



Multi-stakeholder perspectives of value in project portfolios

Karyne Cheng Siew, ANG

Date submitted: 5 February 2018

A dissertation submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy in Engineering (C02018).

School of Systems, Management and Leadership
Faculty of Engineering and Information Technology
University of Technology Sydney, Australia

Supervisory panel

Assoc. Professor Catherine Killen and Prof. Shankar Sankaran

CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Production Note:

Signature of Student: Signature removed prior to publication.

Date: 5 February 2018

This research is supported by an Australian Government Research Training Program Scholarship.

[This page has been intentionally left blank]

Abstract

This study explores multiple stakeholders' perspectives on the value delivered by project portfolios and reveals a new way of understanding value. When organisations invest in projects, they expect to create value. From a project portfolio perspective, a key goal of project portfolio management (PPM) is to maximise this value across the project ¹portfolio for the organisation. It is easy to agree that value is an important concept, yet it is hard for scholars and practitioners to agree on what it entails. Value is an especially challenging area due to its subjective, intangible and emotional aspects. The value generated by projects has long been understood to be more than just the direct financial value. Yet, financial and tangible value appears to be the dominant way that a project portfolio value is viewed.

Research highlights the complexities of project and portfolio 'value' due to the multiple and sometimes contradictory expectations demanded by different stakeholders who participate in and influence the ways that PPM decisions incorporate value. While researchers are extending the understanding of value for project portfolio environments, PPM research into the complex and multi-faceted aspects of value is still quite limited. To better understand value, the involvement of a wide range of stakeholders is important as value is perceived in different ways by different stakeholders.

This thesis is a collection of six published papers that bring together the theoretical concepts of value, stakeholder theory and sensemaking in a research investigation about value in multi-stakeholder project portfolio environments. The research sheds light on the overarching question: *'How is value understood in practice by different stakeholders in different project portfolio contexts?'*

By studying how value is expressed, understood and used to influence decisions in multi-stakeholder PPM environments, the research reveals deeper insights into the wide range of

¹ In this thesis, the terms 'project portfolio' and 'portfolio' are used interchangeably.

value perspectives at play in project portfolios. The study includes a diverse group of organisations from the public, private (profit) and non-profit sectors in its exploration of project portfolio value. The exploratory research follows a pragmatic mindset and incorporates sensemaking concepts in the research design. It comprises two overlapping qualitative methodologies incorporating multiple case studies and a series of expert panels.

The findings demonstrate how an understanding of value is built from many micro-constructs of value emanating from a variety of stakeholders. Sensemaking concepts applied to the study reveal how stakeholder perceptions of value are based on time and space, and are dynamic and non-linear in nature. As a result of the investigations, a [typology](#) of multi-stakeholder value perspectives that aims to improve PPM decision-making is derived from the findings and presented in this thesis.

This study contributes a novel way to draw together deep concepts that are subjective, difficult to categorise and often ignored, by providing qualitative researchers with an alternative approach that is empirical and multi-method. The two-fold approach of case studies and expert panels incorporates a structured and orderly yet flexible research process that includes verification strategies.

The research provides a new theoretical contribution by broadening the way value is viewed in multi-project environments, specifically PPM. Through its investigation of value concepts in multi-stakeholder portfolio environments, this research contributes to theory by integrating stakeholder theory and sensemaking concepts and extending the relevance and application of sensemaking to PPM research methods and practice.

This thesis contributes a fresh way of thinking about value in project portfolios through the development of a typology of value perspectives and explores the implications of that typology for practice. The typology could prompt organisations to consider a wider range of stakeholder perspectives, and as a result improve the quality of decision-making by encouraging organisations to derive relevant value lenses and language at different organisational levels and in different stakeholder contexts.

Table of Contents

Abstract	v
Preface	xi
Acknowledgements	xv
About the researcher	xviii
List of Tables	xxi
List of Figures	xxi
List of main publications	xxiv
Other related publications	xxv
Part 1: Exegesis	1
Introduction	3
Literature review	8
Concepts of benefits and value in PPM.....	8
The complex, pluralistic and paradoxical nature of project portfolio value	14
Stakeholder theory in relation to PPM	15
Research Questions	19
Research design and methodology	21
Research aims	23
Theoretical framework underpinning the research	23
Philosophical assumptions	24
Incorporating a sensemaking orientation in the research.....	28
Research methodology	31
Methodology 1 – Multiple case studies	32
Sampling – case studies.....	32
Data collection: case studies	34
Observations of meetings, presentations and workplaces	36
Other data collected in the case studies: documents and other material	36
Methodology 2 – Hybrid Delphi (HD) expert panels	37
Sampling – Hybrid Delphi Expert Panels (HDEPs).....	38
Data collection: Hybrid Delphi Expert Panels (HDEPs)	40
Data analysis	41
Coding	42

Analysis.....	42
Rigour and trustworthiness of the methods.....	44
Findings and Discussion.....	45
Key themes and research issues.....	46
Typology of multi-stakeholder value perspectives.....	48
Synopsis of the papers.....	52
Overall contributions.....	61
Contributions to knowledge.....	62
Contributions to theory.....	63
Contributions to research methodology.....	64
Contributions to practice.....	65
Research limitations.....	65
Areas for future research.....	66
Ethical considerations.....	67
Research reflections.....	67
Conclusions.....	69
References.....	72
Appendices.....	81
Appendix 1: Characteristics of Benefits and Value.....	83
Appendix 2: Key research questions and related papers.....	89
Appendix 3: Interview protocol.....	91
Appendix 4: Participant consent form – case study interviews.....	95
Appendix 5: Example of stimulus material used in HDEP 1.....	97
Appendix 6: HDEP 2 workshop participants’ co-created raw outputs and related transcript.....	99
Appendix 7: Example of open-ended question used in HDEP 3.....	101
Appendix 8: HDEP 3 Pre-session questionnaire.....	105
Appendix 9: HDEP 3 Post-session questionnaire.....	113
Appendix 10: Extracts from NVivo Pro 11 - Parent and Child Nodes.....	119
Part 2: Papers.....	127
Paper 1: Value constructs in multi-stakeholder environments that influence project portfolio decision making.....	129

Paper 2: Multi-stakeholder perspectives of value in project portfolios	165
Paper 3: 'Value for Whom, by Whom': Investigating value constructs in non-profit project portfolios	213
Paper 4: Multilevel value creation in projects, programs and portfolios: Results from two case studies.....	237
Paper 5: Unanticipated value creation: sensemaking and the value spectrum in partnership projects	257
Paper 6: Making sense of project portfolio value in practice.....	295

[This page has been intentionally left blank]

Preface

"A hundred francs! Oh, dear me! It is worth millions of francs, my child. But my dealer here tells me that in fact a picture is worth only what someone will give for it. How much money do you have?"

Julia took out her purse and counted. "Four francs and twenty sous," she said, looking up at him sadly.

"Is that all the money you have in the world?"

She nodded.

"Then four francs and twenty sous it is."

Iain Pears, English art historian, novelist and journalist, from 'The Dream of Scipio', 2002.

The purpose of this research is to explore how value is understood in practice by different stakeholders in project portfolios as a means to understanding PPM decision-making processes. It offers new insights into how value is perceived beyond the financial assumptions of value common to current PPM practices. The study reveals the ways in which multiple stakeholders perceive, make sense of and integrate value in decision-making practice. It is important to investigate this area because if project portfolio managers intend to maximise value across the portfolio with stakeholders in mind, then they need to be clear about the types of value that different stakeholders regard as important to be able in turn to integrate these values into the decision-making process.

This dissertation should be of interest to project portfolio managers, and those dealing with multi-project and multi-stakeholder environments in their organizations. It would also interest scholars, researchers and those interested in qualitative methodologies.

The thesis is made up of two main components: the exegesis (Part 1) and the published papers that form each of Papers 1 to 6 (Part 2). In Part 1, the exegesis integrates the overarching research questions, research design and methodology, findings, themes, discussions, contributions and implications for all the papers. It presents an overview of the main literature supporting this study, while in Part 2, each paper examines the relevant literature in greater depth. Specifically, Paper 1 highlights the overall research gaps through a conceptual discussion of the extant literature. Papers 2 to 5 address specific research issues, while Paper 6, the latest published contribution, integrates the overall research design,

findings and contributions.

This research is supported by an Australian Government Research Training Program Scholarship (Commonwealth Research Training Program (CRTP), formally known as Australian Postgraduate Awards (APA)) and the UTS Research Excellence Scholarship. The research in this study was designed to meet the requirements of the NHMRC National Statement on Ethical Conduct in Human Research (2007) and has been approved by UTS Ethics Committee (HREC), ref. no: 2014000114.

All papers included in this thesis were written in collaboration with my supervisors and co-authors. Although all these papers were written collaboratively, my ideas and contributions were sufficiently more in comparison to my co-authors. As an indication, my ideas and contributions make up at least 75% of the content and writing of the papers. My co-authors helped me shape and develop my theoretical assumptions and propositions, and contributed to copy-editing. The papers have been published at conferences, journals or formed part of a book chapter, and have thus been reviewed by external researchers. Permission for non-exclusive, non-commercial copyrights has been granted by all the publishers and conference organisers for the papers in this thesis.



(Karyne) Cheng Siew, ANG

School of Systems, Management and Leadership
Faculty of Engineering and Information Technology
University of Technology Sydney, Australia

5 February 2018

‘You may not appreciate the value of a key
until you encounter the door it locks or unlocks.’
Ifeanyi Enoch Onuoha - speaker, coach and author.

[This page is intentionally left blank]

Acknowledgements

All glory to God for directing my paths! First and foremost, I would like to thank my principal supervisor, Assoc. Prof. Catherine Killen. Thank you for trusting and believing in me. I could not have asked for a better advisor and mentor for my PhD thesis. I appreciate all her contributions of time, patience, ideas and countless emails, planning and celebration sessions to make my PhD journey both a stimulating adventure and a productive pursuit. I am thankful for the times that she has helped steer me back into perspective and purpose, when I felt that I was losing the plot or felt that I was drowning in the data. Catherine inspires me as a person who is both a well-balanced and successful academic and researcher.

A big thank you to Prof. Shankar Sankaran for the sharing of ideas, his great knowledge of the various theories that has helped to expand my thinking, and the wonderful connections and networks of people who have enriched my world. Shankar also helped me consider several alternative routes of research before I settled on my research design for this thesis. The timely introduction to the book about ‘deep work’ helped me dive back into my research very quickly when I felt that I had lost some momentum. Inspired by the book, I jumped into an eleven hour train ride from Sydney to Melbourne and started to write my exegesis. 48 hours later, I was back in Sydney, with a solid outline of which eventually became this thesis.

Both Cathy and Shankar have guided me consciously and unconsciously through their own exemplary work and conversations about how good exploratory research is done. I am thankful to both my supervisors for their unfailing support, responsiveness and patience. They have connected me with other professionals, scholars and PhD students with similar interests. I am thankful for the times when they were there as a sounding board, challenged my thinking and ideas and helped provide clarity.

Besides my supervisors, a big kudos and thanks to my many informal mentors Dr. Tim Aubrey, Mr. Ravindra Bagia and Prof. Pernille Eskerod (in no particular order) for their advice, inspiration, motivation, focus, ideas, and most of all, for believing in me. I am also indebted to Ravindra for several personal conversations and discussions about emergence and systems thinking that inspired me to consider this aspect in my research.

I would like to acknowledge the funds that helped to support my research. First, the UTS Research Excellence Scholarship that includes the Australian Government Research Training

Program Scholarship. Second, the funds provided by the university - Vice-Chancellors' Conference Travel Funds, Faculty Travel funds and the HDR (Higher Degree Research) Maintenance Funds.

Many thanks to the three reviewers for this thesis - Prof. Monique Aubry, Assoc. Prof. Jon Whitty and Assoc. Prof. Per Svejvig who, through their thoughtful consideration and expertise have provided me with encouraging feedback that has helped raise the quality of this thesis. I appreciate how the reviewers highlighted the strengths of the thesis in terms of relevance, structure, presentation and approach. I thank the reviewers for their encouragement to publish in a variety of journals beyond the project management field, such as the organisation and management fields. Their formative ideas and suggestions have helped me develop further as a researcher and will certainly help me expand the ways in which value can be further explored in my future research work.

I would also like to thank Ms. Hazel Baker, the copy-editor who helped with clarity and consistency in this thesis.

I am appreciative of the Euram 2015 - 2017 and IRNOP 2015 and 2017 conference discussants and participants for their feedback and interest in my work. I wish to thank Dr. Derek Walker, my doctoral mentor during the Doctoral Colloquium at Euram 2015 as well as the organizers and members of the doctoral colloquium group. The experience of meeting other like-minded PhD students in similar topic areas gave me encouragement and confidence that I was not alone, as I did not know of other PhD colleagues with similar interests at my Engineering school at that time.

I am grateful to Prof. Martina Huemann and Prof. Pernille Eskerod in Vienna for inviting me to share my work and discuss practice-based ideas with other scholars and practitioners in a workshop in 2016. The interactions helped me refine my thinking about the research in this thesis. I would like to especially acknowledge Prof. Pernille Eskerod who very kindly invited me to visit Webster University in Vienna as a visiting scholar in 2016. I was honored with her openness in considering my research frameworks and ideas. The visit and conversations in Vienna provided more clarity in what I was doing in my research. I was very much inspired then, as I am now, and appreciate the friendship and collegial collaboration we have formed since.

My sincere thanks to the Graduate Research School and Faculty HDR teams for their administrative support and guidance on the research and thesis. My sincere thanks also to the members of School of Systems, Management and Leadership for their administrative support. Particularly, a special thank you Madeleine Miller who, in addition to her own heavy workloads, also supported me at a very challenging time when I was due to complete my thesis and my mother passed away suddenly and hence I had to make a painful long-distance trip overseas to be with my family, all the while my work-space was being demolished and renovated, and all PhD students had to move, all at the same time. It was an overwhelming period for me. During my absence, Madeleine helped me pack up my personal belongings before everything was demolished, and ensured my belongings remained safe through the move process and checked-in on me to ensure that I was all right. Her being there for me gave me confidence and peace of mind, so that I could focus on completing my thesis.

I am sincerely grateful for the friendships formed with academics and fellow PhD students – thank you for the stimulating discussions, advice, the sharing of ideas, the inspiration, for the lunches, morning and afternoon teas, dinners and sleepovers. Thanks to those who attended my countless practice sessions and presentations, for their feedback, enthusiasm and encouragement especially during the competitive PhD events - Three-Minute Thesis (3MT) (Finalist), and FEIT Research Showcase (Winner of ‘Best Poster’ and ‘The Peoples’ Choice’ awards).

Last but not least, I would like to thank my husband Patrick for supporting me all the way spiritually, mentally and emotionally throughout the research and writing of this thesis over the last few years. Thanks for being my cheer-leader, sounding board and for being ‘the wind beneath my wings’. Thanks for keeping me grounded and on track with life, and with God.

[This page is intentionally left blank]

About the researcher

Karyne C.S. Ang, M.Ed, BBA

Karyne Ang is based at the School of Systems, Management and Leadership (SML) at the Faculty of Engineering and Information Technology (FEIT) at UTS. She is also a Project Manager and casual academic at UTS. Prior to joining academia, for over 15 years Karyne professionally directed and led multiple client-based research and marketing portfolios encompassing NPD, brand management, consumer behaviour and market segmentation research for several multi-national corporations and market-research agencies.

Karyne engages actively in teaching, facilitation, learning and educational research. Karyne's research interests are inter-disciplinary, encompassing project and portfolio management, multi-stakeholder engagement, multi-dimensional value perspectives, collaborative practices and decision-making in complex environments across the public, private and not-for-profit sectors. Her current research into how multiple perspectives of value might influence decisions could contribute future opportunities for optimising relevant value constructs and multi-stakeholder relationships in multi-project and portfolios environments in different sectors. Karyne's research has been presented in several conferences in Warsaw, London, Boston and Paris, and has already been published in several journals. She was also a visiting researcher at Webster University in Vienna, Austria in 2016 and has recently been involved in megaproject research with Prof. P. Eskerod.

[This page is intentionally left blank]

List of Tables

Table 1: Research philosophies, methodologies and strategies of inquiry	26
Table 2: Outline of sampling structure for Method 1 - Multiple case studies	34
Table 3: Sensemaking focus strategies to support the interview questions	35
Table 4: Outline of sampling and data collection structure for the HDEPs.....	40
Table 5: Definition of benefits and value, their management and worldviews or assumptions	83
Table 6: Criticisms and opportunities in BRM and VM.....	86
Table 7: Key research questions and related papers	89
Table 8: Data nodes - High-level codes or themes	120
Table 9: Data nodes - Value and Value Perspectives: Second and third order themes in the hierarchy of nodes	121
Table 10: Data nodes - Expanded ‘Value Networks and Relationships’ node	123

List of Figures

Figure 1: Structure of the thesis: road map of the exegesis (Part 1) and collection of publications (Part 2).....	7
Figure 2: Research design: theoretical framework and research methodology	23
Figure 3: Research design and qualitative methodologies.....	31
Figure 4: Demonstration of data construction to derive the main themes	43
Figure 5: The typology of value perspectives in multi-stakeholder environments.....	48
Figure 6: Papers and titles.....	52
Figure 7: Example of stimulus material used in HDEP 1	97

Figure 8: HDEP 2 workshop and sample of outputs99

Figure 9: Feedback on the typology of 8 value perspectives..... 101

Figure 10: Hand-written responses about the typology and value..... 102

Figure 11: Data nodes - Main topic and its categories..... 119

Figure 12: Data nodes - Themes about value and value perspectives 120

Figure 13: Data nodes - Levels in a hierarchical node structure – Value, Value Perspectives,
Value Networks and Relationships..... 122

[This page has been intentionally left blank]

List of main publications

The main publications presented in this thesis are found in Part 2, comprising Papers 1 to 6, and are from journals, conferences and a book chapter. I acknowledge that Papers 1 to 6 have been granted non-commercial, non-exclusive permission by all the publishers and conference chairs to be reproduced in this thesis.

Paper 1: Value constructs in multi-stakeholder environments that influence project portfolio decision making

Ang, K.C.S., Killen, C. & Sankaran, S. 2015, '*Value constructs in multi-stakeholder environments that influence project portfolio decision making*', Proceedings of EURAM 2015, The 15th Annual conference of the European Academy of Management, Warsaw, Poland, June 17-20, 2015.

Paper 2: Multi-stakeholder perspectives of value in project portfolios

Ang, K.C.S. & Killen, C. 2016, '*Multi-stakeholder perspectives of value in project portfolios*', Proceedings of EURAM 2016, The 16th Annual Conference of the European Academy of Management, Paris, France, June 1-4, 2016.

Paper 3: 'Value for Whom, by Whom': Investigating value constructs in non-profit project portfolios

Ang, K.C.S., Killen, C. & Sankaran, S. 2016. '*Value for Whom, by Whom': Investigating value constructs in non-profit project portfolios*. Project Management Research & Practice, vol. 3, no. Jul-Dec 2016.

Paper 4: Multilevel value creation in projects, programs and portfolios: Results from two case studies

Ang, K., & Biesenthal, C. 2017. '*Multilevel value creation in projects, programs and portfolios: Results from two case studies*', in Sankaran, S., Müller, R. & Drouin, N. (eds.): Cambridge Handbook of Organizational Project Management, Cambridge University.

Paper 5: Unanticipated value creation: sensemaking and the value spectrum in partnership projects

Ang, K.C.S., Killen, C. & Sankaran, S. 2015, '*Unanticipated value creation: sensemaking and the value spectrum in partnership projects*', The Power of Projects, Proceedings of IRNOP 2015, International Research Network on Organizing by Projects, London, UK, June 22-24, 2015.

Paper 6: Making sense of project portfolio value in practice

Ang, K.C.S., Killen, C. & Sankaran, S. 2017, '*Making sense of project portfolio value in practice*', The Modern Project: Mindsets, Toolsets, and Theoretical Frameworks, Proceedings of IRNOP 2017, International Research Network on Organizing by Projects, Boston, USA, June 11-14, 2017.

[Other related publications](#)

Other publications that draw upon the published contributions of the abovementioned papers in Part 2 but do not form part of this thesis are as follows:

Eskerod, P., Ang, K.C.S. & Andersen, E. 2017, '*Increasing Project Benefits by Project Opportunity Exploitation – Investigating a Landmark Megaproject*', Proceedings of EURAM 2017, The 17th Annual conference of the European Academy of Management, Glasgow, Scotland, June 21-24, 2017.

Eskerod, P. & Ang, K.C.S. (forthcoming 2017), 'Stakeholder Value Constructs in Megaprojects – a Case Study with Long-term Assessment', *Special Issue on Megaprojects as Symbols, Project Management Journal (PMJ)*.

Eskerod, P., Ang, K.C.S. & Andersen, E. 2017, 'Increasing Project Benefits by Project Opportunity Exploitation – Investigating a Landmark Megaproject', *Special Issue: Managing Major and Mega Projects: Opening up for new Research Eras, International Journal of Managing Projects in Business (IJMPB)*.