has shown that the use of multiple value criteria including strategic measures is associated with better portfolio performance than a reliance on financial value measures alone (Cooper, Edgett et al. 1999). Meanwhile, very few studies explore non-commercial and intangible value. Thiry (2002) considers value management within project and program management that integrates learning and performance concepts whilst Bardhan and Sougstad (2004) raise the importance of valuing and prioritizing a portfolio of IT investment projects using real options analysis. Other studies about value in projects and project portfolios include value in multi-project environments where value realization is positioned as an outcome of a project portfolio (Kopmann 2013); value co-creation utilizing project alliance in the transport infrastructure sector; (Heikkinen & Airola 2013) and value management and learning in portfolios (Thiry 2002). Additionally, Killen et al (2012) discuss how the value of non-commercial portfolios might be measured and very recently, Martinsuo and Killen (2014) reviewed the concepts and practices of strategic value in non-commercial project portfolios to suggest that more research needs to be conducted in non-commercial evaluation and performance criteria for PPM. Other studies imply considerations of value in their research through the exploration of portfolio decision-making processes and outcomes, although value is not their primary focus (Kester, Griffin et al. 2011).

Although there is acknowledgement of the influence of multiple stakeholders on managing portfolio value and the need for improved ways to truly improve portfolio value (Thiry 2002, Thiry and Deguire 2007), there is a lack of guidance for practitioners in their quest to strategically and holistically improve non-financial value through the project portfolio. Furthermore, projects and therefore portfolios in different industries can be perceived (Blomquist and Wilson 2007) and potentially treated quite differently to meet the value expectations of different types of stakeholders. What this implies is that a multi-faceted approach needs to be applied when investigating value dimensions in project portfolios, because portfolios cannot be neatly classified as customer, marketing, NPD (innovation), Learning, R&D, alliance, accounting or otherwise as there are often two or more of these dimensions within a portfolio, for example customer co-creation of new products and learning leading to innovative design.

From a project portfolio perspective, a portfolio can assist with resources when a project is able to communicate and demonstrate its value potential in the domains of both tangible and intangible value. This is important because socially complex and intangible resources such as reputation, corporate culture, long-term relationships with suppliers and customers, and knowledge assets are seen as resources that may lead to long term competitive advantage (Barney 1991, Teece 1998) using the criteria of : valuable, rare, inimitable and effectively deployable (Barney 1991). These types of resources are often intangible, difficult-to-replicate and are argued to be necessary to undergird the business processes for competitive advantage and stakeholder value creation.

Therefore, the ability to identify, understand and manage strategic project value is deemed essential for the project selection and termination decisions that are central to PPM. What the preceding sections demonstrate is that one should not ignore the differences among stakeholder groups in considering value in project portfolios. Nevertheless, the task of establishing organizational objectives in a manner that takes into account concerns across and within heterogeneous stakeholder groups can be said to impose an unrealistic expectation of managers (Sundaram and Inkpen 2004). A fundamental problem with the stakeholder view is that the question of *which* stakeholder should matter is left unanswered. Scholars (Mitchell, Agle et al. 1997, Sundaram and Inkpen 2004) are still on the quest of addressing stakeholder saliency through their question "The Principle of Who or What Really Counts" although Freeman (2004), in a later article critiques Sundaram and Inkpen's question as philosophical in nature. Despite the academic debates of what is possible, realistic and what is merely philosophical, in practice however, there is a clear dilemma for decision makers. Whose values should be represented in such management decision-making?

This calls for subsequent rounds of research in extending the exploration of stakeholder management in practice in different contexts. As stated by Hillman and Kleim (2001), exploring multiple stakeholder demands and how managers manage and balance the diverse demands of different stakeholder groups and prioritize are important areas of investigation. Insights in these areas can help illuminate and guide project portfolio managers in different

sectors undertaking different types of decisions involving projects, programs and portfolios with multiple stakeholders.

These PPM processes are interconnected, iterative and cyclical and many suggest that the management of value considers the complexity of managing multiple stakeholders (Jonas 2010, Lim, Quercia et al. 2010, Unger, Kock et al. 2012, Voss 2012, Beringer, Jonas et al. 2013) and incorporates a 'sensemaking' process (Thiry 2001, Brown, Stacey et al. 2008, Winter and Szczepanek 2008). Thiry (Thiry 2001) explored value management and sensemaking in program management. Whilst the literature mentions value management and sensemaking in the discipline of project management, the exploration is only at the cusp of pioneering new knowledge in this relatively unknown area. Further investigation into sensemaking processes is needed for value management among stakeholders in PPM.

Sensemaking in organizations

Sensemaking in organizations is a complex process of forming and re-forming shared understandings is built from the ongoing interactions and coordinated actions between people (Easterby-Smith, Crossan et al. 2000, Weick, Sutcliffe et al. 2005). Weick (1979, 1995, 2001) talks about organizations as sensemaking systems. What this means is that people in organizations create and recreate conceptions of themselves and those around them. According to Weick (1995), sensemaking in organizations is characterized and shaped by social occurrences, is enactive of sensible environments, retrospective, on-going, influenced by cues and driven by plausibility. It can also be impacted by how the 'actor' or person observed and interviewed is attending to other people at a given moment in time-space (Dervin 1998). Dervin (1998) implies that socially, sensemaking occurs with and in relation to other people inside and outside the organization. In being enactive of sensible environments, people create or enact a part of the very environment they face and implant their own reality. People's preconceptions of their surroundings determined consecutive decisions and ultimate actions taken (Weick (1995). People share feelings, intent and perceptions among themselves and gradually define and create meanings (Weick 1995, Allard-Poesi 2005). These shared sentiments then enable people to agree on decisions and actions to thence be able to coordinate their actions. In fact, what is achieved is the shared equivalent inter-subjective meanings that are built through discussion, conversation and trial and error. Sensemaking is therefore also positioned as retrospective since it is seen as a never-ending reconstruction of experience, and hence linked to its characteristic of being ongoing and continuous – sensemaking is always in process (Weick 1995, Pugh and Hickson 2007). Additionally, sensemaking is said to be driven by plausibility rather than accuracy (Weick 1995, Pugh and Hickson 2007). This is where accuracy takes second place to acceptability. It is argued that people are likely to take a route that is 'good enough' to guide action for the time being (Weick 1995, Pugh and Hickson 2007).

Sensemaking and meaning-making grows from familiar points of reference and can be extracted from cues (Weick 1995). Weick (1995) adds that identifying and controlling these cues can become a source of power since controlling what others respond to frames the view they will take and what they will do. Some scholars have found that stakeholders may

exercise underlying forms of power to determine value, and that could ultimately influence decision-making (Weick 1995, Mitchell, Agle et al. 1997). Unfortunately, research relating sensemaking practices to stakeholder and value management in project portfolios is almost non-existent and only two such studies were found (Thiry 2001, Sense and Badham 2008).

Sensemaking and multiple stakeholders in project portfolio management

Through sensemaking perspectives, decision-makers construct meanings of what constitutes value in a portfolio of projects in order to prioritize their decisions, to help them clarify which projects matter, and this in turn will help them define, negotiate and integrate value dimensions with multiple stakeholders that can help determine future decisions and actions. However, since decisions made are often determined by people's preconceptions of their surroundings (Weick 1979, 1995, 2001), this could lead to portfolio managers dismissing or neglecting other important factors in the decision process, exacerbate pre-existing blind spots within the teams or portfolio and may lead to portfolio disaster as an outcome.

If multiple stakeholders are considered to individually make sense of what is valuable in a portfolio, how do portfolio managers then interpret, integrate and incorporate these multiple value constructs and dimensions in their decision-making processes? This point creates a tension and gulf between what Weick (1979, 1995, 2001) states about sensemaking practices for the different actors as a subjective, constructivist and interpretive practice as opposed to traditional project portfolio processes and decision support tools offered as 'best practices' in determining what is of value in a portfolio. While decision-making features involving rational theories of choice and logic are acknowledged, these theories will not be a key area of focus in this paper. Rather, this paper and the proposed research study instrumentally links sensemaking practices with value interpretations and encourages the reader to consider in actuality, how project portfolio managers construct, interpret and integrate stakeholder value dimensions for decision-making.

Discussion and analysis of literature

In the literature, value is discussed from two over-arching positions – the tangible or financial values; and the non-financial, non-commercial and often intangible values. Furthermore most of the focus of value in the project portfolio literature emphasizes economic financial and customer value measurements. There is a lack of research or guidance on the integration of less tangible dimensions of value in the different contexts of project portfolio management and decision-making. What is also still missing is the consideration of value dimensions by stakeholders in non-commercial portfolios or in non-profit sectors. These are equally if not more complex, inter-dependent and operate in dynamic multi-stakeholder environments where decisions are critical and yet there are few, if not no frameworks to consider non-financial value in decision-making.

Research that addresses the ways that multiple stakeholders and multiple value dimensions influence PPM decisions could provide insights and findings to improve PPM

practice. Such findings could help project portfolio practitioners avoid an over-reliance on decisions surrounding risk aversion, legitimacy, financial, profit-driven characteristics of the portfolios in terms of short-term gains. Further investigation into these areas could provide guidance for practitioners to include long term strategic value and incorporate a well-diversified and balanced portfolio. The downside of ignoring this critical area could lead to an avoidance of high-growth, long term and more sustainable portfolio opportunities for example, in new product development, partnerships, new technologies or organizational development.

The literature also suggests that project portfolio managers can often be on a metaphorical 'decision see-saw' as illustrated in Figure 1, as they strive to make sense of, prioritize and balance the multiple demands of different stakeholders in order to identify and deliver value relevant to these stakeholders.

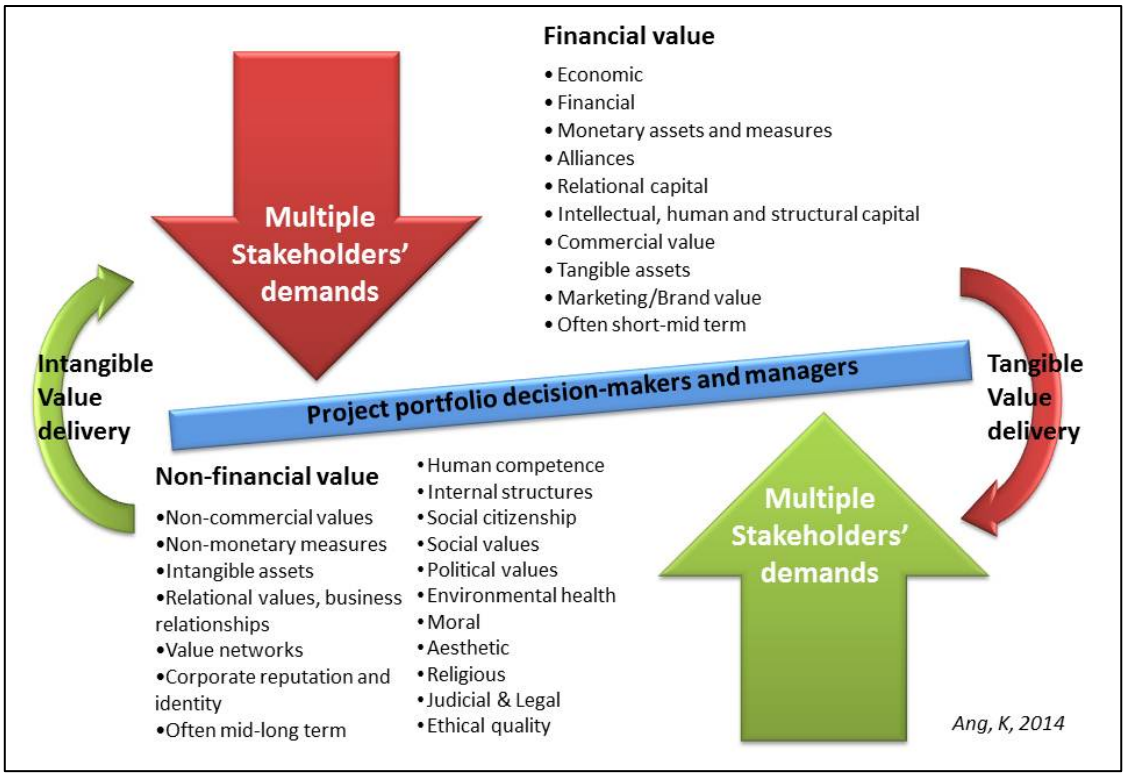

Figure 1: The PPM decision 'see-saw'

Understanding how stakeholders and decision makers make sense of value in order to make decisions can contribute to the knowledge gap between seemingly objective rational models of portfolio decision-making, and what actually occurs in practice. Irani (2002) suggests an interpretivist approach that could also be applied in addressing these research gaps. This 'softer more persuasive approach' (Irani 2002, p. 13) can be particularly useful when dealing with multiple stakeholders on the justification of medium- and long-term project investment concepts and plans

Mitchell et al (1997) raise questions of stakeholder identification and saliency under the principle question of 'who and what really counts'. Inspired by the question 'knowledge for what and for whom' raised by Mesny and Mailhot (2012) as to who are the true beneficiaries in the production of knowledge, this study supports the scholarly pursuit of addressing the research gap by extending research surrounding the principle question of 'value for whom, and by whom?' in project portfolio decision making practices.

Addressing the gaps identified in the literature, the following research questions have been formulated:

1. How do the different constructs of value in various multi-stakeholder environments influence project portfolio decisions?
    a. How is value understood in practice by different stakeholders in different portfolio contexts?
    b. What are the dimensions of value that inform portfolio decision-making in practice?

Incorporating a sensemaking orientation in the research design

Sensemaking research could play a role in exploring the multiple value dimensions in project portfolios. Dervin (1998) includes the practice of enabling participants to define their own terms, criteria sets, gaps and bridges in their own experiences. Sensemaking practices are said to be activated by and situated in the they are created and situated in the overall situation (Dervin 1998) or in micro-practices of interactions, conversations and coordinated actions between people (Dervin 1998), Easterby-Smith et al 2000, Hellgren and Lowstedt 2001). These practices are also shaped by language rules, vocabulary, authority relations, work roles, norms and social structures (Weick 1993) or situations based on the concepts of time, space, movement, gap, constraint (Dervin 1998).

Project portfolios exist in complex environments where there are usually multiple actors and hence, multiple stakeholders who are likely to have multiple expectations, demands and perspectives of what constitutes value. Therefore, a sensemaking approach is deemed appropriate for investigating these inexplicit and often subtle perspectives. Multiple constructs of meaning or outliers are often overlooked by decision-making tools and mechanistic processes that focus on logical and rational value factors. The outliers that are ignored may be important as these may become problematic at some stage of the project portfolio. The reality is that decision makers often need a way to identify and integrate the value dimensions within their project portfolio management practices – they are in fact, balancing stakeholder constructs of value, as well as the actual project portfolios. The proposed exploratory research seeks to adopt a reflexive and iterative strategy to capture emergent differences and dimensions of value that may be lost if a researcher is looking for a confirmation of practices too early in the research process. Linked to reflexivity and the retrospective-prospective nature of sensemaking is the notion that sensemaking comprises an on-going and tensional process with a 'continual weaving of sense from beliefs, implicit assumptions, tales from the past, unspoken premises for decision and action' (Weick, Pugh

2007, p. 123) known also as 'rolling hindsight'. Furthermore, people are said to exercise selective perception, that is, people are likely to notice some things and not others, and depending on where they look, what they focus on, how they look, what they want to represent, and what their tools of representation are, the sense made of the same situation will often differ for different people. This is important in addressing the gap in the research on how stakeholders and decision makers make sense of, view, identify and determine value. Thiry (2001) emphasizes the role of multiple stakeholders in sensemaking for value management and highlights it as an interpretive activity anchored in the social processes of projects.

In supporting the key research question '*How do the different constructs of value in various multi-stakeholder environments influence project portfolio decisions?*', this research implies an epistemology and ontology that has a strong pragmatist focus to deal with the practice-based challenge of complexity whereby there is the acceptance of multiple realities, social perspectives and the involvement of the researcher and participants in the research and validation process (Jones 1988, Creswell 1998, Mertens 1998, Cicmil, Williams et al. 2006).

Proposed research design and methodology

Addressing the questions surrounding multi-stakeholder expectations of value and project portfolio decision-making, and how the knowledge is constructed and associated requires a blending of the participants' multiple perceptions of value, their environment and researchers' observations. Allard-Poesi 2005, p. 170-171 draws on Schutz (1962) to comment that '*sensemaking research relies extensively on interpretive grounded approaches that seek to grasp people's understandings*'. From this angle, a socio-constructivist or interpretivist assumption is recognized through the acceptance of multiple realities, and the involvement of the researcher in the epistemological process (Mertens 1998, Creswell 2003).

A qualitative methodology is proposed that adopts multiple qualitative methods (Hesse-Biber 2010). The primary thrust of this research will be conducted through multiple case studies (Yin 2009) focusing on value and PPM decision practices in diverse organizations, followed by a secondary phase using Hybrid Delphi expert panels (Landeta, Barrutia et al. 2011) to review and validate the insights and propositions. The combination of qualitative methods through multiple case studies and expert panels is expected to enable the various PPM contexts, inexplicit nuances and layers of value to be studied in depth. In light of the exploratory nature of the research questions, the method is open to new information and is less confirmatory (Hesse-Biber 2010). Using case study research enables the exploration of the 'how' and 'why' (Yin 2009). Guba and Lincoln (1981) suggest that case studies could be used to describe what it is like to 'experience' a situation, a function identified as 'rendering'. The cases will explore the relational nature of the elements involved in multi-stakeholder expectations of value and project portfolio decision-making, and how they are constructed and associated by blending participants' perceptions of value, their lived experience of their environments and the researchers' observations.

The types of sensemaking questions will encompass micro-moment time-line questions about former decisions made (Dervin 1983). Dervin's framework of questioning will be adapted to incorporate micro-moment decision-making interviews about how and which value dimensions are of strategic focus, and who else impacts on each decision-making moment. In consideration of the socio-constructivist view where the detailed, situated and concrete practices and interactions are being researched, this could include analyses of conversation sequences, storytelling, narratives (Easterby-Smith, Crossan et al. 2000), the adoption of micro/interpretivist methods through participant observations, open interviews, conversational analysis and interaction analysis. Accordingly, participants use their own terminologies and steer the interview around issues and concepts they feel best represent their own experiences and interactions (Gioia and Thomas 1996). The application of micro-logics and activities between organization members could include records and transcripts of interactions for example face-to-face conversations, emails, archival data including minutes of meetings, publicly available documents, annual reports, websites, memorandums or newsletters.

The cases are proposed to represent a mix of commercial and non-commercial project portfolio environments across multiple industries (Eisenhardt 1989, Patton 2002). The case samples will be varied with respect to sector type, industry, size of organization. Specifically, these cases will be selected from the public/government, private/profit and non-profit/charities sectors. This is to ensure that one achieves a good diversity of responses, a term referred to as purposive sampling (Lincoln and Guba 1985).

Organizations selected will be those that operate in multi-project or multi-program and project portfolio environments. They will need to provide the researchers with consent and access to communicate with relevant portfolio stakeholders. Research participants will include project and portfolio members, decision makers and key stakeholders (based on the literature, this may include customers, suppliers, shareholders, senior managers, staff, government officials or the public). Through a snowballing referral method (Vogt 1999, Atkinson and Flint 2001, Prell, Hubacek et al. 2009), many of these participants may be referred to by others within the project portfolio network as members that are directly relevant to the decision-making process in the portfolio. This method provides a practical means of identifying and accessing relevant participants in the portfolio groups under study where a link or bond exists between the initial sample and others within the same target group in the case study (Berg 1988). It is well suited to exploratory, descriptive qualitative interviews (Atkinson and Flint 2001). In this research, the unit of analysis is the project portfolio. Other units of analyses may include the projects, programs, stakeholders or the decisions made.

Following on from the multiple case-studies, the second phase of the research will seek to validate the framework and theoretical propositions primarily through expert panels using a Hybrid Delphi technique (Landeta, Barrutia et al. 2011). The conventional Delphi technique involves multiple rounds of remote and anonymous feedback from experts (Linstone and Turoff 1975). The Delphi technique is acknowledged as a reputable method of 'harnessing

the opinions of an often diverse group of experts on practice-related problems' (Powell 2003) p. 376. Expert panels are used in numerous fields, and is cited to be used for purposes to generate communication and debate, judgement, evaluation and opportunities for revisions (Linstone and Turoff 1975, Powell 2003, Okoli and Pawlowski 2004, Landeta 2006, Rikkonen, Kaivo-oja et al. 2006, Nowack, Endrikat et al. 2011). Such expert panels provide different perspectives to an area of exploration and produce a higher proportion of high quality, highly acceptable solutions and better performance due to the wide range of expert alternative perspectives provided. The Hybrid Delphi technique by Landeta et al (2011) combines face to face workshops with anonymous remote feedback. These sessions are proposed to gather feedback and validation on the findings, further develop the themes and co-create new knowledge in the field of project portfolio management and decision-making

It is important that panelists in any form of Delphi group are balanced and representative in composition, and well-moderated by the researcher (Bloor, Sampson et al. 2013). Participants who have previously shown interest in the study are more likely to be successfully recruited. Bloor et al (2013) also suggests that more panelists than needed should be recruited to allow for 'no-shows'. The expert panel is intended to comprise of different scholars, practitioners and interest groups relevant to PPM who can articulate and provide multiple perspectives and expertise in their own contexts and areas of knowledge to make sense of, review, assess, validate, deliberate, debate to suggest implications and refine practice-based propositions and guiding principles that help to inform decision making and stakeholder value management concepts, processes or frameworks that may arise from the study.

Data Analysis

As this study is primarily exploratory, it is proposed that the case and expert panel analyses will focus on the sensemaking process and the different stakeholder meanings surrounding value. The data could be coded to identify themes, relationships and patterns of how people construct a sense of value, in conjunction with the analysis of internal and external documents (Dervin, 1983; Yin, 2003). Here, the data could be cross-examined and triangulated from the different data collection methodologies. The interviews can contribute thick description to the case studies, allow for depth of understanding and triangulation with the documents analyzed and survey conducted. The analysis of the qualitative data is recommended to be iterative, co-created, reflexive and multi-staged. Feedback from the expert panel workshops will be similarly coded and analyzed to determine the level of validation and support for the propositions and the framework.

Conclusion

Exploration of the literature on the various perspectives of value in relation to stakeholder theory and PPM highlights potential decision making challenges accompanying the construction of value in multi-stakeholder environments. The literature suggests that multiple stakeholder needs and expectations should be taken into account for effective PPM

decision-making. However, decision-making in a complex environment can often mean that multiple stakeholders compete with each other due to their conflicting needs and varying perceptions of value (Thiry 2002). Where the value expected from projects is not primarily financial in nature, the influence of the varying stakeholder views is especially relevant for PPM decision making.

We highlight a gap in the research; extant studies do not deeply explore or fully address the ways that value propositions are determined in different types of portfolios, and whose perspective(s) of value are adopted in different contexts. Adding to the complexity is that the relevant stakeholders may vary by portfolio type, and their needs and value expectations, particularly intangible value dimensions, could shift depending on context, from issue to issue and time to time. The multiplicity of influences and the lack of insights on incorporating the less tangible value expectations of different stakeholders may potentially lead to complex decision dilemmas, compromises and inconsistencies in project portfolio decisions.

A central goal of PPM is to maximize strategic value across the portfolio – this value maximization requires understanding of both tangible and intangible value dimensions and the ways that value influences PPM decisions. Exploration into this area is important for understanding the ways multiple stakeholders and their varying perceptions of value can influence portfolio management decisions. In-depth research will be needed to illuminate the ways in which a project portfolio decision-making framework or guiding principles may be used or translated to different contexts. The findings from such research have significant implications for the effective management of stakeholder engagement processes that occur in multi-stakeholder projects-based organizations. The outcomes of the proposed research could contribute to the effectiveness of project portfolio managers as they deal with and make sense of multiple stakeholder interests and expectations of value in projects and project portfolios.

A multiple-case study followed by a Hybrid Delphi study is proposed to explore how multiple stakeholders impact the determination of value in portfolio decision making. The research will contribute to the theoretical development in the PPM discipline through integrating practice-based perspectives of value, stakeholder management and sensemaking to inform the development of a framework and guiding principles that could be further tested and validated. No such decision-making framework currently exists in integrating value within multiple stakeholder portfolios in different portfolio and sectoral contexts. Frameworks are useful for learning and for guiding practitioners in complex multi-stakeholder decision processes (Hajkowicz 2008). The suggested qualitative research methodology utilizing multiple qualitative methods aims to explore how PPM decision makers and stakeholders make meaning of value (Hesse-Biber 2010). It provides an integrated practitioner dimension in addressing the question of ‘value for whom, value by whom’. Similarly integrated decision models can help guide project portfolio practitioners in sensing, developing, planning and achieving multi-stakeholder goals (Thabrew, Wiek et al. 2009) through project and portfolio management capabilities (PMI, 2013). This is important for improving understanding of the world of PPM and could provide insights and exemplars to inform practice. Portfolio managers may benefit from insights about the multi-dimensional

aspects of value and the ways that they might traverse and negotiate in a complex decision environment in a holistic and strategic manner.

This study links to other recent value-based studies in the project portfolio field (Thiry 2001, Thiry 2002, Killen, du Plessis et al. 2012, Kopmann 2013, Martinsuo and Killen 2014) by extending the knowledge on strategic value and multi-stakeholder management to public, private (profit) and non-profit sectors. Ultimately the proposed research aims to provide insight and guidance for all organizations, whether commercially focused or not, on working with multiple stakeholders to improve PPM decision-making to deliver strategic holistic value through the project portfolio. The research proposed in this paper benefits decision makers and stakeholders alike as it highlights some of the necessary considerations of different value dimensions by different stakeholders in order to be equipped in identifying, negotiating and integrating strategic value dimensions in order to make better informed decisions in their respective contexts.

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