

Investigating Innovation in Projects:

Issues for International
Development Cooperation



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Investigating Innovation in Projects: Issues for International Development Cooperation

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Abstract

Substantial resources are directed worldwide to conceive, plan and implement international development cooperation projects. These initiatives are concerned with improving the socio-economic standing of beneficiary groups, organisations and institutions in a target country. In many cases support is directed towards the development of local abilities to manage and further develop institutional settings, public services delivery and the capability to act in international trade and representation. Innovation, both technological and administrative, is often cited as a key enabler of development, based on the observation of the positive role that innovation has had in the socio-economic development of industrialized nations.

While international development cooperation projects in many cases are seen to be relevant, efficient, effective and perhaps even sustainable, it is not clear whether the current approaches and methods contribute to and enable administrative innovation in the project contexts. The study of projects in this context is challenging due to an undeveloped theoretical base of projects and their management in this specific circumstance. The temporal nature of projects and the institutional set-up are also found to create discontinuity gaps between projects that inhibit learning, the transfer of knowledge and best practice across projects. Furthermore the conceptualization, planning and implementation of projects are hindered by an inherent asymmetry of capabilities and knowledge between the donors and the beneficiaries.

This study examines and explores international development cooperation projects from the perspective of administrative innovation. The study asks if the current practice contributes to the development of administrative innovative in the project contexts? Secondly, how could this practice be improved upon?

Through a contextual review of projects and their management, international development, and innovation research focused on administrative issues and knowledge, key issues have been identified and relevant theoretical approaches charted. The four essays of the study examine the present practice of

development cooperation projects for innovative attributes, the impact of the environmental context, the applicability of current theoretical thinking of project management, knowledge management and the relationship between capabilities and constraints. Both quantitative and qualitative research methods are used, in addition to a fully conceptual approach used in one essay. A joint section has been prepared to create a synthesis of the findings and to develop a framework model that links the various elements at play.

The study concludes that the present practice of international development cooperation projects does not fully contribute to administrative innovation in the project contexts. In order to enhance this contribution, project practices need to adopt participatory approaches in the overall conceptualization, planning and implementation of projects in order to guarantee local ownership. On another level, projects are seen to benefit from repetitive project cycles, moving from exploration to exploitation, while learning between projects would benefit from engaging further existing communities of practice. Finally, in order to enable continuous innovation, projects need to establish a balance between the enabling individual capabilities and inhibiting social constraints present in the project contexts.

In terms of managerial implications, the developed framework model is seen to enable a more appropriate conceptualization, planning, execution and control of development cooperation projects. A contribution is made to the theory of projects and management, the role of communities of practice in knowledge transfer, and the application of the Capability Approach of Amartya Sen to the project context. The research is seen to be relevant to organisations that act as clients or fund development cooperation projects, and to high know-how international development consultants and service providers.

Keywords: Project management, administrative innovation, international development cooperation, capability approach, knowledge management, continuous innovation.

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My first contact with projects for human development was in the context of the squatter towns, or *favelas* in São Paulo, Brazil in the late 70's, when we, a group of undergraduates from the Faculdade de Arquitetura e Urbanismo of the Universidade the São Paulo, Brazil, were learning the use of alternative technologies in complex housing improvement schemes. After a career in the 80's and early 90's of contributing in design, business and management to an extensive series of projects in the industrialized European context, I was requested in 1994 to support the post-war reconstruction in an African country that had recently emerged from a long and destructive civil war.

This took me on a journey that has lasted till today, and has given me the opportunity to reside and work in a series of very challenging but insightful environments in Africa, Asia and Oceania; over the years, I have been cleaning up after wars, earthquakes, tsunamis and human nature. The people I have met on the way have taught me to see and value tacit, local, and situated knowledge; without it many positive things would have remained undone.

On the other hand, the more formal learning at the five universities attended to date has also taught me the value of codified knowledge. Although we were not really hopping with enthusiasm as young undergraduates to read Vernant's¹ treatise on Greek historical psychology, it did open up wonderful avenues for curiosity. On this track, I was especially delighted in 2003 to start my involvement with the Helsinki School of Economics, which eventually led to the study at hand.

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¹ Vernant, J-P (1973) *Mito e Pensamento Entre os Gregos*. São Paulo: Editora da Universidade de São Paulo.

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Mikko Koria

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PART I

1. Introduction

1.1 Background

This study examines projects in international development cooperation. There is a specific interest in understanding whether the current project practice creates benefits and positive outcomes, through contributing to and enabling the creation or adoption of new ideas and ways of doing things; in other words, to innovation in the project contexts. This is based on the notion that novelty, utility and success together create innovation, which in turn underpins the improvement of human welfare also in developing countries.

As many development cooperation projects are concerned with enhancing the abilities of organisation and institutions to support human socio-economic improvement, it is pertinent to ask whether these initiatives support the ability of said institutions to see, assimilate and configure new knowledge for a permanent advantage and to successfully diffuse these ideas in their contexts.

Thus this study examines administrative innovation in international development cooperation projects. Administrative innovation is understood as the creation or adoption of an idea or behaviour new to the organisation (Lam, 2005). This focus does not exist by chance. After a number of years of separately making sense of projects, innovation and human development, in this study I am examining the three complex domains concurrently within one study. This study is seen to be relevant for project managers, experts and service providers involved in technical and managerial support to international development cooperation projects. It is also relevant to those who are searching for new ways of delivering efforts that have developmental aims and to those who see innovation as key driver of development.

The international business aspect of this study is linked to knowledge intensive project services in an international setting. While the context of the study is specific to international development, many of the issues that are related to project management in the international context are generic in nature and applicable to the practice of knowledge intensive services in the international context also outside of the specific development cooperation context.

1.2 The research gap

International development cooperation and the linked aid originating from the developed countries today have to aim of supporting the goals and objectives of the beneficiary organisations in less favoured circumstances; these aims are often linked to improvement of human well-being, through enhanced institutions that enable improved health, education, access to opportunities and participation in global trade and affairs (e.g. Wilson & Whitmore, 1995; CEC, 2004; World Bank, 2005). Institutional capability in developing countries has been seen as a key enabling element in development, underpinning other initiatives (World Bank, 2003; OECD 2002). Institutional frameworks are also seen to be important in the context of the developed nations, as they are seen to form the basis of competitiveness and growth (North, 1990; Porter, 1998; Hämäläinen, 2003), while innovation is seen to be a key driver the development of society and its institutions (Freeman, 1987; Lundvall, 1992; Edqvist, 1997). There appears to be no reason to expect that innovation would not be a key driver of growth and competitiveness also in the developing country context (Lall, 1999).

The international aid to the beneficiary organisation is channelled either as budget support, or as support to projects and programmes that are intended to achieve specific aims with external support (CEC, 2004; World Bank, 2005). The quality of aid, in addition to the quantity, has come under examinations of late, and concerns have been voiced, among other things, on the coordination of aid and the heavy administrative burden that donors impose on recipient institutions (Wolf, 2007; Lensink & Morrissey, 2005; Roodman, 2006). Concern

and substantial critique has also been voiced towards aid itself, and e.g. Easterly (2006), and recently Moyo (2009) have argued that aid has effectively failed. Collier (2008) is somewhat more optimistic, searching for solutions to improve on current practice, while others, such as Sachs (2005), are firm that success can be achieved through correctly and timely disbursed development aid.

Projects set up within the field of development cooperation are expected to be relevant, efficient, effective, while having an impact and being sustainable in terms of the long term outcomes (e.g. CEC, 2004; OECD, 2002; Ostrom *et al.*, 2002). Projects are also routinely evaluated for these indicators, and while they address the utility of the projects in many ways, the chosen indicators do not fully explain the adoption of novelty or the diffusion of the related practice to other contexts. Thus, while the concurrent presence of novelty, utility and diffusion is seen to underpin innovation (Lam, 2005), development projects are not usually evaluated holistically in these dimensions. Furthermore it is recognized that the theory of projects is problematic in the social development context (Koskela & Howell, 2002; Cicmil & Hodgson, 2006).

The research gap of the study is linked to the present practice of conceptualizing, planning, implementing and closing international development cooperation projects. It is unclear whether these initiatives contribute to and enhance administrative innovation in the project contexts. As noted previously, administrative innovation is understood as the creation or adoption of an idea or behaviour new to the organisation (Lam, 2005). It is also not clear how administrative innovation could be further enabled in this context. This knowledge gap is both wide and deep as there is scarce research on administrative innovation in the international development cooperation project context.

1.3 The research aim and adopted perspective

The aim of the research is to contribute to the theory and managerial knowledge of setting up and implementing development cooperation projects that are innovative in the sense that they enable improvement in the way that

beneficiary organisations (and the projects themselves) are able to create or adopt new ideas or behaviour patterns that are new to the organisation.

1.4 Research questions

There are two research questions formulated in the study:

1. To what extent do current development cooperation projects contribute to administrative innovation in their contexts?

2. How could the contribution of development projects to administrative innovation in their contexts be further enhanced?

The two questions are structured in a logical continuum. The first one requires a tentative answer before an attempt answer to the second one can be undertaken. The first essay examines specifically the first research question. The remaining three essays address the more complex second question. The questions are also different in nature. There exists an answer to the first question, but the second question cannot be answered except through a framework of thought, as each and every project is unique in its own operational context. The second, third and fourth essay explore various aspects that underpin the development of a framework model, which is explored later on in this joint section. The second research question is linked to managerial implications, which are also addressed in this joint section.

1.5 Structure of the study

The study is structured into five main sections, divided into two main parts.

In Part I, a joint section is developed, with the objective of addressing the context of the study. The triple themes of development cooperation, project management, and innovation are introduced, to form the groundwork to be used in the analysis of the joint findings from the four distinct essays that form the second part of the study. The joint section develops a framework model that links the various elements into a coherent whole.

Part II of the study is structured into four essays that form the body of the findings and the individual, essay-specific conclusions. The first research question is linked to the examination of the existing project practice, and is addressed in the first essay. The second research question is more complex, and addressing it requires exploring issues related to the operational environmental in the second and third essays, and capabilities and constraints in the fourth essay. The choice of the methods and essay foci is reviewed in the research design chapter.

For a logical flow, it is suggested that the reader initially examines Chapters 1-4, of Part I, after which it is recommended that the four essays be visited in Part II; subsequently the remaining Chapters 5-6 of Part I will draw the argument together and conclude the study.

PART 1	PART 2
Joint Section 1.Introduction 2.Contextual review 3.Methodology 4. Essay summaries 5. Discussion 6. Conclusions 7. References (joint section)	Essay 1: Are international development aid projects innovative? Evidence from three continents and six institutional donors
	Essay 2: Building with technology, management and innovation: challenges on Vanuatu
	Essay 3: Managing for large and complex recovery programmes: Tsunami lessons from Sri Lanka
	Essay 4: On Innovation & Capability: A Holistic View

Figure 1.1 Structure of the study

1.6 Assumptions, limitations

A key assumption of the study involves the idea that innovative projects, through their aims and objectives, structural set up, delivery methods and transfer of knowledge can contribute to human development through enhanced

capabilities, reduced constraints and transfer of knowledge in local institutional contexts. Through improved capabilities, local institutions are able to provide improved support to the public and private sector, leading to sustainable development through enhanced potential for the accrual of socio-economic benefits. Furthermore it is assumed that making projects and their outcomes contribute more to innovation also addresses complementary issues such as the reduction or removal of constraints that inhibit the development and use of capabilities.

In terms of limitations it should be noted that the study navigates in a cross-disciplinary area of innovation research, international development and the management of projects. While this is potentially an opportunity to transcend domain boundaries, and to arrive at new, unifying approaches that create novel opportunities for both research and praxis, it is done at the risk of potential ontological and epistemological incompatibilities. While all possible care has been taken to avoid these pitfalls, the fact remains that all three of the fields of study are individually extremely extensive in their own right, and the adoption of a single perspective into the scope of the study implies potentially eliminating other relevant views. The three domains are examined through a common lens; a single conception of knowledge runs through the study.

Finally, the research results obtained from empirical evidence from the Asian, Oceanic, African and Latin American contexts may be non-extendable or lead to inconclusive findings in other contexts.

1.7 Expected results and relevance

Two main results are expected. In the first place, it is assumed that an understanding of the current level of innovation in the practice of international development cooperation projects may be achieved. Secondly, it is also foreseen that an understanding of the managerial implications of this theoretical knowledge and the evidence from the empirical studies can be built up, with the aim of informing best practice in development project conception, planning and implementation.

In terms of the general relevance, I argue that the improved ability of institutions and public-third sector organizations to deal with novel situations, to be effective, sustainable and to transfer best practice is seen to be a core building block for institutional ability to drive development, economic growth and sustainable development.

Also, the ability to effectively contribute to the development of a third party's capability through innovative projects creates significant competitive advantage for international knowledge intensive service providers. The research is particularly relevant to the Finnish high know-how international development consultants and service providers.

1.8 Key concepts

Administrative innovation. Overall, this study uses the definition put forward by of Lam of organizational innovation as the "creation or adoption of an idea or behaviour new to the organization" (Lam, 2005, p.115). Administrative innovation in this study is taken to be is concerned with organisational and social structures of administrative and participatory processes, and may or may not be linked to technical innovation. A distinction is made between technical and administrative innovation. As Afuah (2003) notes, technical innovation may embed administrative innovation, and can be linked to a product or a process; also administrative innovations may embed technology.

Communities of Practice. The concept is here defined through Wenger, McDermott, Snyder (2002, p. 4) as, "A group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their understanding and knowledge of this area by interacting on an ongoing basis." This definition does not necessarily impose clear boundaries or explicitly identifiable groups, but it does imply a special purpose (Lave & Wenger, 1991), which in the context of this study is taken to mean involvement in conceptualizing, planning, implementing and closing international development cooperation projects.

Capability Approach is a conceptual framework that emphasises capabilities based on the freedom of choice and the real ability to make those choices. Conceived by Amartya Sen (2000) and further developed by Martha Nussbaum (2000), the Capability Approach is used in this study as a framework of thought: to organise the thinking between individuals having capabilities and socially construed constraints that deprive individuals from exercising these functions.

Continuous Innovation is defined as “the effective, ongoing interaction between operations, incremental improvement, learning and radical innovation aimed at combining operational effectiveness and strategic flexibility through exploitation and exploration” (Boer *et al.*, 2006, p.10). Continuous innovation is seen to replace periodic innovation.

Human development is the process of enlarging a person’s functionings and the capabilities to function, together with the range of things a person could be and do in his/her life (Sen, 1989). Seen from this viewpoint, human development aims to improve lives through expanding the range of things that a person do or be. This includes being well nourished and healthy, being able to participate in the life of communities and being educated and knowledgeable. This viewpoint involves the idea of that obstacles like illiteracy, ill health, lack of access to resources and lack of civil and political freedoms need to be removed.

International development cooperation is here defined as “the cooperative process of promoting human development that is supported across national boundaries”(definition by the author). See above for the definition used for human development.

Knowledge management (KM) is framed in this study through a practice-based perspective, whereby the role of management is to facilitate social interaction and communication that will enable effective perspective making and taking; knowledge is considered to be embedded in practice, embodied in people, socially constructed, with tacit and explicit knowledge being inseparable (Boland & Tenkasi; 1995, Tsoukas, 1996). The definition of Sense (2007, p.140) is used for project situated knowledge management: “the way a project team

actually goes about acquiring, creating, exchanging and assimilating knowledge in and around a project team setting”.

Participation in development is concerned with the exercise of popular agency, and is here taken to mean a process that is transformative in nature, creating opportunities for improved existence. It is considered a right of citizenship and can imply representative mechanisms (Hickey & Mohan, 2004).

A Project is considered to be “a temporary organisation and a process set up to achieve a specified goal under the constraints of time, budget and other resources” (Shenhar & Dvir, 2007, p.94).

Project Management (PM) is understood “as the managerial activities needed to lead a project to a successful end” (Shenhar & Dvir, 2007, p.94)

Project Management Office (PMO). “An organisational body or entity assigned responsibilities related to the centralised and coordinated management of those projects under its domain. The responsibilities of a PMO can range from providing project management support functions to actually being responsible for the direct management of a project” (PMI, 2004, p.368).

Project Cycle. The project cycle follows the life of a project from the initial idea through to its completion. It provides a structure to ensure that stakeholders are consulted and defines the key decisions, information requirements and responsibilities at each phase so that informed decisions can be made at each phase in the life of a project. It draws on evaluation to build the lessons of experience into the design of future programmes and projects (CEC, 2004).

2. Contextual review

This chapter is used to introduce the key concepts, review the literature, examine the context of the research and to explore the internal linkages between the various elements of the study. The chapter is organized in four sections, starting off with projects and their management, the field of study for this research. The second section deals with innovation in the context of projects, seen to be the focus of interest in the field of the study of projects. The specific context of the investigation is set out in the third section, which deals with international development cooperation. A summary of the key issues that cut across the field of study in the research context is provided in the first section of Chapter 5. Discussion.

2.1 Projects and project management

Initially, this section gives a short overview of the background of present projects and PM practice, followed by an examination of the relationship between programmes and projects. The specific challenges of theory, context and discontinuity are addressed in the last part of the section.

Projects have become core processes for a significant number of organisations that organise their operations along project-based approaches (e.g. Engwall, 2003; Maylor, 2001). It has also been observed (Hobday, 2000; Turner, 1999; Winter, Smith, Morris, Cicmil, 2006) that ordinary operations are being increasingly performed by what Engwall calls time-limited organisational structures (Engwall, 2003) and project management practices. These include strategy implementation, business transformation, continuous improvement and new product development (Winter *et al.*, 2006). Since the 90's the projectification of the society attracted the attention of researchers (Cicmil & Hodgson, 2006; Packendorff, 1995; Kreiner, 1995; Lundin & Söderholm, 1998). The theoretical foundation of projects has been questioned and several authors (Koskela & Howell, 2002; Maylor, 2001; Morris, Patel, Weame, 2000; Cicmil &

Hodgson, 2006; Winter *et al.*, 2006) have developed alternative views of how projects and their management should be conceived.

2.1.1 Projects

A project can be considered to be “a temporary organisation and a process set up to achieve a specified goal under the constraints of time, budget and other resources” (Shenhar & Dvir, 2007, p. 94). Another widely used definition of a project as a “temporary endeavour undertaken to create a unique product, service or result” (PMI, 2004, p.368). The word has an origin in Middle English (in the sense ‘preliminary design, tabulated statement’); derived from Latin “projectum” (something prominent), a neutral past participle of “proicere” (throw forth), derived from “pro” (forth) and “jacere” (to throw) (OUP, 2006). Projects may also be defined simplistically as “a one-off activity” (Maylor, 2001, p.96). The Australians have kept it simple: “a plan; a scheme” (OUP, 2004), and the British define it as “an enterprise carefully planned to achieve a particular aim, or a proposed or planned undertaking” (OUP, 2006), while the American version of projects is “an individual or collective enterprise that is carefully planned and designed to achieve a particular aim: a research project or a nationwide project to encourage business development” (OUP, 2005). The EU, in contrast, defines projects in the context of development cooperation as “A series of activities aimed at bringing about clearly specified objectives within a defined time-period and with a defined budget” (CEC, 2004, p.8).

All of the definitions imply planning (sometimes carefully done) and premeditated action. The PMI and European Commission definitions are explicit about a definite beginning and an end, which is defined by the project achieving it’s aim or goal, or being aborted before the aim is completed. The finite nature of projects does not necessarily imply that they are short in duration. While the EU (2004) talks about a budget in the definition, the PMI (2004) definition indicates that there is a deliverable, considered to be unique; this has implications on both the organisational structure and the operational environment, which may tend towards the unique as a response to the

uniqueness of the deliverable. The American definition gives an indication of the usefulness of the projects in business development; projects are goal driven (PMI, 2004). These definitions distinguish projects from operational work, considered to be ongoing and repetitive (PMI, 2004). Both project and ongoing work are evidently performed by people, constrained by limited resources and have three main phases of planning, executing and controlling (Koskela & Howell, 2002; PMI, 2004; Cicmil & Hodgson, 2006).

Programmes

The Project Management Institute defines programmes as “a group of related projects, managed in a coordinated way to obtain benefits and control not available from managing them individually. Programmes may include elements of related work outside of the scope of the discrete projects in the programme” (PMI, 2004, p.368). A programme in EU development assistance can have various meanings: as a set of projects put together under the overall framework of a common Overall Objective/Goal; or an ongoing set of initiatives/services that support common objectives (i.e a Primary Health Care Programme); or still yet, a Sector Programme, which is defined by the responsible government’s sector policy (i.e. a Health Sector Programme) (CEC, 2004).

It appears that there is no real consensus as to what a programme is. Arto, Martinsuo, Gemünden, Murtoaro (2008), through a bibliometric survey, make reference to the key differences between programmes and projects. They find that the dominant theory of programmes is linked to organisational theory and strategy, while projects are linked to the theory of product development. Programmes are linked to change in permanent organisations, while projects involve narrow, defined and temporary tasks. Systems thinking is present in programmes and absent in projects, and programme innovation is linked to open systems, while projects are concerned with product innovation. Finally, the outcomes in programmes are related to a wide set of impacts, while projects have a short-term business result focus (Arto *et al.*, 2008).

The CIDA (2003) report illuminates the differences between projects and programmes in development. While projects are often seen to enable local ownership, they are still often supply-led, and linked to a limited number of parties and partnerships, while programmes are expected to be based on locally owned wider initiatives (as in many projects within a wider programme network). The isolation of projects is seen to lead to difficulties in donor coordination, and to higher transaction costs. Programmes are focused on wide goals and outcomes, while projects tend to have a focus on the success of the project itself.

Programmes are thus clearly different from projects, as it is the outcomes that are important, not the outputs, as in projects; outcomes are related to overall benefits (OGC, 2007). Until the 80's programmes were seen as extremely large projects, which were broken down into sub-projects and smaller parts that could then be broken down into a work breakdown schedule for planning and control purposes (AEW, 2006).

2.1.2 Project Management (PM)

Project management (PM) can be defined “as the managerial activities needed to lead a project to a successful end” (Shenhar & Dvir, 2007, p.94). It has also been defined by PMI as “the application of knowledge, skills, tools and techniques to project activities to meet the project requirements” (PMI, 2004, p.368). The management of projects requires thus an a priori capability, in the form of skills and knowledge. If tools and techniques are considered to be manifestations of explicit knowledge, requiring the use of at least an element tacit knowledge, one can argue that project management essentially requires the existence of a pre-intervention mix of explicit and tacit knowledge. Management is also seen to depend on people to influence other people (PMI, 2004). Development cooperation projects typically involve organisational, human and political issues, which make them very sensitive to deal with – how people deal with these sensitivities will impact on the perceived success of the project itself. On another level, the PMI defines programme management as

“the centralized coordinated management of a programme to achieve the programme’s strategic objectives and benefits” (PMI, 2004, p.368).

History of Project Management

Project management (PM), in its modern form, has its origins in the late 50’s and, and is built upon the legacy of large defence and aeronautics projects like the Manhattan Project, the Polaris nuclear submarines, and the Apollo spacecraft. The Cold War was a significant driver in the development of the current project management practice. Operations research underpins the build-up of the PM expertise well into the 90’s when expert information and communication technology (ICT) systems were developed that were to enable detailed and explicit control over operations. This appears not have happened to the degree that was expected (Maylor, 2001; Morris *et al.*, 2006; Cicmil & Hodgson, 2006; Engwall, 2003; Packendorff, 1995).

Concurrently with the development of PM practice, professional associations were formed (e.g. the Project Management Institute (PMI) in the US (1969), the Associations for Project Management (APM) in the UK (1972), among other such national bodies) and best practice was codified in bodies of knowledge (BOK) (as the PMI BOK, or the APM BOK) from the 70’s onwards, reaching the status of de-facto standards by the 80’s. This was paralleled by professional certification programmes, and a cycle of revisions that developed the bodies of knowledge further – in fact, as Morris *et al.* note, certification became a key driver for the development of the bodies of knowledge, needed as a knowledge base to certify against (Morris *et al.*, 2006).

Intellectually the current PM practice is built on the foundations laid down already in Scientific Management, and is based on a functionalist, instrumental, and reductionist view, where the management issues are whittled down to planning the content, ordering execution and controlling the implementation. This effectively eliminates the political and participatory processes, learning, and elevates the project management into an expert role, based on rationality, universality and objectivity, with the ability to make value-free, exact and

correct decisions and predictions based on perfect knowledge (Howell, Macomber, Koskela, Draper, 2005; Koskela & Howell, 2002; Cicmil & Hodgson, 2006; Engwall, 2003).

Establishing project management as a field of science has been problematic, partly due to the inadequate theoretical base of a functionalistic tradition, reductionism, operational research and prescriptive contributions with little analysis and links to other fields of management science (Buchanan & Badham, 1999; Kreiner, 1995; Packendorff, 1995; Maylor, 2001; Cicmil & Hodgson, 2006). There has been ongoing discussion in the management education community as to whether project management is practice or an academic discipline (e.g. Kwak & Anbari, 2008). There have also been attempts to rethink project management practice (e.g. Winter *et al.*, 2006). Currently project management research links into management studies, organisational research and research into strategy, to name a few. Packendorff (1995) notes the deficiencies that are related to the idea of universality of project management theory and the lack of alternative presentations of projects. At the time, there was also a perceived weakness in the empirical base of the theorising. Morris (1994) noted already in 1994 that most of the literature in PM deals with tools and techniques and not the management side of projects. Morris *et al.* (2006) have observed that the professional communities and the BOKs that embed the practice of project management would benefit from a more interpretivist approach. Incorporating more strategic elements of knowledge and taking into account the problematic front ends of projects, not to mention the further development of the relationships between programmes and projects, would address key areas in need of development. Recently new “agile” project management methods have been developed (e.g. SCRUM, used mainly in ICT projects and Last Planner, that is based on just in time planning) as alternative ways of managing complex and fast paced projects (Koskela, & Howell, 2002).

2.1.3 Threads of research

Several conventionally based main threads of research into projects have been identified by Winter *et al.* (2006). The conventional and dominant strand sees projects management as a rational, universal and deterministic. Most project management books are based on this approach. A second strand emerged in the 60's and 70's from the literature of organisational design, and Winter *et al.* (2006) note the key influences to this strand as being the seminal work of Lawrence & Lorsch (1967), Galbraith (1973) and Minzberg (1983).

As Hobbs *et al.* (2008) note, the current literature of project management is mostly related to product and process innovation. It tends to furthermore use the Nelson & Winter (1982) incremental-radical divide. Some attention (Turner & Keegan, 2004) has been directed towards creative environments that underpin product and process innovations. Hobbs *et al.* (2008) argue for an extension of this thinking: they see organisations themselves as objects of innovation and they view the project management office (PMO) as “a socially constructed entity” (Hobbs *et al.*, 2008, 550) that is in dialogue with its host organisation, shaping each other and co-evolving.

The second strand of research was instrumental in the conceptualisations related to temporal organisations (e.g. Packendorff, 1995, Lundin & Söderholm, 1995), the historical embeddedness of projects (e.g. Engwall, 2003; Kreiner, 1995), multiple project management (Engwall & Jerbrant, 2003), while developing also thinking related to the trend of programmification. The conceptualization of projects as temporary organisations has been important in the sense that it helped to define projects as organisations, something which hitherto had been lacking. Notwithstanding these developments, Cicmil & Hodgson (2006) argue that the essential basic conceptualisation of projects has not changed through these efforts.

Van Donk & Molloy (2007) have taken the thinking of temporal organisations forward, and through an application of Mitzberg's (1979) work on organisations, have arrived at a set of typologies of projects that potentially are useful also in

the context of development cooperation projects. Modifying Mintzberg's original categorizations, they arrived at five main categories of projects: the *simple projects*, where complexity is low, and in some cases this would represent the start-up phase of a larger project / programme; the *bureaucratic project* appears to require a stable environment and a low level of complexity; the *divisionalised project* found in engineering offices or consultancy firms; and the *professional project*, according to van Donk & Molloy (2007), is linked most likely to new product development, where multiple experts work and bring their expertise to the table. *Adhocracy* is the last category, and originally the one where Mintzberg located projects and similar non-functional initiatives. Van Donk & Molloy (2007) are not very explicit about the characteristics of this category, but one could speculate that this would be either an inception phase of a large and complex project (as described in Essay 3 in this study), before it settles into another format, a project that is in the process of transition from one phase to another or possibly a project that is failing. It could also be a programme that is managed like a project, or vice versa (see the third essay - there exist some indications of this).

A third strand of research, which has emerged since the 80's, has had a focus on major projects (e.g. Miller & Lessard, 2001; Morris & Hough, 1987; Flyvbjerg *et al.*, 2003), and special sectors like the auto industry or construction projects. The conceptual base of this strand has been further developed to include considerations for the front end, the human factor, strategy, and learning, striving for a more holistic approach. Winter *et al.* (2006) argue, however, that the conceptual base for these approaches still remains well within the conventional paradigm. It is noted that the approach proposed by Koskela and Howell (2002), used as one of the foundation stones in this study, falls into this third, developed category. It is also noted that this research builds on this strand.

Other approaches

Three unconventional approaches have also been identified by Winter *et al.* (2006). The first approach is related to the link between corporate strategy and direction (e.g. Morris & Jamieson, 2004). Strategy in project environments has

also been recently studied by Artto, Dietrich and Martinsuo (2007). They introduced four types of strategies (*Obedient servant, Independent innovator, Flexible mediator, and Strong leader*). These typologies are in function of two elements in the project environment: project autonomy and the strengths in the stakeholders groups. In development projects the tendency is for projects to be located in the area defined by low autonomy with several principal stakeholders breathing onto the project. This requires survival strategies linked to the Flexible mediator classification.

The second strand identified by Winter *et al.* (2006) is linked to project management as an information processing system (Winch, 2004), especially in construction contexts. The third strand, as a recent signal in emerging trends, is related to the use of the critical management perspective put forward by Cicmil and Hodgson (2006), discussed in more detail below. Additionally, other approaches have been proposed, such as the memetic approach of Whitty (2005), where language is a key element of replication, while Pollack (2007) analyses projects from a dualistic hard vs. soft perspective.

With these approaches, project management theory is emerging from the positivist cage and is doing a catch up with the rest of the social sciences. It should be noted, however, that the methodological rigour and approaches are somewhat wanting, as Smythe & Morris (2007) note, and that there is significant room for improvement in the epistemological positioning of the current project management research.

2.1.4 A theory of projects and management

In order to understand further the theoretical bases of projects and their management, three approaches are presented in the following sections. The Koskela & Howell (2002) model updated the theoretical project thinking by adding new components to fill observed gaps in the original (implicit) project models. Cicmil & Hodgson (2006) present a more radical revision of the way projects should be thought about. Pollack's (2007) model has great explanatory power in the development context through the hard/soft division. It would

appear that there are elements in all of these theoretical updates that could be of value to enhancing projects in the development context.

From implicit to explicit

As Koskela & Howell (2002) note, as the starting point of their theoretical development, implicit theory of the project has been based on the transformation view of operations, where inputs are transformed into outputs, through a decomposition of the whole into smaller transformation/tasks. Linked to this is an optimization process, where the individual cost is minimized and a sequence is established. All work can be captured by a de-composition of the whole (and the sum of all decomposed tasks equals the total transformation), and all requirements exist at the outset (Koskela & Howell, 2002).

As it is possible to note from the above, the theoretical underpinning of projects assumes that projects can be explicitly identified, exactly specified and defined in detail, that progress and variation to progress can be measured with precision, and that corrective action can be ordered at will. This is evidently alien to real life in many cases, and as Koskela & Howell (2002) note, the current paradigm is in many ways problematic, as it effectively does not account for ambiguity or uncertainty, time or a client perspective. Nor does it account for participation and learning, both key elements in development.

Koskela & Howell updated the initial model with two elements. In the first instance, in addition to the input-output transformation, they argued for a consideration for time in projects. The flow concept, originally developed in the twenties by the Gilbraiths (Frank and Lilian Gilbraith were extensively involved in developing novel management systems during the first decades of the 20th century), was later applied by Henry Ford, and currently in use in a developed form in lean manufacturing (as in the Toyota production system) and just-in-time production. It has a focus on managing linkages, reducing uncertainty and addressing waste created through unnecessary work (Koskela & Howell 2002). Secondly, the theory of the project needs to address value generation to stakeholders. This view emerged in the 1930's, put forward by Shewhart

(Shewhart, 1931 - as quoted in Koskela & Howell 2002), and the underlying idea is to create value for the customer, recognizing that the customer needs to be involved in the process, as the requirements are not always well known or possible to define at the outset (which is the key assumption of the present project management approach) The value generation view has been further developed in the context of the quality movement.

Theories of management in projects

Parallel to the theory of projects, Koskela & Howell (2002) proposed an updated view on the relevant management theory of projects. In managerial action, planning, execution and control are seen the key elements of concerted action. Planning has been seen as the primary management function, while a separate effector function exists to translate the plans into action (management-as-planning). Planning is furthermore seen to be a straightforward process that can be assigned to a party, and it is assumed that plans are easy to transfer into action. Koskela & Howell (adopting the thinking of Johnston & Brennan, 1996), argue for a different, situated response as an additional element (management-as-organizing). This involves managerial inputs into the physical, political and cultural structure of the setting of the project. This is observed also in the context of development projects.

In terms of execution, the managerial action consists of authorizing the decomposed tasks to start according to plan. These assumptions hold the view that transmission of information is perfect, and that perfect capability exists to receive and execute instructions. To update the original model, in terms of execution, the single channel transmission needs to be enlarged to allow for a two - way dialog and a negotiated agreement on execution. The Language/Action Perspective (LAP) of Winograd & Flores (1986), originating from the realm of computer sciences, is indicated by Koskela & Howell (2002) as a theory with extensive potential to explain work in organisations as being coordinated through a negotiation process of making and keeping commitments. This thinking was later refined further in Howell *et al.* (2005), where a new holistic and organic approach was developed based on trust, a co-

created future, coherent commitments, and where planning is seen a rehearsal for execution, not used for project control. In the approach, leadership is based on trust, coaching and mutual interests.

The conceptualization of control rests on the idea that a process exists, standardized performance exists and the deviation from standard can be measured and adjustment orders given (also known as the thermostat model or cybernetic control) (Hofstede, 1978; Ogunnaike & Ray, 1994). This assumes a continuous process (which projects can be but mostly are not), measurement on aggregate terms (difficult is a discontinuous environment) and that the process can be corrected (ignoring lock-ins and the political decision making processes) (Johnson & Brennan 1996; Koskela & Howell, 2002). The conventional theory of control also omits learning and improvement from the equation. Koskela and Howell propose an upgrade in theory through scientific experimentation (Shewhart & Deming, 1939, as quoted in Koskela & Howell, 2002), which would allow for a feedback loop for the identification of deviance and the root cause behind it.

Project & management theory base		
Subject of theory		Relevant theories
Theory of Project		Transformation Flow Value generation
Theory of Management	Planning	Management-as-planning Management-as-organizing
	Execution	Classical communication theory Language/Action Perspective
	Control	Thermostat model Scientific Experimentation

Figure 2.1 Theory base for PM. Source: Koskela & Howell, 2002

The updated Koskela & Howell model addresses many of the issues that are seen to be problematic in development projects, and the applicability of the model is reviewed in the second essay of this study.

Making projects critical

Cicmil & Hodgson (2006) argue that project failure in many cases is not due to technical issues, but is a result of political processes that are not considered well enough in the project conceptualization, planning, and implementation. The issue of stakeholder participation and the ownership of projects are critical issues in the development cooperation environment. Flyjberg, Bruzelius, Rothengatter (2003) note the need to consider the social construction of projects and the social embeddedness of project management. The power relationships between the actors in programmes and projects either enable or constrain the positive movement of the project.

Just as in the case of Koskela & Howell, Cicmil & Hodgson are deeply unsatisfied with the present theoretical foundation of the project management practice. In an attempt to arrive at an enhanced base of understanding, Cicmil & Hodgson (2006) look at extending the theoretical base of project management practice towards critical management studies.

Critical management studies (CMS) is considered to have started with the *Critical Management Studies* of Alvesson & Willmott (1992), which initially brought together critical theory and post-structuralist writings. Embedded in a politically left-wing context, the CMS has developed and widened its perspectives to cover Marxist theories, social issues of inclusion and exclusion, alternatives to globalisation, and a critique to present management practices and thinking inside and outside of business school environments. Due to its very nature, CMS is a marginal phenomenon, but Cicmil & Hodgson have engaged some of the key concepts to re-think about projects.

Their key observation (and issue) is related to the positivist epistemology of management that perpetuates a belief in rationalism. The implicit consequence of a view of reality as being rational allows managers to make value-free decisions based on technical terminology and meaning. This ignores the process of a social construction of reality and of decisions that affect also projects. It also ignores the political processes that are inherent in, say, any development

cooperation initiative, which in many cases are (official or de-facto) extensions of foreign policy.

Fourier & Grey (2000) argue that morality, equality, and ethics need to be considered alongside with efficiency and effectiveness of management, in a move toward the ideas of corporate social responsibility. They furthermore note that the present social arrangements, economic activity, and ways of organising human activity are manifestations of an agenda of a specific group; one that does not necessarily represent humanity widely, or give a voice to other, alternative views. These arrangements lead to and perpetuate social exclusion and oppression.

Taking this discourse into the realm of project management gives a number of insights that are useful particularly in the context of development cooperation projects. Cicmil & Hodgson (2006), while not extending prescriptive solutions, nonetheless make three significant contributions to be considered. In the first place they call for an increased sensitivity to the possibility of exclusion and exploitation in project settings. This can be seen as being directly related to the projects or as a consequence of the action of the projects. In the development cooperation context, the impact of projects is a key driver of decision-making, affecting all aspects of the initiative. Secondly, Cicmil & Hodgson highlight the importance of engaging with practitioners. This could be extended to cover all stakeholders at all levels. This participation is by definition specific and local, within the project context. As the last set of key issues, they note the need to re-examine the very foundation of performance, critical success factors and the concept of success in projects. They furthermore see a need to develop indicators beyond the triple elements of time, cost and quality performance.

Hard and Soft

As a third interesting and relevant view of projects, Pollack (2007) proposes that there are advantages in viewing projects from the dual perspective of hard and soft paradigms (see Fig. 2.2). The terminology of hard vs. soft approaches has

been used on and off in the PM literature, is somewhat ambiguous, but has descriptive value in this context.

With the hard paradigm, he refers to the conventional approach of seeing projects as adhering to a positivist epistemology, deductive reasoning, objectivity, quantitative frames of mind and reductionism, focusing on control and expert-led delivery. Soft approaches are associated with an interpretive epistemology, inductive reasoning and qualitative techniques, which emphasise contextual relevance. This argument follows the main lines of Koskela & Howell (2002) and Cicmil & Hodgson (2006), but examines the issues from a systems thinking perspective, which is used to demonstrate that different approaches need to be used in different contexts.

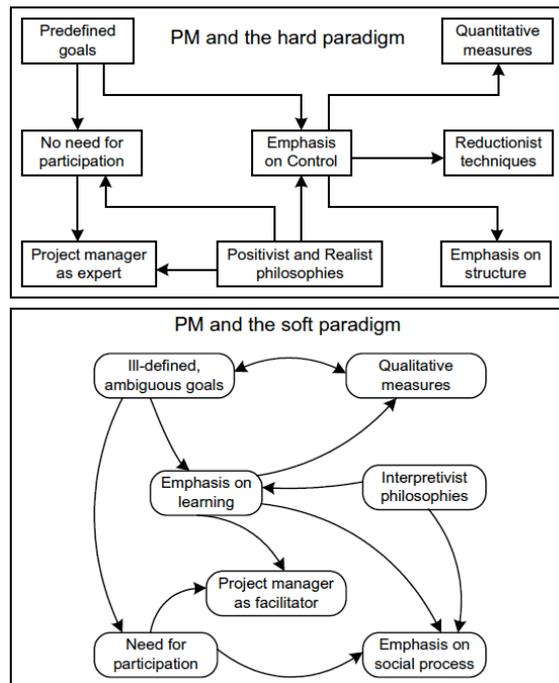


Fig. 2.2 Hard and Soft PM paradigms. Source: Pollack 2007, 267

Pollack argues that the hard paradigm of project management is well suited for situations that have pre-determined goals uncontested and require efficiency and control, have simple and straightforward contexts, low levels of ambiguity and well established relationships and hierarchy. It would appear that

development projects have none of these attributes, and would tend toward the more complex circumstance.

Pollack also divides the theory and practice of the two paradigms, to illustrate how the theoretical approaches affect problem resolving, central to project management. In this view the positivist/realist theory translates into a problem-solving approach in practice, while the soft interpretive theory results in problem-structuring in practice. The evident conclusion is that soft approaches should be applied in situations that demand sense-making and exploration.

2.1.5 Contextual issues

Shenhar & Dvir (2007, p.7) note that a common theme of failed projects is the lack of upfront appreciation of the extent of uncertainty and complexity that these undertakings involve. Projects and their management take place in a context, and as Engwall (2003) notes, the research of project environments is not as well developed as, say, in organisational theory, where the influence of external factors is widely recognized. There is a growing body of research that challenges the concept of the universality of projects. Pinto & Covin (1989) examine differences between projects in R&D and construction, while Shenhar & Dvir (1996) investigate projects with varying levels of complexity.

Engwall (2003) notes that the relationships between projects and their parent systems, between projects their principal, and between projects and their historical context have been examined. He further argues for an open systems (Scott, 1992) nature of projects and recognizes the history and path dependency that exists within and between projects. As e.g. Hobbs *et al.* (2008) and Pellegrinelli *et al.* (2007) observe, projects happen within organisational contexts and are subject to change and evolution over time. In this context innovations are seen to be both socially constructed and society-shaping (Bresnen *et al.* 2005).

Söderholm (2008) reviews the managerial strategies that are linked to unforeseen changes, induced by the operational environment. These unforeseen

changes can modify the process flow and cause discontinuity. He notes that four main response strategies appear to exist. Management can resort to innovative action, i.e. creatively design action to deal with the unexpected, often going outside of the planned course of action and the standard ways of doing things. They can also resort to an extensive coordination exercise, through a series of meetings, or try to isolate the consequences as much as possible, perhaps by changing plans so that other work can go on while the unexpected is being dealt with. It is also noted that managers often need to resort to a process of negotiation to safeguard the project. In development cooperation projects, anecdotal evidence suggests that these strategies are sometimes resorted to concurrently.

Projects might be new at some specific point in time, but in some cases relationships behind the projects exist due to previous cycles with the same actors. Hadjikani (1996) notes the value of the sleeping relationships that exist between project cycles. These can benefit enormously the start up of subsequent projects. That being said, there appears to be a shelf-life of knowledge in terms of the discontinuity gap.

Still, in the double contexts of project and innovation, Shenhar & Dvir (2007) in their diamond model consider aspects of projects based on novelty, technology, complexity and pace (the NTCP model); this allows a bridging of the project management and innovation viewpoints. As Lenfle (2008) notes, however, the NTCP model does presuppose an established objective at project inception, effectively limiting its use in explorative contexts.

Project based organisations (PBOs)

A trend, linked to the projectification of the society overall (Lundin & Söderholm, 1998), is the emergence of project based organizations. As Hobday (2000) notes, the project based organization (PBO) has been put forward as the panacea to manage increasing project complexity, fast changing environments and, a customer focused innovation and a high degree of ambiguity. In the context of complex products and systems, PBOs seem have an advantage over

more traditional functional matrix structures in terms of innovative approaches to organizing, attending to stakeholder demands and needs and responding to environmental changes and to the challenges of new technologies (Davies & Hobday, 2005). What PBOs are not very good at, according to Hobday (2000), is performing routine tasks, achieving economies of scale and enabling coordination between projects and an organization-wide development. PBOs are also not seen to excel at promoting organizational learning, as there exists a learning enclosure around the project that effectively isolates it from the rest of the organization (Hobday, 2000; Thiry & Deguire, 2007).

DeWaard & Kramer (2008) argue for the need for a stable organisational platform that underpins project-based work. This platform can be a base from which to mobilize temporary organisations or projects. Building on empirical evidence from the military context, they furthermore argue for modularity in the project team composition, needed to achieve efficiency and effectiveness.

As observed in the fields of disaster management (e.g. Denning, 2006) and construction (e.g. Ekstedt, Lundin, Wirdenius, 1992), through the act of contributing larger organisational elements to projects, organisations increase their chances of hitting the ground running with projects. These trends is also observable in the practices of consulting firms that not only field experts in development, but provide also the backstopping practices needed. These consulting firms also face the challenge of aligning their service offering and processes to match the needs of the clients (Gann & Salter, 2000; Artto *et al.*, 2008).

As noted by Packendorff (2002) and Turner, Huemann, Keegan (2008), internal tensions within project-based organisations are often caused by pressure originating from the dynamic nature of the work environment. It appears that organisations to date have not been widely successful in dealing with this issue, as it requires resources and an effective management system, which are not often available in projects that are set up on a one-off basis (as in the case of many development projects). Turner *et al.* (2008) furthermore note that this pressure is notably high in small and medium sized organisation, and in multi-

project environments. In order to attract professionals, organisations involved in project-based work must also ensure adequate career paths for their experts and managers.

Project management office (PMO)

Project management activities need a location, which is provided in many cases by a project management office (PMO). The PMI defines the PMO as “An organisational body or entity assigned responsibilities related to the centralised and coordinated management of those projects under its domain. The responsibilities of a PMO can range from providing project management support functions to actually being responsible for the direct management of a project” (PMI, 2004, 368). Hobbs *et al.* (2008) argue that PMOs can be considered as an organisational innovation as it is a recent and important phenomenon. In the recent years, organisations have responded to environmental challenges through developing new, flexible organisational models and mainstreaming projects into their core operational modes.

There exist a great variety of arrangements in terms of a PMO (Hobbs & Aubry, 2007), both in form and functions. The PMO, while being deeply embedded in the host organisation and co-evolving with it, appears to be an unstable innovation (Hobbs *et al.*, 2008), and organisations tend to restructure their PMOs every few years, in search for best fit to suit changing purposes. There is furthermore a plethora of structures and forms that the PMO can take, and Hobbs *et al.* (2008) find no systemic relationship between the external context and the structure of the PMO. They also did not find correlations with the maturity of the studied large eleven organisations and the frequency or degree of change of their PMO structures. It can be stipulated that in some cases organisations do not manage their projects through a PMO structure, but as embedded in line management functions.

In some cases the life-span of PMOs is linked to that of the projects. Firm level strategy development and the search for an optimum organisational structure often leads to reconfiguration processes (Pettigrew, 2003; Midler, 1994; Hobbs

et al., 2008.) The PMOs also have to respond to complex and dynamic environments (Brown & Eisenhardt, 1997).

Tensions transform PMOs, and can be identified into five categories, according to the Hobbs *et al.* (2008). Economic tensions emerge through the PMO associated costs and project performance; these become acute when objectives are not met. This would be most evident in exploratory projects (Lenfle, 2008) where objectives and goals shift and/or are ambiguous. There are also political tensions in projects, revolving predictably around power, control and accountability. Tensions emerge from the relationships between the PMO and their clients; in some cases the client-ship is not clear and unequivocal, which adds to the degree of discomfort. The fourth key area of tension, according to Hobbs *et al.* (2008) is linked to the question of standardization versus flexibility; in many cases the standard set of procedures does not work well for any number of reasons and deviation from protocols must be made, either officially or on an adhoc basis. This is also clearly linked to the tensions created by decision-making powers. Lastly, tensions emerge from the “project machine” (Hobbs *et al.* 2008, p.553) that are linked to controlling the organisational capacity to deliver projects; enhancing or reducing this ability impacts also on the relationship of the PMO to the host organisation.

It also appears that institutionalisation processes are not visible in PMOs in terms of isomorphism (Hobbs *et al.*, 2008; DiMaggio & Powell, 1983); in other words PMOs are seemingly not developing towards a uniform size and shape. In many cases it appears that PMOs are set up and managed with little or no knowledge of the knock-on effects, resulting in frequent revisions of the structure and processes. This is linked with the view of Hatchuel and Weil, 1992 (Hatchuel A, Weil B. *L'expert et le système: gestion des savoirs et metamorphose des acteurs dans l'entreprise industrielle*. Paris: Economica (1992), as quoted by Hobbs *et al.*, 2008) of organisations as fundamentally irrational actors that are engaged in cyclical efforts to rationalise.

Exploration and exploitation in projects

March (1991) originally proposed that exploitation in organisations would include ideas of refinement, choice, production, selection, implementation and execution, and would be based on the overriding idea of operational effectiveness achieved through embedded configurations of products, processes, technologies, competences, organisation and management. He linked exploration to the strategic flexibility of the organisation, in terms of being able to develop novel configurations of products, processes, technologies, competences, organisation and management systems. Boer *et al.* (2006) note that the capabilities that are required for exploration are different from the exploitation ones.

In examining exploration, exploitation (March, 1991) and innovation in projects Lenfle (2008) notes that the current dominant understanding of projects is not well suited to cases in which objectives are not well known; there is a “fundamental tension between exploitation and exploration” (Lenfle, 2008, p.477) that underpins project management practice. Organisations that are adept in one arena may find it difficult to operate successfully in the other. As Lenfle (2008) notes, there is a need to apply distinct management practices to specific situations. Building on Brady & Davies (2004) in examining the exploration – exploitation divide, but in the administrative context in development, exploration projects could be understood as ways to search and learn, while exploitative projects would be characterised as being set up to achieve specific objectives within existing constraints of time, money and scope.

Lenfle (2008) identifies the characteristics of explorative projects through five main points. In the first instance, explorative projects are emerging and strategically ambiguous; this contradicts the idea that projects need to have established objectives from start. The projects also need to adopt proactive approaches; there is often no pre-project demand, and an evident need exists to justify the resource allocation. Thirdly, there are difficulties in specifying the results of the projects; the lack of clear objectives in the project is challenging.

The results need to be identified in wide terms, as in new knowledge or concepts that may feed into other processes or products. In the fourth place, the projects tend towards the exploration of new knowledge; the effectiveness of the project is linked to the speed of learning and knowledge creation. There is a distinct possibility of failure, as in all innovation activity. Lastly, there is what Lenfle calls the “hidden urgency and multiple time horizons” (Lenfle, 2008, p.473); as the explorative projects feed into the exploitative ones, the time constraints are not always clear and explicit, especially if a single explorative project leads to multiple exploitative initiatives.

To address these specific characteristics, Lenfle (2008) suggests that specific management principles must also be adopted. There is a need to set up dedicated organisations to manage the exploration project, in order to coherently link the results to subsequent exploitative initiatives. As traditional project management methods are not fully effective (i.e. no clear objective or scope) tentative plans must be made, and dynamically updated, as the project moves ahead. In this context experiments and concurrent engineering are suggested by Lenfle (2008) as key mechanisms to achieve a stage-wise progressive elaboration within the project. This progressive elaboration also implies that project objectives may be even radically reformulated during the project cycle.

Capabilities in projects

Davies & Brady (2000) and Brady & Davies (2004) build the case for project capabilities, understood as those capabilities that enable organisations to enhance their technology and market bases (through base-moving projects). Brady & Davies (2004) view projects from the perspective of the exploration to exploitation continuum, arguing that projects can be understood as experiments, and that learning between projects needs to be transferred if efficiency over time is to be achieved. While their work has been developed in the business enterprise context, their thinking has been recontextualized in this study to the not-for-profit sector and the international development project context.

Also in the organizational context, dynamic capabilities are defined as “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece, Pisano, and Shuen (1997, p.516). This essentially involves learning based on common codes; organizational knowledge is seen to reside in routines and patterns that enable successful solutions. Through external collaboration these routines can be updated. Coordination and integration of assets is also linked to positive performance, and rapid changes in external environments require a reconfiguration of these assets (Eisenhardt & Martin, 2000; Teece *et al.*, 1997). In development projects the dynamic capability could be linked to the ability to review and direct the course of the project in mid-flight, when initial assumptions no longer hold true or when the external environment changes radically. The main issue is the origin of these capabilities: it may be that knowledge-intensive service providers, such as development consultants whose business is project-based, develop these capabilities over time, and apply them on need. It would appear that much of the knowledge needed in these capabilities would be tacit in nature and linked to practical experience. That being said, as Ferdinand, Graca, Antonacopoulou and Easterby-Smith (2005) note, knowledge in the original concept was somewhat undefined, treating it as an asset instead of an socially embedded resource, as it would be the case in development.

While Brady & Davies (2004) essentially focus on the organisational level, Söderlund *et al.* (2008) take the discourse on capabilities to the project level itself, noting that the development of such ability is linked to “both repeating and exploring new knowledge areas” (Söderlund *et al.*, 2008, p.518). Thus the perception of projects is one of processes of socially constructed learning, knowledge creation and sharing in a situated and project specific context. Tsoukas & Chia (2002) observe the constantly ongoing change processes in organisation, which may or may not change the organisation itself, depending on the degree of institutionalization. These dynamic processes take place irrespective of managerial intent but can potentially be engaged positively to achieve new capabilities. As Tsoukas & Chia (2002) note, there is a need for

both stability in the organisational platform and dynamic change through human action. Projects in institutional settings can at best offer the needed dialogue.

In this context, Thomas and Mengel (2008) argue that educational models that aim to develop project management professionals need to address the increasing complexity, through fostering ideas of continuous change, reflection, self-organizing, networking, resilience to high ambiguity and team building skills.

As Bresnen et al. (2003) note, knowledge management is particularly complex in projects as the “self-contained, idiosyncratic and finite” (Bresnen *et al.* 2003, p. 158) nature of projects, linked to the inherent discontinuities, makes it difficult to capture and diffuse knowledge generated in projects – the tendency is to re-invent the wheel. At the same time, the technology based knowledge management techniques have limitations; Bresnen *et al.* (2003) argue that social communities with shared systems of meaning can have a significant role in learning, knowledge capture, retention and transfer. There is a further particular challenge for development projects: Bresnen *et al.* (2003) note that process related innovations are much more difficult to capture than product innovations, as the social processes and context play a larger role.

Projects in development

As Youker (1999) notes, in the World Bank context, problems facing project management in developing countries and developed countries appear not to be very dissimilar (see Fig. 2.3).

While on the surface problems in the developed and developing countries appear to be very similar; there are however there are some key differences to be considered. These will be examined in section 2.4 in more detail.

List of project management problems from post completion evaluations of development projects of the World Bank, as quoted in Youker, 1999.	List of project management problems in the United States from as quoted in Youker, 1999.
Lack of a shared perception and agreement on the objectives of the project by staff and stakeholders	Communication problems
Lack of commitment to the project by the teams, management, and stakeholders	Conflict between team and support organisation
Lack of detailed, realistic, and current project plans (schedule, budget, procurement)	Different objectives among stakeholders
Unclear lines of authority and responsibility (organization not structured for project management)	Insufficient resources
Lack of adequate resources	Insufficient rewards and lack of interest in the project
Poor feedback and control mechanisms for early detection of problems	Lack of senior management interests and support
Poor or no analysis of major risk factors	Lack of team member commitment
Delays caused by bureaucratic administrative systems (approvals, procurement, personnel, land acquisition, and release of funds)	

Fig 2.3 PM problems. Source: Youker, 1999; modified Korla, 2008

2.2 Innovation

Innovation was originally defined by Schumpeter (1983) as the commercialisation of new elements or a combination of old elements in industrial organisations. This could mean: i) new materials; ii) the introduction of new processes; iii) the opening of new markets; or iv) the introduction of new organisational forms. At the risk of being simplistic and reductionist, it is assumed in this study that innovation implies the concurrent existence of novelty, utility and success.

There is a fair amount of ambiguity in the use of the word innovation. It is often used as a synonym for invention; it is also used in lieu of improvement; and creativity and change is also often equated with innovation (Davila, Epstein, Shelton, 2006). As Amabile *et al.* (1996) notes, innovation is linked to acting on creative ideas. Davila *et al.* (2006) view innovation as a disciplined management process that uses specific rules and tools.

Rosenberg (1982) developed the idea of innovation as a learning process, and attention has also been given to the processes of absorbing the learning (Cohen & Levinthal, 1990). Schumpeter's work was reflected in the foundational work in the 1980's of Christopher Freeman (1982) and Giovanni Dosi (1982), and innovation system concepts were developed in the late 80's and early 90's (e.g. Edqvist, 1997; Nelson, 1993; Lundvall, 1995), based on the idea of collaborative networks of private and public sector actors with knowledge producers. In this vein, Patel & Pavitt (1994) defined innovation as a process that involves exchanging knowledge - they specifically noted both tacit and codified knowledge in this context. While growth through improved technology and production has traditionally been seen as the business incentive for innovation (e.g. Rogers, 1962), the knowledge-driven economy has shifted the focus to productivity, both in private sector led businesses and the public services.

Schumpeter's original elements compare closely to the techno-economic determinants of Hämäläinen's (2003) systemic model; the systems of innovation

approach (e.g. Freeman 1987; Lundvall 1992), in turn takes into account the institutional and public sector roles; the perspective of innovation chosen for this study is related to the systems of innovation approach precisely for this reason. Dense networks of social, cultural and economic relationships on local, regional, national and supranational levels underpin the existence of systems of innovation. Research indicates that these systems of innovation contribute positively to competitiveness in the global marketplace (Freeman, 1987; Lundvall, 1992; Edqvist, 1997). Lundvall (1995) further makes a claim that the long-term performance of an economy is intimately tied to the social cohesion and trust between the members of society. Organisations need to open their borders to access knowledge, through interaction with external agents, and Lundvall sees that systems of innovation are fundamentally based upon systems of knowledge and learning, with underpinning social aspects.

2.2.1 Administrative innovation

In the administrative context, innovation is linked efficiency, effectiveness, productivity, quality of services; it essentially is distinct from invention, in the sense that "Invention is the first occurrence of an idea for a new product or process, while innovation is the first attempt to carry it out to practice" Fagerberg (2005, p.4). The process view of innovation abounds, and e.g. Dosi (1982) see is as a problem-solving process, while Kline and Rosenberg (1986) thought of innovation as a process involving formal and informal relationships in networks of actors. From the project management literature, Hobbs et al. (2008, 550) define organisational innovation as "a new, non-obvious and useful set of rules, processes and structure that has found viable application in organisations."

Overall, this study uses the description put forward by Lam (2004), based on Daft (1978), Damanpour and Evan (1984) and Damanpour (1996) of organizational innovation as the "creation or adoption of an idea or behaviour new to the organization" (Lam, 2004, p.115). This is quite generic, and recognizes that technical and organizational innovations are intertwined. Some

distinction must, however, be made between technical and administrative innovation. As Afuah (2003) notes, technical innovation is linked to new or improved products, services or processes. It may require administrative innovation, and can be linked to a product or a process. Administrative innovation in this study is taken to be concerned with organisational structure of management and administrative processes, and may or may not be linked to technical innovation (Afuah, 2003). It is thus considered to be a subfield of organisational innovation. That being said, Lam's definition is seen to be valid also for administrative innovation, and is thus used throughout.

The idea of innovation and the process itself causes discontinuities (Christensen, 1997; Birkinshaw, Bessant, Delbridge, 2007) also in the administrative innovation arena. In the context of developing country public sector management, there are formidable constraints to the adaptation of new ways of doing things (or barriers to innovation), as these tend to upset existing webs of vested interests.

2.2.2 Knowledge and innovation

The knowledge perspective of innovation has evident linkages with the idea of the knowledge economy that emerged in the early 60's (Machlup, 1962). This evolved into the dual ideas of knowledge being quantitatively and qualitatively more important than ever, while the proliferating application of information and communication technology (ICT) became one of the key drivers of growth and economic development. The current trend of understanding knowledge as a key driver of economic development is also apparent in the developing country context. As the World Bank notes (World Bank, 1998), knowledge has become a more important factor than resources in determining the standard of living. In this process, knowledge has become increasingly a commodity as the advances in ICT have reduced transaction costs and increased the connectivity between actors (CEC, 2004).

In terms of knowledge, three main approaches could be adopted for this study. In the first place one could look at organizational forms as inducing

innovativeness (e.g. Burns and Stalker 1961; Mintzberg 1979). It is, however, argued that research solely into the structural forms of the organizations does not have sufficient explanatory power to successfully drive the argument when dealing with the extreme complexity of the international development context, with the clear asymmetry of capability and knowledge that exists between the various parties. It is recognized, however, that the structural aspects have an impact on innovation in the development context.

Secondly, one could develop further the thinking of Hannan and Freeman (1977), Romanelli and Tushman (1994) in seeing innovation as a capacity to respond to modification and upheavals in the operating environment. Shaping and influencing the environment is clearly an ability that can lead to innovation, but it is argued that the focus on external environment in the approach is too limited, and the selection process through an adaptation process is somewhat simplistic in the institutional context. The impact of the circumstance is, however, considered throughout the study but not as the leading theoretical approach.

The third perspective follows Argyris and Schon (1978), Nonaka (1994), Nonaka & Takeuchi (1995) and is based on the approach that learning and organizational knowledge creation is the basic platform for innovation. The ability of the organization to see, understand and exploit new knowledge is the key building block for innovative practice – and this is history and path dependent (Cohen and Levinthal, 1990), increasing the need for continuous, managed effort. As Nonaka & Takeuchi (1995) note, it is not the knowledge that drives innovation, but the dynamic creation of knowledge, through processes of absorption, assimilation and reconfiguration, which require distinct capability. This knowledge perspective implies a need to consider the cognitive and learning aspects in promoting innovation (also the same elements can inhibit innovation).

The ability to recognize the value of new, external information, assimilate it and apply it to novel circumstance has been coined as the organisation's absorptive capacity (Cohen & Levinthal, 1990), which is assumed to be dependent on the

prior level of related knowledge. Thus developing absorptive capacity and subsequently innovative performance is understood to be history and path dependent. Enhancements in this area require individual capabilities, which currently may not be fully developed, and a concurrent reduction of the social constraining factors that limit the full use of existing potential, in line with the Senian framework (Sen, 2000).

As Afuah notes, three properties of knowledge determine how well an organisation can perform its activities: newness, the balance between existing and new knowledge and the degree to which the knowledge is tacit. The degree of newness that underpins an organisation's activity is critical; the newer the knowledge, the more difficult it is to use. It follows that the amount of new knowledge is therefore also critical. The degree in which the knowledge is tacit impacts on the learning and transfer of knowledge in the organisation (Afuah, 2003).

As innovation is inherently risky, more intention appears to exist than real innovation as Drucker (1985) affirms, classifying opportunities by risk; the closer one gets to innovation based on new knowledge, the more inherent risk there is in the development process. Risk is tied to the degree of uncertainty: the biggest risk evidently is on something that does not yet exist. Failure is intrinsic to innovation and an organisation must create room for its members to fail, otherwise no-one will assume the internal risk of failure.

The knowledge driven economy has also implications for the management of innovation in projects. In the first place, innovation is seen to be systemic effort, the result of not a single activity but the cumulative outcome of a wide array of interlinked activities (Maskell, 1999). This effort is also managed and not a random search for opportunity, although the very idea of innovation involves high degrees of ambiguity and progressive elaboration in projects. Perhaps the key element to be recognized is linked to the idea that growth originates from increasing the productivity of work through knowledge. In administrative innovation therefore the aim is to organise activities in such a way that productivity is enhanced. This requires that human resources be managed in

such a way that individual capabilities are given room to flourish, while organisations need to be set up in a fashion whereby creativity and interaction can happen. There is also a need to network internal and external parties for best fit. These have evident repercussions on capabilities.

Practice based knowledge

Another option would be to see knowledge from a practice-based epistemology. The objectivist view assumes that explicit knowledge can exist independently of human beings, contrary to the view that knowing is personal, developing through practice. This view entails seeing knowledge as being embedded in practice, with tacit and explicit knowledge being essentially inseparable. Blackler (1995) argues that knowledge is not something that an individual possesses - it is something the person does. From this frame of mind, tacit and explicit knowledge are inseparable, as they are constituted in the same act (e.g. Werr & Sternberg, 2003). As Polanyi (1969) observes, the idea of strictly explicit knowledge is problematic, as it is meaningless without tacit knowledge.

Knowledge is further considered to be embodied, and for example Tsoukas (1996) observes that the situatedness on human action makes it impossible to act based solely on explicit knowledge, as no set of instructions can be complete enough to serve all situations. In this context also knowledge is understood as being socially constructed and culturally embedded.

Bounded rationality

The organizational and management research in the cognitive tradition is rooted in cognitive psychology and is concerned with the mental models, belief systems and knowledge structures that individuals adopt as the basis for decision-making (Weick, 1979,1995; Walsh, 1995; Lam, 2005). Similarly to individuals, organizations are seen to develop collective mental models, which encompass a social dimension. It is assumed, for the purposes of this study, that mental models vary in time and place, and both individual and social systems are linked to prevailing cultures – this would imply that definitions of innovation might also be culturally dependent. As Lam (2005) notes, using the cognitive

perspective it is possible to gain insight into the process of organizational learning and knowledge creation.

Individuals and organisations are only boundedly rational, as they are cognitively limited and thus not able to know all the factors that would influence decision-making. There are also evident difficulties in making action explicit, as knowledge maybe embedded in the actions of individuals, or the strategies, structure, routines or systems of organisations (Conner & Pralahad, 1995).

2.2.3 Continuous improvement and Deming

Continuous innovation could be said to have developed from the concept of continuous improvement, which was first developed in the US, transported to Japan after WWII, and is now making itself felt again in the West. Known in Japan as Kaizen, the central idea can be defined in the industrial circumstance as a planned, systematic process of company-wide, ongoing and incremental improvement of company performance based on change (Boer & Gertsen, 2003). W. Edwards Deming was instrumental in developing the Kaizen quality thinking through his extensive involvement in the post-war reconstruction of Japan. Perhaps his most visible innovation was the Plan-Do-Check-Act cycle underpinning the continuous improvement thinking.

The key benefit of thinking about projects through the Deming cycle is related to the idea on continuity of the process. The original circle was based on the idea of a repetitive process. Deming himself called it the Shewhart Circle, after Walter A. Shewhart, whose conceptualization underpins Demings version – Shewhart had used the term “See” to signify both Check and Act (as presented in Koskela & Howell, 2002). While Deming later on in his career updated the circle from the original Plan-Do-Check-Act (PDCA) to Plan-Do-Study-Act (PDSA), in this study the PDCA nomenclature is used throughout.

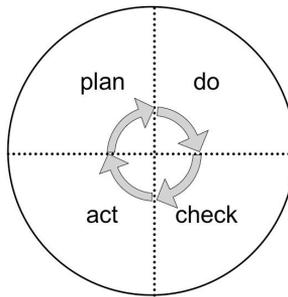


Fig. 2.4 The Deming PDCA Cycle

The PDCA cycle consists of the following phases:

- Plan:* Determine the objectives and related processes that are required to deliver the results aligned with the set specifications;
- Do:* Execute/implement the process;
- Check:* Review the results against the original objectives and specifications, and report on the outputs/outcomes;
- Act:* Take action that adjusts the plan-do-check-act process, to improve on outputs/outcomes in the next implementation.

The PDCA concept has its origins in the three stages of forming a hypothesis, developing and running an experiment and evaluating the results, which then leads back to either a revision or validation of the original hypothesis. This is also the basic premise of the Scientific Method and the work of Francis Bacon (1561-1626) and specifically his “The New Organon” of 1620 (Roland, 2001).

Bacon’s work is significant inasmuch as he improved on the philosophical process of syllogism through his new system of logic (Klein, 2003). The pre-Baconian writings of Alhazen (Book of Optics, 1026 as referred to in Agar, 2001), and the later work of Descartes (Discourse on Method, 1637, as referred to in Smith, 2007), taken together with Bacon, can be considered to be critical in the historical formation of modern scientific method. Abu Ali al-Hasan ibn al-Haytham (965-1040) (known to Europeans as Alhazen) wrote on astronomy, optics, geometry and mathematics. Through systematic, repeatable and quantifiable experiments, Alhazen was instrumental in formulating the basics of

modern scientific method, including the idea of hypothesis expressed through mathematical formulae. René Descartes (1596-1650), besides significant contributions to philosophy, founded analytic geometry, essential to the invention of calculus and analysis, while being a significant member of the 17th century rationalistic movement in continental Europe (Smith, 2007).

Iteration, and especially improvement and development through iteration underpin the PDCA circle. The circle should be repeatedly used to increase the knowledge that exists in the process at hand. This is closely related to the idea of knowledge as linked to practice (Hislop, 2005), and the premise that improvement can be achieved through practice. It also allows for both incremental improvement and more radical leaps of breakthroughs. In managerial terms the PDCA principle is also a forgiving one as it allows the start of activities with the premise that improvements can be made as one goes along.

2.2.4 Towards continuous innovation

As Bessant and Caffyn (1997) note, the concept of continuous improvement is sometimes considered to be synonymous with continuous innovation as it deals with a continuous quest to improve on the existing in terms of processes, services or products. It is also linked with waste reduction and quality improvement. Bessant and Caffyn also suggest that continuous improvement is about increasing the participation in the innovation process within organisations. There is a Japanese parallel to this, in Kaizen, where quality circles have enhanced the participatory aspects of industrial production. They define continuous improvement as “an organisation wide process of focused and sustained incremental innovation” (Bessant & Caffyn, 1997, p.10). They also note that the concept as such is clear but there are significant difficulties in implementing it.

The continuous improvement is moving towards continuous innovation, as learning and the innovation processes are converging (Boer *et al.*, 2006) On the level of individual organisations Bessant & Caffyn (1997) and Janszen (2000),

among others, make the case for continuous improvement and innovation as the only means of realizing sustainable competitive advantage. This implies that innovation cannot be considered a “one-off” exercise but instead a continuous process.

Boer *et al.* (2006, p. 2)) make the case for continuous innovation capability, which they define as the ability to enable the “effective, ongoing interaction between operations, incremental improvement and learning (exploitation process) and radical innovation and change (exploration process).”

Sources of innovation

Sources of innovation can be organized into two main categories. As von Hippel (1988) observes, functional innovations are derived from the organisations internal or external value chains, the links to external knowledge creating organisations, competing organisations or other nations or regions. Von Hippel (1988) identified the end-users as a significant source of innovation.

There are also circumstantial sources of innovation (Afuah, 2003), and the question then becomes under what circumstances can one expect innovations, and when? Innovation can be planned, and conscious attempts in R&D can be seen as investments towards developing new and better ways of working.

Unexpected occurrences (or the responses to them) are a significant source of innovations. Natural disasters, as tough as they may be in terms of humanitarian suffering, can also be seen as opportunities to improve on the current state of affairs. This has been recognized for long, but “building back better” is tremendously difficult to do, as is noted in the third essay of this study. As Drucker (1985) notes, opportunities can be found in the unexpected, the incongruity, process needs, changes in the industry & market, demographics, changes in perceptions, moods and meanings and finally new knowledge. Drucker (1985) also identifies the risk of innovation as increasing when one progresses from the unexpected success to the application of new knowledge.

The third significant circumstantial source of innovation is change - or again the responses to change (either proactive or reactive). Globalisation is a force that is

changing the world in many ways, and while it has clear negative impacts, there also significant gains to be obtained from the process. Perhaps the challenge in this regard is to strive for an equitable balance.

The original technology push view, as with the market pull and actor networks in technology and innovation has evolved into thinking about complex systems that encompass products and services, technology and management (Davies & Hobday, 2005). In the area of administrative innovation, social networks are seen to act as sources of innovation (Foray, 2000; OECD, 2000). This thinking builds on the ideas of technology push and networking. The key idea of innovation thinking is based on the idea that knowledge fosters innovation. Innovation is driven in organisations from within through the attention of senior management, creative environments that encourage novel solutions, joint initiatives with partnering organisations, such as public-private partnerships, and project management. On the other hand, as Von Hippel (1988) notes, there are also externalities. Knowledge-intensive service providers such as development consultants can have major roles in fostering innovation in projects, through their cumulative experience and expertise. These consultancies share similar attributes to the companies studied by Gann & Salter (2000), who note the dependence that these organisations have on their past project portfolio, their reputation and the systems that have been built up over time. Similarly, the learning issues between individuals, teams and the wider community are present in the development project context.

Innovation transfer & management

Kogut (1991) notes the long-term history and path dependencies that economic systems follow; in this sense organisational and administrative innovation is likely to be linked to changes in institutional frameworks. Due to the relative international immobility of labour, successful organisational innovations may be difficult to import/export across cultures (Whitley, 1992; Hollingsworth & Boyer, 1997). As also Simon (1962) notes, it would appear that innovations in the techno-economic determinants of the systemic model would be easier to transfer from one national context to another than innovations in institutional

frameworks and related government roles. The latter appear more rigid and contain the key elements of inertia in the national economic systems.

Innovation transfer across functional and organizational boundaries presents challenges in terms of the absorptive and transmission capacities, the nature of the innovation in question, the timing involved and the differences in the national and organisational cultures.

The effectiveness of an innovation transfer is in function of the ability of the recipient to absorb the knowledge being transmitted. The absorption capacity is history and path dependent, as the assimilation of external knowledge requires a minimum of related pre-transfer knowledge (Cohen & Levinthal, 1990; Zahra & George, 2002). The process of knowledge transfer is affected by complementary assets such as facilities and equipment (Afuah, 2003). A knowledge gap impacts on development cooperation, as the asymmetric background of the donors, technical assistants and the local host organisation may require operating on the level of the lowest common denominator.

The nature of the innovation impacts on the transfer process. Radical innovations and incremental innovations transmit differently and are dependent on the circumstances. In development, a crises tends to enable the uptake of radical innovations, while incremental innovations are enabled through a longer term change. The complexity and the underpinning level of tacit knowledge are important determinants of the transfer process. Notable also is that fact that, in international settings (and especially in development cooperation), incremental innovation for one party may constitute radical innovation for another.

National and organisational cultures are seen to be key enablers or inhibitors to the transfer of innovations (Hofstede, 1980; Trompenaars and Hampden-Turner, 1997). An organisations values and beliefs, together with the structure, people and systems, produce behavioural norms within the organisational setting. The national and local cultures in which the organisation is embedded are seen to impose the ultimate social constraints in terms of what is possible and what is not (Sen, 2000). Transferring innovations in international development

cooperation often involves a double challenge of cross-organisation and cross-national transfer. This is evident in the situation described in the third essay.

2.3 International development cooperation

Todaro & Smith (2006, p.23) note the objectives of development as including securing and improving access to basic life-sustaining goods, raising the measurable level of living and improving the range of economic and social choices that one can make in one's life. Sen (2000) defines development as the process of enlarging a person's functionings and the capabilities to function, together with the range of things a person could be and do in his/her life. This viewpoint involves the idea of that obstacles like illiteracy, ill health, lack of access to resources and lack of civil and political freedoms need to be removed.

International development cooperation is here defined as the cooperative process of promoting human well-being that is supported across national boundaries. Well-being is used in the wide sense, encompassing among other things good governance, accessible and appropriate healthcare and education, human rights, infrastructure and environmental concerns, economical opportunity and resilience to natural and man-made disasters. There are also more operational definitions, as in the case of Unesco (2006), in which development cooperation is understood to refer to the activities (e.g. technical support) of the financing agencies.

The terms "development aid" and "development cooperation" are often used interchangeably (other terms used are development assistance, technical assistance, international aid, overseas aid and also foreign aid), but the tendency since the 90's is to use development cooperation, as it conveys the idea of a partnership. In all cases, the terms refer to support given by governments and other agencies to developing countries with the intention of supporting the economic, social and political development of the recipient. Development support usually involves a long-term commitment, and is distinct from humanitarian aid, which is mostly delivered in short term.

2.3.1 Background to development cooperation & aid

The origins of international development, as we understand it today, can be traced back to the beginning of the 19th century, with a noted escalation of activity after the Second World War, when the reconstruction needs and later the cold war drove the establishment of international financial institutions and initiatives like the Marshall Aid (Browne 1990). The second half of the 20th century has seen an intensification of international development, sometimes driven by political agendas, like to ones related to the Cold War and the containment of the spread of communism (Thomas, 2000).

It has been suggested that the theoretical approaches used in international development since the Second World War are rooted in the modernism and technological optimism of the (mostly) Anglo-American political thought (Barlett, 2007), supported in the fifties by Rostow and evolving into the neo-liberalist agenda of the 70's and 80's with Friedman *et al.* (Parfitt, 2002; Thomas, 2000). These approaches were implemented through extensive structural adjustment programmes and later on through privatisation programmes. The modernization theory of development made several assumptions, among them the idea that less developed countries would follow the track of more developed ones and that assistance is required for this development to happen. It has also been assumed that less developed countries would develop at a faster pace than developed countries and that a balance would be found sooner or later. An assumption was also made that education would play a strong role in the process and that the application of technology would foster growth.

The criticism to the neo-liberalist agenda started to take form already in the 60's, with the advancement of dependency theories between the developed and the developing countries. Through a bottoms-up approach, often taking civil action against the adjustment programmes in the 70's and 80's, the critics of the established institutional approaches gained momentum, incorporating alternative development approaches that focus on human needs and capabilities

through the contributions of Streetan, Haq and Sen, among others (e.g. Fukuda-Parr & Shivakumar, 2004; Partfitt, 2002; Bhaduri, 2005). Some of these initiatives were incorporated into policies and programmes, as in the case of the UNDP Human Development Report. The dependency theory led to some failed import substitution policies, especially in Latin America in the 80's, and was later contested by Immanuel Wallerstein's notions of centre - semi-periphery - periphery (so called World Systems Theory), which attempted to explain, inter alia, the industrialization processes in the Newly Industrialized Countries (NICs) (Kohler & Chaves, 2003).

Now, in the second half of the first decade of 21st century, the international community has embarked on the ambitious goal of reducing poverty through the Millennium Development Goals (MDGs), while others maintain that "trade, not aid" is the way forward (Sachs, 2005, Brolén et al. 2007). These two aims are not contradictory as such, and one builds on the other, but approaches to address the two issues can be extremely divergent. The MDGs are seen to have replaced the previous modernistic discourse, with a shorter perspective, while corporate social responsibility is seen to be in a key position to influence positive human development through fair trade and appropriate commercial practice. Globalization appears to be leading to a greater integration in the world and concern has been voiced over the asymmetry of power and participation in global affairs.

There are also voices that have heavily criticized the current formal aid delivery systems and related institutions. As an example, Easterly (2006) has argued that the planned interventions in development aid have basically failed to produce the desired impact, calling for agile and small interventions that could promote local innovation. Moyo (2009) argues for a radical stop of the whole funding system of development aid, while promoting alternative private sector approaches to development finance. Collier (2008) has identified a series of traps that the poorest developing countries have fallen into; he offers a series of prescriptions on how to both avoid the traps and get out of them. Perhaps a

common theme of the three writers is a call for alternative ways of delivering development aid; in other words, innovation in aid.

2.3.2 A rights based approach

Development is essentially not an option, possibly to be extended to some and not to others. It is a fundamental human right, clearly set out in the Universal Declaration of Human Rights (1948), the International Covenant on Civil and Political Rights (1966) with its Optional Protocols and in the International Covenant on Economic, Social and Cultural Rights (1966).

While the International Bill of Human Rights contains civil fundamental freedoms and political, economic, social and cultural rights, including also third generation rights, it is the Declaration on the Right to Development (1986), and the Vienna Declaration and Programme of Action (1993), that establish socio-economic development as a basic right.

The rights based approach is important, as it establishes the right of individuals within their societies to be able to develop, and acts as the basis for the dialogue between the donors and the aid recipients. It is a cornerstone for the efforts to achieve symmetric relationships, within and external to societies.

The rights based approach is also important because it forms the basic principles on which development interventions need to be built upon. These have since been translated into guidelines, such as the Sphere Project Core Principles (The Sphere Project, 2004), an initiative by international and national NGOs, The Red Cross Movement, UN agencies, donors, host governments and representatives from affected populations to develop a operational manual that would set the minimum standards for action in humanitarian assistance. This de-facto standard notes, for example, that all possible steps should be taken to alleviate human suffering arising out of calamity and conflict; it is also explicit in affirming that people affected by disaster have a right to life with dignity. The Sphere project is based on International Humanitarian, Human Rights and Refugee Law. Many international organizations, such as the International Red

Cross and Red Crescent Movement and other NGOs have adopted codes of conduct that form the basic rules of engagement.

2.3.3 Aid, institutions and development

Quantity vs. quality

While the quantity of aid is a long-standing, almost constant debate, the quality of aid has also come under examination recently (UNDP, 2005; World Bank, 2005; ActionAid, 2005). These processes led to the Rome (2003) and Paris (2005) Declarations, which argue that development aid should be untied from the donor-country sole procurement and delivery in kind, be harmonized and coordinated between donors and recipients in terms of delivery, and aligned with local needs. A further issue which impacts greatly on the delivery of aid is the proliferation of both donors and programmes and projects, which increases the administrative burden on recipient organisations, and after a threshold level, causes aid effectiveness to decrease due to administrative and managerial inability to cope (Morss 1984; Roodman 2006). Aid translates to public expenditure, but in relation of less than one to one, as administrative and project managerial costs are often factored into the aid package already at the donor level, reducing the freedom of local institutions to assign resources (Mackinnon, 2003; Wolf, 2007).

A case for institutional development

Hämäläinen (2003), building on Porter (1998), attaches importance to role of the institutional framework of government (North, 1990). On a systemic consolidation of classical, neoclassical and endogenous growth theories, Hämäläinen argues that the techno-economic determinants (productive resources, technologies, organisational efficiency, product market characteristics, together with external business activities) form the core of the system, and the framework conditions of the formal/informal institutional arrangements and government policies are at the core of determining competitiveness and economic growth.

The enabling role of the public and third sectors within institutional frameworks has been understood by international development agencies and organisations, such as the UNDP (2006).

Transparency and a reduction in corruption, together with improved relationships of accountability between users, service providers and governance on both central and local levels is seen to be a prerequisite for efficiency and effectiveness in aid delivery (World Bank, 2003; Jüttig *et al.*, 2004). Aid efficiency may be significantly enhanced through addressing corruption. As Wolf (2007) notes, the efficiency of service delivery is closely related to the allocation of resources, which in turn depend on governance. The success of recent decentralization policies is seen to be closely linked to the ability of the central governance to strengthen the local structures and institutional capacity, while service delivery enhancements are only likely if institutions are in place for an efficient use of resources.

Furthermore, aid volatility can seriously hinder long-term policies, and significant aid flows can alter the delicate balance between the private and public sector employment opportunities, especially in small, closed markets (Wolf, 2007). It has been argued (Lensink & Morrissey, 2005; Arellano *et al.*, 2009) that aid instability can decrease investment, while permanent flows of aid are often directed at consumption. As investments are usually delivered through projects, volatility in project funding is harmful to long-term development (Fielding & Mavrotas, 2005). Also, the increase of aid, often cited as the panacea for development, does increase the public sector expenditure (Wolf, 2007), but Jayasuriya & Wodon (2003) establish quality governance as a key determinant of outcomes - with an interesting link to increasing urbanization, which affects educational outcomes significantly.

As institutional factors are a key determinant of aid effectiveness (and thus of development and human welfare in general), it is of interest to verify the opportunities that exist to strengthen the recipient organisations ability to align, coordinate and harmonize aid, while managing the proliferation aspect.

2.3.4 Participation and ownership

Development assistance today is characterised by the support to the development of indigenous abilities, through initiatives identified by the beneficiaries themselves (Wilson & Whitmore 1995; CEC, 2004). In theory, the donor community responds to local initiatives and funds activities that are “owned” by local concerns, with sensitive approaches that take into account cultural issues, the socio-economic circumstance and local governance. There is also a shared understanding that there needs to be a concurrent strengthening of institutional and administrative capacity and capability in the partner countries. Over time, the client-ship in projects has been shifting from the donor agency to the beneficiary institution and a parallel trend of providing sector wide support has emerged (Sida, 2000; Unicef, 2001; Ostrom *et al.*, 2002; Saasa *et al.*, 2003; Franks *et al.* 2004). As the development of capacity and capability is history and path dependent (e.g. Cohen & Levinthal, 1990), real ownership cannot be given but must be gained over time.

In many cases, however, development initiatives support existing, static (and sometimes stagnant) local structures and organizations and fail to produce long term, sustainable positive results. From the beneficiary side, there are problems related to weak capabilities in the identification, planning and implementation of initiatives. From the donor side, in many cases there are failures to understand local livelihood issues, priorities and the need for participatory processes; often the focus is on fulfilling the organisational and structural demands of the donor itself (Ariyabandu & Bhatti, 2005; Saasa *et al.*, 2003). Furthermore, donors are wary of problems related to governance, and possible financial and operational mismanagement. Taken together, these problems may lead to a situation in which the donors remain effectively in control of the initiatives they fund.

As Hickey and Mohan (2004) note, participation has often been considered the panacea of development, with an expected immediate positive impact. This view is simplistic and evidence shows that it does not hold water (Hickey &

Mohan, 2004). However, it appears that empowerment and transformation can be achieved, but participatory approaches are most likely to succeed when they are an integral part of a wider political project or agenda, intent on securing the rights of citizenship to (often marginalized) groups. Engaging in processes of social change instead of technocratic interventions is a foundation stone for successful participatory initiatives.

While there has been a clear move to the direction of a sector wide approach (Atherton 2002; Adams 2004; CEC, 2004) and towards the increasing control and implementation responsibility of the local beneficiaries, with resources that are injected through normal local public sector budgetary channels, the project approach is still a main vehicle used to deliver focused development projects and programmes that receive external donor support.

2.3.5 Communities of practice

As in many other fields, the development professionals have formed communities of practice (Lave and Wenger, 1991; Wenger, 1998). According to Wenger, McDermott and Snyder (2002, p. 4) a community of practice is: "A group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their understanding and knowledge of this area by interacting on an ongoing basis". In the context of this study this is taken to mean involvement in the conceptualizing, planning, implementing and closing international development cooperation projects.

The current understanding of the concept was developed through the study of apprenticeships (Lave & Wenger, 1991). It has since been widely adopted into use in the context of organisational development, in learning and knowledge management, in sharing and creating new tacit knowledge within organisations, in developing social capital and in stimulating innovation.

The original work by Wenger (1998) set out the principles of the community of practice through identifying the main elements, including the domain of knowledge, defining the key issues of interest area, the community of people

that are joined through a common passion for the matter and the practice that the community shares. Wenger furthermore developed the thinking (that appears relevant for the development context) through dualities: participation vs. reification; designed vs. emergent; identification vs. negotiability; and local vs. global. In his 1998 work, Wenger has used the idea of negotiation of meaning as a process of experiencing the world through engagement involving change and learning. He furthermore suggests that this negotiation process is linked to the two main components of participation and reification.

The two are linked through the idea that participation turns the abstract into concrete; but it also recontextualizes it's meaning. Thus participation and reification jointly create meaning; independently they are not able to achieve change and learning (and thus negotiated meaning). Through these processes, individuals align themselves with community-wide learning and sense-making. This creates the social capital that is embedded in the communities of practice. It should be noted that these communities do not necessarily possess clear boundaries or explicitly identifiable groups, especially not in regard to existing organisations or institutions; but it does imply a special purpose (Lave & Wenger, 1991).

This is where the importance of communities of practice lies for development projects: while the communities are deeply embedded in the field of development through practice, they are independent from most organisational settings and cross national, cultural, and organisational boundaries. In the field of development projects, communities can be tentatively subdivided into communities linked to institutional donors, the beneficiary public sector, NGO operators and finally communities linked to various types of service providers and the academia. These communities are multidisciplinary by nature, as typically tasks in projects extend across disciplinary boundaries, especially in the management of projects, considered to be a cross-cutting skill in development (Alasuutari, 1999; Leinikki, 1998; Welch, Welch and Tahvanainen, 2005). These communities are also seen to offer the possibility to transmit tacit knowledge that cannot be easily captured, stored or transmitted.

Typically communities are effective in time saving and leveraging and diffusing best practices, while ensuring that new generations of practitioners are inducted to the community. The communities are also concurrently local and global; a project takes place in a local context but many of the participants originate from global contexts. As Wenger (1998) notes, the local and global contexts co-exist and shape each other.

Borrowing on the thinking of Wenger (1998), the practice of development projects is also in many ways a response to the design of the initiatives; this implies that unexpected adaptations are needed on occasion, as the design of projects is, by definition, never an exact science but a social construction of reality. The emergent nature of the projects can be seen as a positive driving force, keeping the initiatives over time relevant to the stakeholders; that being said, it can also lead to strategic and operational indecision and paralysis.

While organisations cannot control or fully own a community, they can take part, encourage, support and take advantage of the communities of practice. As Wenger & Snyder (2000) note, communities of practice have distinct attributes: they exist to create and share knowledge on a self-selection basis, evolve and end organically and are held together through passion, learning and identification. These make them distinct from development project teams (which exists to deliver a service or product, reporting to a defined manager, having set job and task descriptions and a temporal nature) or more formal departments that are not finite in nature (Wenger and Snyder, 2000). Communities of practice are also distinct from communities of interest (which have a purpose of being informed and are held together by a sense of like-mindedness) and informal networks, which exist to pass on information and are based on mutual friendships (they are also open-ended relationships).

All that being said, as Lindkvist (2005) notes, there are also situations where groups with similar interests fail to engage as a tightly-knit group: he makes reference specifically to temporary projects organisations, under circumstances in which the group consists of individuals who have not met before, who originate from diverse backgrounds, and who may be under considerable time

and task pressure. Lindkvist argues that in these situations, groups may engage on a “collectivity-of-practice” (Lindkvist, 2005, 1199), or a loosely coupled group that share a minimal base of knowledge and understanding.

In examining the case put forward by Lindkvist, two observations emerge that are especially relevant to development projects. In the first place, while the project organisations are temporary ones, they tend to last for the duration of the project, and are set up most often as dedicated (field) structures, thus eliminating multiple projects and the participation of key staff in many different concurrent projects. Secondly, while short-term experts are frequently used, they tend to possess skills that are standardized to a degree (e.g. due to, say, standardized evaluation briefs). These two factors increase the degree of common knowledge base and understanding between the individuals that work in development projects. There is clearly room for further research in this area, and it could be that both types of communities exists concurrently, even within single projects or programmes.

2.3.6 Sen and the Capability Approach (CA)

Amartya Sen originally proposed the embryo of what was going to become the Capability Approach (CA) in his Tanner Lecture on Human Values at Stanford in 1979 (Sen, 1989). The idea of the CA is built on the notion that human capabilities are restricted by social constraints that effectively inhibit the choice that individuals have. Removing these constraints is a central task of development.

This study adopts the view put forward by Robeyns (2003), of understanding the Capability Approach essentially as a framework of thought for the evaluation of individual advantage in the context of the related social arrangement. According to Robeyns, the CA can also be understood as a critique to other approaches of evaluating human well-being, or as an algorithm for interpersonal comparisons.

As a framework of thought, the CA sees human beings forming the *end* of economic activity, rather than its means. This includes the idea that economic

growth or the related metrics are not sufficient objectives for development; socio-economic arrangements need to be evaluated in terms of how they enable the expansion of human capabilities. Thus capabilities enable people to do or to be; social constraints act as inhibitors to the process.

When applying this concept to projects, the unit of analysis is the project itself, and the focus is on how the individuals are able to operate within the project. It is argued that there is a fine balance in each and every project between the ability of the project staff to make things move, in relation to the constraints imposed by the social circumstance. Sen's CA allows for the modelling of the balance between capabilities and what actually can be achieved. This clarifies the internal working of a project into two balancing forces that can be evaluated and understood in a single framework.

Please refer to Essay 4 in this study for a more detailed account of the CA.

2.3.7 Problematic development projects

As van Dijk & Sandee, (2002) note, inventiveness is quite commonplace in developing countries, but wider diffusion (or success) of inventions is often not achieved.

While the project approach has been in the mainstream of development cooperation in the last decades, it has been perceived to possess some inherent weaknesses (CEC, 2004; World Bank, 1998). As noted by the World Bank (1998), "Aid agencies have a long history of trying to 'cocoon' their projects using free-standing technical assistance, independent project implementation units and foreign experts – rather than trying to improve the institutional environment for service provision... They have neither improved services in the short run nor led to institutional change in the long run." (Source: CIDA, 2003, p.9)

On the other hand novelty that is not diffused is either not useful to anyone or taken up and spread for any number of other reasons. The inadequate local ownership of projects has been perceived to be a significant problem, impacting

negatively on the sustainability of the benefits. Secondly, the establishment of separate project management, funding, and monitoring and reporting systems is seen to undermine local capacity and capability, and not develop it as would be desirable (this also adds a tremendous burden on the recipient). Thirdly, the project approach has created a narrow view of how available financial and other resources should be used. Referred to as aid fungibility, donors may be funding projects that government would have undertaken anyway (even if the donor funding were not available); this has the effect of freeing government resources to be used for other purposes (as in the case of Sri Lanka after 2006-07, to wage a civil war).

The total effect of donor support therefore depends on how government uses these freed resources and not on the specific project or programme against which the development assistance is specifically earmarked. Agreement on overall public expenditure priorities is a way of ensuring that fungibility does not compromise the objectives of the providers of the development assistance (CEC, 2004). And lastly, the large number of projects, each with its own funding, processes and protocols, has resulted in high and wasteful transaction costs.

Sector and budgetary support

Due to the perceived problems, the donor community, including the EU, has developed alternative mechanisms (or rather, these mechanisms have existed all along - perhaps they have just become fashionable again) of delivering development aid. Two main instruments have emerged as preferred ways of achieving this: direct budgetary aid to governments and sector approaches.

Direct budget support is a clear-cut strategy of simply giving money to a party and letting them figure out what to do with it (although that is perhaps a bit simplistic as there are always some strings attached). The recipients (usually governments) favour it in many cases, as it allows the incorporation of donor funds into the normal revenue streams, budgeting and disbursement mechanisms, theoretically enabling coherent and cohesive administration. It

also allows small and large-scale misuse and preferential agendas, and devolves all operational issues to the recipient. Macroeconomic budget aid supports the overall national development, while sector budget support is linked to the sector approach.

The other current favourite is sector support (also called Sector Approach and Sector Programmes, Sector Investment Programmes (SIPs), Sector Development Programmes (SDPs), Sector Expenditure Programmes, and as the most recent term, Sector Wide Approach (SWPs). The common theme is that this approach specifically supports a certain sector (e.g. education, health), often through budgetary support that is tied to specific areas or focal activities. These two mechanisms attempt to bypass the project-related problems, by giving the partner governments the lead in the sectoral policy, strategy and spending. This is seen to enhance the coherence, through a comprehensive view of the sector, minimising also the transaction costs, as no parallel structures are used.

One cannot help but to wonder how much of the rearrangement of the aid delivery is based on donor convenience. To manage and run projects requires significant expertise, effort and administrative inputs, and badly performing projects are a reputational risk. Also, it can be observed that the developmental parts of the sector programmes will no doubt be still organised into projects, but through the efforts of the recipient 's organisation. This evidently devolves the power to set up projects, but it does not make it any easier and does not guarantee that relevant expertise is available. While simple projects may well thrive under a devolved agenda, large and complex projects (which many significant projects are) may not even get off the ground. This is clearly also visible in the very low disbursement rates that some governments have in relation to, say, World Bank soft loans, which appear administratively tremendously difficult to get up and running.

But projects still remain

Notwithstanding budget and sector support, projects still remain as a significant vehicle for delivering development aid. As Foster and Fozzard (2000) note,

sector wide approaches are only really advisable in situations where the recipient countries have relatively good macro-economic management and sector policy environments, but when the capacity of the civil service is underdeveloped (this is the case of many countries in Africa). Weak sector policies or macro-economic management, irrespective of the level of aid-dependency are unlikely to result in positive results. This clearly demonstrates the need for projects also in the future. In a similar vein, Jones & Lawson (2000) note the importance of linking policy, planning, budgeting to a holistic framework, in order to guarantee success in macro-strategic and operational levels; again failing the big picture will give cause to proceed in small, project-like steps.

As Crawford & Bryce (2003, p. 363) note, the “project cycle is a preferred vehicle for the delivery of foreign aid to developing or newly emerging economies”. While sector approaches have been developed in the bilateral and multilateral aid delivery between institutional partners (as with the World Bank and developing country governments), there has also been drive to decentralize development initiatives to implementing partners, such as Non Governmental Organisations (NGOs) that implement externally funded projects within developing countries, acting in some cases almost like private contractors (Crawford & Bryce, 2003).

Diallo & Thullier (2004) and Crawford & Bryce (2003) argue that development cooperation projects have specific attributes in terms of project management. The projects often have a focus on objectives that involve human development, making performance measurement a complex issue. The political nature of the projects is also well recognized, resulting in stringent reporting requirements and a high demand for accountability. Crawford and Bryce (2003) also point out the unpredictability linked to socio-political environments, technically challenging operational environment and competing objectives of development partners. The actors are furthermore often separated by culture and geography, making communication onerous and prone to misreadings.

While many of the industrialized country project management tools and techniques, such as the logical framework, planning, execution and process controls (such as PERT, critical path methods, or management by objectives, to name a few) are found to also be directly applicable in the development context (Muriithi & Crawford, 2003), there are issues with non-technical systems. As an example, they note that a high power-distance in workplaces inhibits the use of sense-making techniques (such as brainstorming), unless they are clearly planned and executed without the presence of higher hierarchies. Similarly, fostering motivation through reward and recognition is different in the studied African context than in the more developed countries. The economics in procurement and contracting are embedded in social networks that influence buying decisions and compliance to a great degree – and other criteria besides economic rationality is often applied (Muriithi & Crawford, 2003).

2.3.8 The EU and development projects

In order to ground the study in the context of European efforts in development cooperation, the European Union model of setting up and managing development cooperation projects is examined. This is a research choice; it should be noted that many multilateral organisations utilise project cycle management systems and models that are very similar.

The EU approach to supporting development is based on the Article 177 of the EU Treaty, which sets out three broad areas of development cooperation: i) fostering of sustainable economic development; ii) smooth and gradual integration of developing countries into the world economy; and iii) the campaign against poverty (CEC, 2004). The strategic direction was further refined in 2000, through the Policy of the European Community for Development Cooperation (CEC, 2004), which sets the guiding principles for development cooperation. These principles include the idea that the ownership of the development processes rests with the developing countries themselves; that there needs to be an increased attention given to social dimensions of growth and development (with a focus on poverty and the most vulnerable

groups, such as children, women, and the disabled); and that there must be more attention on results of development cooperation (CEC, 2004).

As noted early on, the EU defines projects in the context of development cooperation as “A series of activities aimed at bringing about clearly specified objectives within a defined time-period and with a defined budget” (CEC, 2004, p.8). In the EU context, it is very unclear what the distinction between programmes and projects is, as the EU simply notes that: “The definition of what a programme is depends essentially on how the responsible authority(ies) choose to define it.” (CEC, 2004, p.8). This implies that a programme can be everything that a project is and also potentially everything that a project cannot be.

The EU policy (CEC, 2004) notes that projects are still needed, despite or in addition to the other instruments, with:

Decentralised cooperation with non-public entities. What this implies is that the support to non-state actors (or anything outside of the government) will be delivered through projects. This is significant as to the tune of 15% of all of the EU development funding is to go into this category.

Emergency and post-crises interventions. Typically like the humanitarian crises and the recovery operations, such as discussed in the third essay.

Technical assistance projects. This is vague, and is defined as projects that can encourage innovation and learning, through promoting new methodologies and ways of working.

Regional environmental projects or international public goods. This is when the expected benefits are very long term, or cross-border.

Investment projects that have high transaction costs for governments. This would include mega-projects, where specific expertise is needed.

When conditions do not allow for other approaches to be used.

As is notable, the list is long, and it covers almost all imaginable situations where projects could be favoured viz. a viz. other approaches. It would appear that projects are not going to disappear very soon from the repertoire of tools that exists for development aid delivery. There is anecdotal evidence that there has been a swing towards projects, away from sector approaches, in recent times – this may have to do with the level of control.

Project cycle management (PCM)

The EU defines Project Cycle Management (PCM) as a methodology for the preparation, implementation and evaluation of projects and programmes based on the principles of the Logical Framework Approach (CEC, 2004). The use of the Logical Framework Approach (e.g. NORAD, 1988; AusAid, 2000) to manage development project cycles is wide-spread within the donor community, and although it is seen to be static in nature (Crawford & Bryce, 2003) it still is useful in terms of laying out the various components of projects in a holistic fashion. It is a tool for setting out the intervention logic, objectives and indicators in a joint framework.

The project cycle follows the life of a project from the initial idea through to its completion. It provides a structure to ensure that stakeholders are consulted, and defines the key decisions, information requirements and responsibilities at each phase so that informed decisions can be made at each phase in the life of a project. It draws on evaluation to build the lessons of experience into the design of future programmes and projects (CEC, 2004).

The PCM is divided into five main phases: programming, identification, formulation, implementation, and evaluation and audit. According to the EU (CEC, 2004), three main principles apply to the EU model: each phase has proprietary criteria and procedures for making decisions, the phases involve progressive elaboration and new projects draw on the knowledge captured from the previous phases.

The EU model is intended as a form of control, to ensure that projects are “supportive of the overarching policy objectives of the EU and development

partners” (CEC, 2004, p.17). Explicitly projects are intended to be relevant (meeting demonstrated, prioritized needs), feasible (delivering sustainable benefits through well designed interventions) and effective and well managed (delivering what was intended in well managed way).

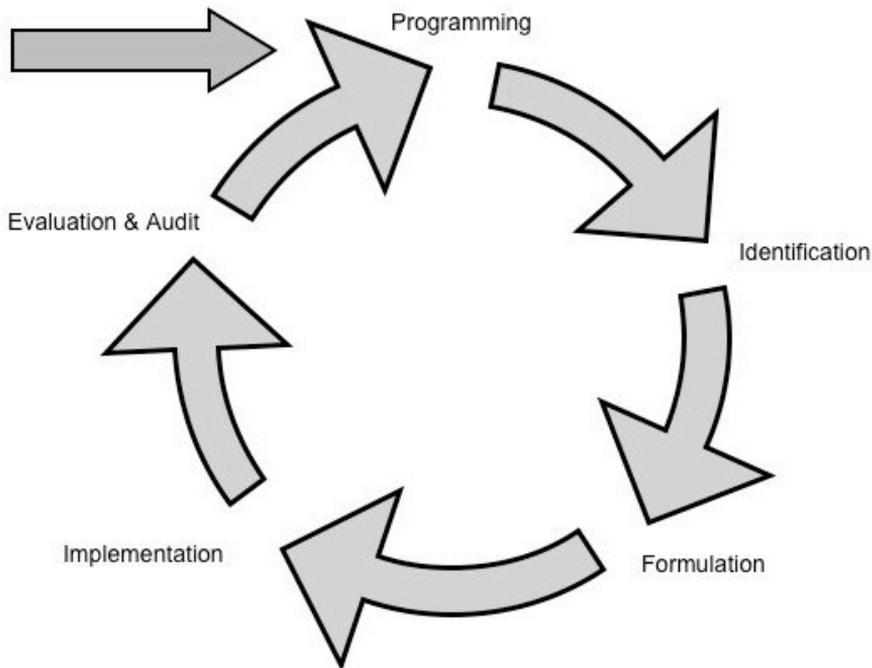


Fig. 2.5 The PCM model. Source: CEC, 2004

There is a delicate balance to be defined in the development cooperation aid. As the EU indicates, a well-formed project should have an appropriate mix between the EU’s development policy and the priorities emerging from the partner’s development needs. The related figure (see Fig. 2.6) is indicative of the problems of the balancing act. The semiotic message of the flow diagram places donor agenda above the recipient agenda. This may be unintended, and perhaps no conclusions can be drawn from this skewed message, but it is a wonderful reminder of the need to consciously balance the issues between the parties.

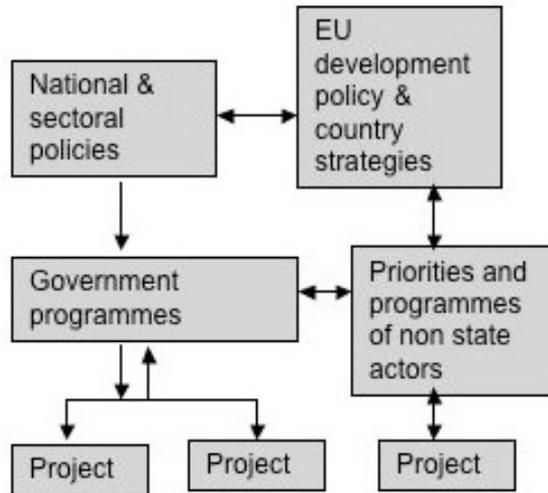


Fig. 2.6 EU Project stakeholders. Source: CEC, 2004

When approached from the theoretical project management perspective, the updated EU policy does not resolve the problematic conventional underpinning theory of projects (Cicmil & Hodgson, 2006, Koskela & Howell, 2002). The EU model does not address the issue of knowledge transfer between projects in a coherent way, as it fails to address an appropriate theory of knowledge and the role of tacit transfer of knowledge between projects. It is also vague in the assumption that creating a methodology creates the pre-condition for execution, thus adhering to the current theoretical assumption in projects of execution as an order of commencement. The specific developmental issues of participation, ownership, and local agendas have been pasted onto the conventional theoretical model without a revision of the epistemological foundations. This may be a key reason for project failure. The project management structure in the EU model has been revised for donor convenience, and does not constitute a revision of the theoretical foundation.

3. Research design and methods

A research gap has been identified: it is unclear whether international development cooperation projects enable and enhance administrative innovation in the project contexts. It is also not clear how administrative innovation could be further enabled in this context. This knowledge gap appears both wide and deep, as scarce research has been identified on administrative innovation in project environments in the development cooperation context.

The aim of this research is to contribute to the theory and managerial knowledge of setting up and implementing development cooperation projects that are innovative in the sense that they enable improvement in the way that beneficiary organisations (and the projects themselves) are able to create or adopt new ideas or behaviour that are new to the organisation.

Positioning of the research

Overall, the study is situated inside a qualitative tradition, and it emphasizes the analysis of the process (of projects, development and continuous innovation). The study does apply also quantitative methods as tools to establish relationships between research elements defined through qualitative approaches.

This study is situated within an interpretivist tradition, in which the understanding of the meaning of social action and arrangements comes through a process of interpretation, by the investigator and the object of the investigation (Miles & Huberman, 1994).

In terms of its ontological positioning, the study furthermore adopts a constructivist approach, implying that the realities to be studied have a local and specific nature (Lincoln & Guba, 2000). In the study, social arrangements are understood as socially constructions. Departing from this stance, a research premise is non-commensurable with the positivist paradigm, and generalisations

may be possible only through applicable theory. The model proposed in the study is seen to be a manifestation of applicable theory. The constructivist approach is, by definition, an anti-foundational one, not adopting any permanent, foundational truth about knowledge.

The aim of the research is not to predict or control through explanation, as would be the case positivist/post-positivist paradigms, nor is the aim to establish a critique, or to enter into processes of transformation per se, as would be the case in paradigms related to a critical theory. In terms of axiology, the propositional knowledge of transactions is considered intrinsically valuable, however with the premise that there is no emancipatory political process within the sphere of the study itself.

A joint platform

The research is designed around a joint platform, consisting of a contextual review and a section joining the individual findings of the four essays into a coherent whole. The initial three essays are based on empirical data, while the fourth essay is conceptual in nature. The three essays that form the empirical body of the study use two main methodological approaches. The first essay uses a quantitative approach to analyze relationships in evaluations of a series of close to eighty development projects. The second and third essays are based on a case study approach, describing two specific sets of circumstances in depth. The fourth essay is a conceptual paper without the application of empirical data.

The research questions have influenced the methodological choices to a great degree, and the study uses quantitative and qualitative methods, in addition to purely conceptual parts of the work.

The first research question, *“To what extent do current development cooperation projects contribute to administrative innovation in their contexts?”* requires that a series of projects be analyzed for innovative attributes, leading to a mixed qualitative/quantitative approach. The first essay was earmarked to address this research question.

The second research question, *“How could the contribution of development projects to administrative innovation in their contexts be further enhanced?”* is more complex, and early on it was recognized that an answer to this question can only be arrived at through an analysis of a wide range of variables, their impact and their interaction, leading to a qualitative and partly theoretical path of investigation. A very practical working question was derived from the research question: *“What needs to be in place so that administrative innovation can be further enabled?”*. On another level, there exists also the implicit query of *“why are projects innovative”* – in other words *what* makes the projects innovative.

This led to an examination of the literature of projects and project management, development cooperation and innovation research. The search was for threads that would connect the various elements. Several were found and were adopted as a basis for reflection in the overall discussion of the study.

Two case study essays were built up as partial responses to the second research question. In the two essays, two longitudinal development initiatives were described and examined. Clear indications of important factors to consider emerged from the two essays. These considerations were incorporated into the joint discussion.

A third avenue of research was also utilized to benefit in the drive to address the second research question. A conceptual study was made to explore a recontextualisation of an identified, potentially useful theoretical framework that intuitively seemed to have significant explanatory power in the context on innovation studies, capabilities and social constraints. Again, the result of this investigation was incorporated into the overall discussion of the study.

As can be observed, the research questions led to a series of investigations, some with clear aims and ideas ex-ante, and some with only an inkling idea of the emergent issues. This overall approach highlights the importance of the joint section of the study and especially of the joint discussion presented.

The joint discussion has led to the development of a model that describes *the key things that need to be in place*, thus effectively answering the second research question.

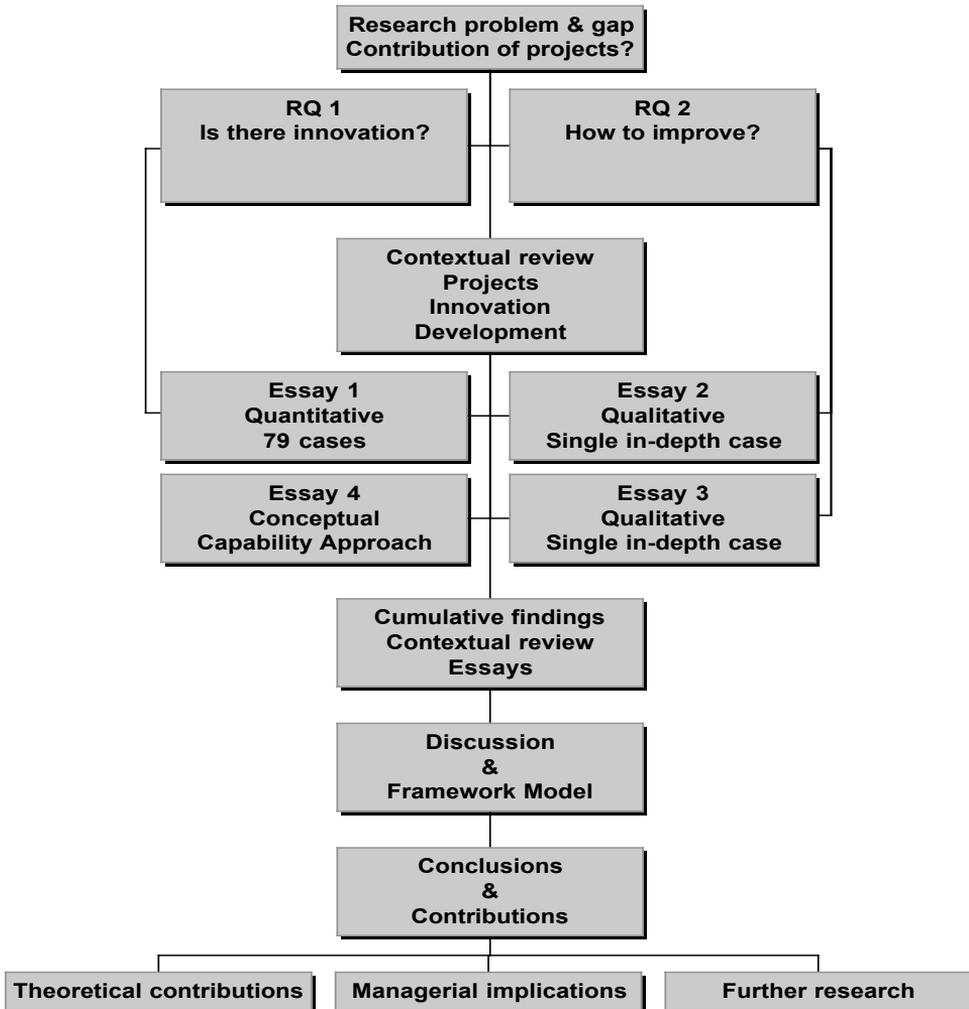


Fig. 3.1 Research design

Quantitative research

The first essay was chosen as the key vehicle to attempt an answer the first research question. Due to the nature of the question, there is a significant

demand to be able to generalize the research results and thus a partly quantitative approach was chosen.

The choice of the data was also critical to the research design. What was needed was data that was publicly available, reasonably uniform and consistent in content across the various projects and presented in a format that enabled a cross-project analysis. The appropriate data was found in post-completion evaluation reports of development cooperation projects (please refer to the first essay for a more detailed description of the data).

The second major challenge was to choose the evaluation criteria for the data. The criteria used to analyse the innovativeness of the projects needed to be well established, well tested and preferably already in public use. Two sets of criteria were unearthed in the research process.

The first set of criteria used is the prize award criteria for the public sector prize, Innovations in American Government Award, initially developed by the Kennedy School of Government, Harvard University (please refer to the first essay for a full description of the used criteria). The criteria address the issues of novelty, effectiveness, significance and transferability; all key innovation attributes. Underpinning the evaluation criteria are the three elements of innovation: novelty, utility and success.

The second set of criteria deals specifically with the knowledge management aspects of the projects. This set was derived from the European Union report on *Innovation Management and the Knowledge – Driven Economy* (CEC, 2004). The report reviews comprehensively the knowledge management techniques currently in use in the developed economies. A list of techniques was extracted from the report and developed into a set of dimensions to be analyzed.

The two sets of criteria were joined together into a common framework of dimensions to be used in the analysis. Through a double content analysis reading of the evaluation reports, a grading of the factors was made, analyzed further through quantitative methods (SPSS13 and Excel were used throughout). Correlations and means were utilized in the analysis, with the aim being to

understand which innovative attributes were present (analyzed through the factors), and what was the concurrent prevalence of these attributes. The statistical significance of the results was ensured by the fact that a wide base of projects was reviewed (ca. 700), with seventy-nine projects fulfilling the set criteria being finally graded (Levine *et al.*, 1999; Hair *et al.*, 1998). While quantitative methods have been used, the valuation of the dimensions has been derived through an inherently qualitative, interpretative process (Silverman, 2005).

The study was executed over a six-month period in the first semester of 2005. The web was extensively used to chart the material that existed at the time. A preliminary analysis of the data was done to scope the work and to develop the analysis criteria. The final reports that were included in the study were printed out but most of the reading and analysis of the projects was done on screen. Excel was used for the coding, and the data sets were later analysed with both SPSS13 and Excel. A great disappointment in the study was the fact that the results from the analysis of the use of knowledge management tools were so inconclusive (another round of analysis was done in 2008 at the time of re-writing the paper but the results proved just as inconclusive). Although the data was processed using quantitative methods, the study set up, coding and analysis of the results was done with a qualitative frame of mind. It should also be noted that the methods used for the analysis were very simple - possibly a more elaborate analysis of the data could bring out still some additional interesting findings. The original analysis results were done in 2005, and a second set of analysis was done in 2008. A first version of the paper was reviewed and accepted to the CINET 2005 conference. The current version has been extensively revised and was presented at the European Academy of Management (EURAM) 2009 conference.

A case study approach

The second and third essay research strategies are defined as case studies (Eisenhardt, 1989; Dyer & Wilkins, 1991; Yin, 2003; Ghauri, 2004; Flyjberg, 2006; and Eisenhardt & Graebner, 2007).

The case study approach has been adopted to respond to the variety of empirical and documentary evidence used in the study (observation, previous literature, other documents and experience), and to allow for the contemporary nature of the events, a rich and wide contextual evidence and the examination of both individual and organizations perspectives in a single format. Participatory observation has been used as a key source of evidence. In line with Eisenhardt (1989) and Eisenhardt & Graebner (2007), the research in the two essays was begun with no theoretical underpinning and no hypothesis to test. The case study approach is used to explain existing practices and to describe how elements contribute to or inhibit innovation. The two essays do not propose to establish measurable nominal causal relationships or to define quantities, intensities or frequencies inside the units of analysis.

As the evidence of the study is based on individual recollection and narrative of past action and circumstance, the setting or verification of hypotheses is not an option that can be considered, nor is it feasible to focus on real-time, actual participatory knowing. In terms of the nature of the knowledge, as the approach is to try to establish a set of reconstructions that induce converging narratives, the constructivist approach has been chosen as the most suitable for the study at hand.

The approach of the two essays implies a role as a participant, if not in the political process, then at least as a “facilitator of multi-voice reconstruction”, as Lincoln & Guba (2000, p.171) put it. This participation does not include a full process of contemporary self-aware reflection, as the teams under study have been partly disbanded and modified in purpose and composition, but it is clearly also not an objective role of an observer.

The case method was also used due to the fact that in both essays two and three the situations were somewhat extreme and other ways of approaching the issues to be studied did not appear to be as suitable for the task.

In Essay 2, the South Pacific experience and context was resuscitated after a few years through a reflective process, based loosely on the approaches developed by Schön (1983) in his *The Reflective Practitioner*. The key factor in the essay

that made it possible to go back in time was the fact that the research question in the paper was new and required a revisiting and developing a novel view of the project. The paper is loosely based on a lecture given at the University of Salford in 2008 on recovery operations in island states. While I had some doubts as to the links that the paper could have with this study, I nonetheless decided to include the paper in this context, as the real life case cross-fertilized the research in two important aspects: in the first place, it located the knowledge repository with the PMO, and secondly, it was an opportunity to examine the applicability of the theories of Koskela & Howell (2002).

The material available of the project was not very extensive and the European Union Delegation in Vanuatu kindly allowed all of the documentary material to be used for the research. Being originally a submission for the special issue on Small Island Developing States (SIDS) in the International Journal of Environmental Technology and Management, the paper had an approach suitable for the SIDS context, which nonetheless allowed the paper to fit into the overall context of the research at hand. The theory building of the paper is concerned with the validation of the Koskela & Howell (2002) PM theory. Interestingly enough, the critical PM thinking of Cicmil & Hodgson (2006) was also validated on hindsight, even though this was not widely taken onboard in the initial study set up. The role of the PMO also emerged as the focal repository of tacit knowledge, thus enabling a bridging of the discontinuity gap.

The case in Essay 3 was also extreme. After some introspection the paper was included in the overall research framework. If the previous essay was based on professional reflection of past experience, Essay 3 used the author's first hand current knowledge of the operation as a means of making sense of the circumstance. The difficulty in the paper has been the search for a theoretical framework that could explain the duality of the programme and project elements. The work of Cicmil & Hodgson (2006) was partly recontextualized to cover the programme aspect of the study. The evidence in the essay originated from a wide front: documents, archives, media, first hand experiences, participatory observation, first hand accounts and stories from affected

populations, multiple observations from both sides in conflict situations and interviews with key informants, to name a few. The multiple sources of the data allow for a very rich case.

The case of the Indian Ocean tsunami also has had some practical significance: from the first draft (2007) onwards the managerial implications of the findings have been actively put to use by managers who are still active in the field in Sri Lanka. Again, I had serious doubts as to the inclusion of the paper in this study, but the extreme nature of the case, together with the very novel findings prompted me to initially submit the paper to the EURAM 2008 conference: The paper was later published in the International Journal of Project Management in 2009.

In both case studies, writing has been a method of enquiry (Van Maanen, 1988).

A conceptual study

The third approach used in the study does not involve empirical evidence, except in anecdotal form. A fully theoretical section of the study was undertaken to examine a theoretical approach to human well-being, capability and social constraints. More specifically, this approach was reviewed from the perspective of innovation, verifying the cross-domain applicability of the approach in the context of innovation studies. This approach made it possible to first operationalize the initial approach and then attempt a domain crossing. The study has essentially first recontextualized the theoretical approach and then operationalized the outcome through the derived model in the discussion, linking various other elements into the overall concept.

The adoption of a theoretical approach has also meant that the style of the essay, the format, and, as an example, the use of references has been aligned with the style of the journal, *Philosophy of Management*, where the work was published in 2009.

The conceptual essay was first written in 2005, and since 2006 has remained essentially in the format presented here. The exploration of a philosophical approach to the context of innovations studies led to a series of exciting

discoveries that culminated in the paper. While Sen's (2000) approach to human capabilities has been around for a while, it does not seem to have been extensively recontextualized into fields outside of development studies.

PART 1	PART 2
Joint Section 1.Introduction 2.Contextual review 3.Methodology 4. Essay summaries 5. Discussion 6. Conclusions 7. References (joint section)	Essay 1: Are international development aid projects innovative? Evidence from three continents and six institutional donors Key methods: Quantitative, with qualitative analysis
	Essay 2: Building with technology, management and innovation: challenges on Vanuatu Key methods: Longitudinal case study, reflective practice, documentary evidence, participatory observation
	Essay 3: Managing for large and complex recovery programmes: Tsunami lessons from Sri Lanka Key methods: Case study, multiple sources of data, multiple methods of enquiry
	Essay 4: On Innovation & Capability: an Alternative View Key methods: Conceptual paper
Figure 3.2 Structure of the study	

Validity and reliability

The validity of the study is linked to the question whether the study has measured or recorded what it intended to, while reliability is concerned with the repeatability of the overall study (Yin, 2003; Silverman, 2005).

The internal validity, here taken to refer to the validity of the causal relationships, has been achieved through triangulation using multiple

approaches addressing the twin research questions. While the first research question was addressed through multiple projects that constituted a statistically significant sample of cases, the second research question, requiring extensive deconstruction of the query itself, was addressed through two longitudinal cases, extensive theory building and the use of multiple methods. The multiple data collection methods across the cases, together with the overlapping of the data collection with the analysis, have enhanced the triangulation processes of the research (Eisenhardt, 1989; Yin, 2003).

The validity of conclusions is thus built on multiple sources of evidence (literature and contextual review, participatory observation, and multiple cases) and multiple research methods (qualitative, quantitative, and theoretical approaches).

External validity, understood as the validity of generalizing beyond the context of the study, is again addressed through the multiple evidence, multiple method approach. The results of the first essay are indicative for a wider set of development projects, undertaken with institutional donors in the international context. The external validity of the model developed in the discussion of the study is linked to the generic nature of the model itself. It is becoming a theoretical construct and as such has some explanatory power in circumstances beyond those of international development cooperation.

Reliability, understood as the repeatability of the results of the study, is addressed through the research design. The contextual embeddedness and the sometimes very specific circumstances pose limitations as to the wider replicability of the research components. That being said, sections of the study are derived from data in the public domain and it is possible to re-do these sections of the study with relative ease. The overall research design ensures reliability through triangulation, multiple sources of evidence and multiple methods.

4. Essay summaries

This section summarizes the four essays that form the body of the study. While the findings and contributions of each essay are here reviewed individually, the cumulative and consolidated findings of the Contextual Review and the Essays are given in the initial section of Chapter 5. Discussion.

4.1 Summary of Essay 1

Koria, M. (2009) "Are international development cooperation projects innovative? Evidence from three continents and six institutional donors", unpublished manuscript. Peer reviewed, accepted and presented at the annual European Academy of Management (EURAM) 2009 Conference, 11-14.5.2009, Liverpool, UK: 14 pages.

In this essay, seventy-nine donor-funded development initiatives were examined in three developing countries (Mozambique, Vietnam and Nicaragua), funded by six major institutional donors: the Asian Development Bank (ADB), the African Development Bank (AfDB), the Danish International Development Agency (Danida), the European Union's EuropeAid, the Inter-American Development Bank (IADB), the Norwegian Agency for Development Cooperation (Norad), the Swedish International Cooperation Development Agency (Sida) and the World Bank (WB)). The aim was to establish whether the identified projects could be considered innovative. In this study, administrative innovation has been defined as "creation or adoption of an idea or behaviour new to the organization" (Lam, 2004, 115). The study was done through examining whether the projects successfully addressed important problems of public concern (significance), while achieving tangible results (effectiveness), demonstrating leaps in creativity (novelty) and promises of transferability (diffusion). The presence of commonly used knowledge management (KM) tools was also assessed. These elements were seen to constitute the basic building blocks of administrative innovation, addressing novelty, utility and success. A mix of qualitative and quantitative methods was used in the data analysis.

The essay concludes that the degree in which the project successfully addresses an important public issue, together with effectiveness in terms of implementation, is correlated to novelty and positive, improved change, often involving new technologies and services. There are apparent differences between the three countries and the donors in the study, implying a need for differentiated project strategies. The study did not find evidence to support the view that official development assistance would produce unanticipated benefits for its clients and weak evidence was found of the transferability of the projects. The study concludes that, while projects overall do not fulfil all the set criteria, they can still be considered to possess some characteristics of innovative projects. There is mixed and scattered evidence on the knowledge management tools used in the projects, and it appears that there may be an issue with the reporting; knowledge management may be absent from the reports due to the fact that they are not covered in the reporting requirements.

The main problem identified in the essay lies with the need to have a concurrent presence of novelty, effectiveness, significance and transferability in projects, if they are to be innovative. In the examination done for this paper the transferability aspect remained somewhat open. Many of the projects bear evidence of the presence of three of the four attributes to some degree. Another aspect that may be indicative of a lack of innovation is the fact that there was no clear presence of unintended benefits for the clients in the projects or that they may not have been registered as such. There is evidence that an introduction of a new technology corresponds favourably with improved service delivery.

Key contributions of the essay to the overall study

The case projects on the whole cannot be considered as innovative, as the concurrent wide presence of innovation attributes is not observed. The evidence indicates, however, that development cooperation projects have some innovative attributes. Knowledge management is not addressed well in development cooperation projects, as only adhoc patterns were observed in the use of knowledge management tools. The operational environment is seen to

influence project delivery. There are consistent differences between countries and regions, and history and path dependency is apparent.

4.2 Summary of Essay 2

Koria, M. (2009) "Building with technology, management and innovation: challenges for Vanuatu", *International Journal of Environmental Technology and Management*, Vol.10, No. 2, pp. 190-205.

While small island developing states are seen to possess specific and exceptional characteristics, it is not known whether the processes of technology application or management practices in development projects in these states would necessarily be specific and exceptional in nature. This paper examines a school building project in the Republic of Vanuatu, reviewing the technology and management aspects of the project delivery.

The paper concludes that there is evidence of specific attributes. In recognizing the key role of management as an enabler of technology application, the paper proposes an update to existing project management theory, suitable for the development context. Including a knowledge perspective as an evolving method of control enables management to assume a wider developmental role and importance through the project management office structure, potentially enabling administrative innovation and co-evolution of the project management office and the host organisation. This wider role is made possible through the specific attributes of the small island developing state context.

The methodology adopted in the essay is based on a case study approach, using documentary evidence and participatory observation over the four-year project period. The case project was executed using the Project Cycle Management approach of the EU (please see the contextual review).

Key contributions of the essay to the overall study

The present theory of project management of Koskela & Howell (2002) may be updated through a knowledge perspective and the inclusion of participatory approaches; this updated thinking is aligned with the critical perspective of

projects put forward by Cicmil & Hodgson (2006) and leads to an enhanced theoretical framework suitable for development cooperation projects. Enabling participation at all stages of project enables co-evolution and learning (Hickey & Mohan, 2004). Projects are political processes, and even key management decisions are not necessarily based on detached rationality, but on social construction.

The project management office can serve as a key enabler of innovation, bridging the discontinuity gap, confirming the observations of Hobbs *et al.* (2007). This requires a series of projects between which knowledge is transmitted in tacit form mainly through project staff. Knowledge is transmitted mainly in the tacit form, with staff moving from one project to another. There appears to be significant difficulty in transforming tacit to explicit knowledge in the development context, supporting the idea that practice-based knowledge underpins development cooperation projects (Tsoukas, 1996). It was furthermore noted that the operational environment influenced the project delivery to a great extent (Engwall, 2003).

4.3 Summary of Essay 3

Koria, M. (2009) "Managing for innovation in large and complex recovery programmes: Tsunami lessons from Sri Lanka", *International Journal of Project Management*, Vol. 27, No. 2, pp. 123-130.

Worldwide donations made the Asian 2004 tsunami recovery operation one of the best-funded recovery operations ever. However, extensive resources have not necessarily translated into timely and appropriate interventions. Wavering public policy, lacking management practices and competence of implementing agencies, inter and intra-organizational strife, together with perturbed markets, a worsening security situation and the sheer size of the operation have in many cases led to less than desirable outcomes in the Sri Lankan context.

In the context of a major international non-governmental organization, this paper explores the findings from the Sri Lanka recovery process from the perspective of programme management, understood to be distinct from project

management. Over a two-year longitudinal study, project management systems have been found to be adequately responsive, attending to the executive need to produce tangible outputs. However, the findings indicate that there is significant room for improvement in programme management, understood as the management of a portfolio of projects and concerned with the overall outcome and benefit delivery of the operation. The programme management practice applied has not been found to be fully able to address the operational front end, the benefit definition and delivery or the appropriate substance of interventions. The organizational set-up and appropriate human resources have not been optimized and organizational learning has been observed to be wanting.

This study looked at the opportunities that exist to promote organizational innovation in programme management practice in large and complex recovery operations. By addressing structural issues, human resources and timing, it is argued that administrative innovation can be enabled; this is thought to require attention to novelty, effectiveness, significance and transferability in complex and uncertain operational environments.

The methodology adopted in the essay is based on a case study approach, with documentary evidence and participatory observation over a twenty-four month period.

Key contributions of the essay to the overall study

The key contributions of the essay to this overall study are linked to the need to embed project management learning and knowledge within the structure of the organisation (Argyris & Schön, 1978; Nonaka & Takeuchi, 1995), in order to achieve efficiency and effectiveness in the delivery of multiple projects, while seeking for a managerial clarity between programmes and projects (Shenhar & Dvir, 2007). On another level, the findings are indicative of the inherently political nature of large and complex programmes (with multiple projects) and of the inadequate fit of current PM theory (Hodgson & Cicmil, 2006; Koskela &

Howell, 2002) to the context. Again, the relevance of the context to the actual practice of the projects was clearly demonstrated (e.g. Ostrom et al. 2002).

The essay recognizes that programme and project management are distinct activities. Present operational practices of projects are not necessarily suited to programmes, and programme and project management are seen to need separate structures and capabilities. It can be observed that the critical thinking on projects of Cicmil & Hodgson (2006) can be recontextualized into critical thinking on programmes. Programme management has been found to be less visible than project management and thus easily under-resourced. In the case operation, programmes and projects have been staffed with less than competent staff, due to lacking protocols and certification schemes. Asymmetric knowledge between partners has hindered the effective delivery of projects. There have been no common protocols of management, and the variance in the approaches between the parties that operate in the matrix has added greatly to the complexity, resulting in inefficiencies and waste. The findings from the paper suggest that capabilities related to the management of wider programmes should reside centrally, while capability to manage individual projects can be outsourced on need. Resident programme management capability enables knowledge transfer between and over projects, enabling also administrative innovation. Evidence of the existence of a community of practice and of highly useful knowledge transmission through this community emerged from the case study.

In the case context, knowledge was found to transmit most efficiently through staff deployments, principally in tacit form (Tsoukas, 1996; Bourgeon, 2007). The operational environment was clearly found to influence both structural and operational issues (Engwall, 2003). A matrix structure was observed, and large and complex operations are seen to need a tiered structure for benefits management, accommodating change, identifying and undertaking individual projects, troubleshooting purposes and to achieve efficiency.

4.4 Summary of Essay 4

Koria, M. (2009) "On Innovation & Capability: A Holistic View", *Philosophy of Management*, Vol. 7, No. 2, pp. 77-88.

This essay examines the Capability Approach originally proposed by Amartya Sen (e.g. 2000), with further development by Nussbaum (2000), Robeyns (2003) and Alkire (2003), among others. The approach examines individual capabilities and social constraints, linking the two into a common frame of understanding. The Capability Approach serves as a platform to understand three linked elements: the means to achieve, the individual factors and the collective constraints that impact on the exploitation of new, external knowledge.

The central argument of the approach rests on the idea that individual capabilities are only useful when they can be applied; social circumstances are seen to limit the use of these capabilities. Without a holistic framework, single initiatives that would focus on one of the issues only would be prone to suffer from myopia, be contextually lost and potentially fail. As an example, livelihoods projects that develop individual skills without addressing wider marketing concerns are failure-prone. It would appear that the capabilities needed in industrialised countries would be somewhat different from the developing country context.

In designing interventions, the approach framework acts as a valuable checklist tool. It allows for any single project (its intervention logic, aims, objectives, activities and methods) to be clearly located in its field and linked to a larger whole. Another clear advantage of the approach lies in the potential it has as a tool for the evaluating and monitoring initiatives, again basically locating single initiatives in their holistic contexts.

While this section of the study concludes that the capability approach of Sen could be useful in terms of improving the basic project approaches, it nonetheless recognizes that the approach operates in the outskirts of the modern conventional macroeconomic thinking that is based on simplified individual preference. While the approach appears ethically sound, there are major

operational difficulties in the proposal to expand a singular economic utilitarian perspective or income valuation into a more complex evaluation of political freedoms, economic facilities, social opportunities, guarantees of transparency and protective security.

Value judgments are problematic in this regard, as they are inherent when contemplating social arrangements. In a similar vein, the cultural fit of any intervention requires careful consideration and sensitivity must be exercised in this regard.

Key contributions of the essay to the overall study

The Capability Approach (Sen, 2000; Nussbaum, 2000) is used to link individual capabilities and constraints into a unified framework, useful in the build-up of the whole research model. The essay establishes an understanding between the approach and innovation studies, enabling a theoretical platform for project conceptualization, planning, implementation and evaluation, in line with a holistic perspective of innovation emerging through empowered individuals within enabling organizations.

5. Discussion

This chapter is divided into three main sections. The first section reviews the consolidated findings from the contextual review and the essays. The subsequent section examines the research questions, proposing a definition for innovative development projects and the third section develops a framework model of thought on innovation in international development cooperation projects.

5.1 Consolidated findings

This section consolidates the findings and observations of the essays, building on the emerging issues and perspectives that were laid out in the contextual review. A graphical short summary of the key issues is shown in Fig. 5.0.

5.1.1 Issues with worldviews

The main approach to development today is understood to be constructivist in nature and based on participation, with beneficiaries of aid retaining the ownership of the processes at hand (Cooke & Kothari, 2001; Hickey & Mohan, 2004; CEC, 2004; Ostrom *et al.*, 2002). The agenda of development is wide with a series of cross-cutting issues, including, among other things, good governance, human rights, gender equality and environmental sustainability. These need to be taken into consideration in projects (CEC, 2004; World Bank, 1998; CIDA, 2003). Development is also considered a right and not an option. At the same time, donors are concerned with the efficiency and effectiveness of the delivery and impact of aid (CEC, 2004; World Bank, 1998).

Projects and their management have traditionally been linked to a functionalist, reductionist ideology, which has close links with the positivist worldview and an operations management view of the organisation of work and tasks (e.g. Packendorff, 1995; Buchanan and Badham, 1999; Howell *et al.*, 2005; Smythe

& Morris, 2007). One of the key issues that emerged from the literature is the potential incompatibility of current development approaches with perspectives of innovation and current project (management) approaches. The inadequate theory of projects and management creates a situation where practice and the theory of project and management are not fully compatible with the development paradigm. This is argued to be a significant reason for project failure (Koskela & Howell, 2002; Cicmil & Hodgson, 2006).

5.1.2 Dealing with novelty, utility and success

Administrative innovation, understood as the “creation or adoption of an idea or behaviour new to an organisation” (Lam, 2004, p.115) incorporates the ideas of novelty, utility and success (e.g. Sundbo, 1998). Technology may be embedded in various ways within projects of administrative nature (Afuah, 2003). It should be noted that projects might be highly successful and useful without necessarily presenting novel attributes. This would exclude them from the context of this study. Also, not all projects need to try be innovative, unless they are directly concerned with new processes, structures or knowledge. Alternatively, innovation in development may take place without projects and innovative projects are not necessarily developmental in nature if they do not create new opportunities to enhance well-being.

Innovation in the past has been mainly seen to be associated with transforming technological inventions into commercially successes (Cantwell, 1995; Sundbo, 1998; Van de Ven *et al.*, 1999). That being said, innovation (and the related research) has in the last decades expanded also into social, cultural, organisational and administrative contexts (Pettigrew & Fenton, 2000; Clark, 2003; Afuah, 2003; Lam, 2004; Jorna, 2006). This, in addition to the widespread use of innovation as a popular term, has led to a contextually wide but diluted understanding of what innovation is. It is argued, however, that innovation always involves concurrent novelty, utility and success - how these are defined will depend on the specific circumstances.

Lenfle (2008) notes the issues related to examining innovation in projects: the two fields of study are distinct and not easily bridged. The rational view of projects and their management has remained the dominant discourse; achieving a specified goal in time and on budget is a central concern in most of the literature (e.g. Morris *et al.*, 2006). The inherent ambiguity in innovation (Van de Ven, 1986) does not sit comfortably with this perception of projects. That being said, Van de Ven (1986) does implicitly advocate a project base organisational model as a suitable one for innovation management.

Creating and sustaining the consistent and continuous effort needed for innovation to happen is a challenge (Sundbo, 1998; Pettigrew & Fenton, 2000; Jorna, 2006) - also in project environments. The balance between the effectiveness and efficiency in the projects is often tilted in favour of efficiency in the delivery, with less consideration being given to effectiveness, such as long-term sustainability, participation and ownership (Diallo & Thullier, 2004; CEC, 2004). As the timeframe for projects is limited, and the project goals set beforehand, there is not usually much leeway to redirect the project creatively during its course.

Due to the adopted approach in terms of capabilities and constraints, this study recognizes the value of the interactive perspective put forward by Pierce and Delbecq (1977), joining the individualist (individuals cause innovation) and structuralist (innovation is determined by structural characteristics) perspectives. Innovation is produced by the interaction of structural influences and the actions of individuals, a complex process, subject to reinvention and reconfiguration. This duality is also reflected in the approach to development of this study, through the capability-constraints duality (Sen, 2000; Nussbaum, 2000; Robeyns, 2003).

Evidence from the studied set of projects in the first essay indicated that the cases overall did not demonstrate a strong concurrent presence of novelty, utility and success. The evidence of the use of standard knowledge management tools was also found to be weak and inconstant. If projects in international development cooperation are to be concerned with innovation, it would appear

that they need to be conceptualized, planned, executed and closed with attention also to the factor of novelty, in addition to efficiency, effectiveness, sustainability and relevance (CEC, 2004).

5.1.3 Operational environment, context and complexity

Research confirms the importance of the operational context of projects (Morris, 1994; Engwall, 2003), while contesting the idea of universality in project management (Koskela & Howell, 2002; Cicmil & Hodgson, 2006). Development projects are usually embedded in institutions and organizations that form the larger society-wide context for the initiatives within national and regional innovation systems (Freeman, 1982; Dosi, 1982; Lundvall, 1995; Edqvist, 1997).

The operational environment and contextual setting affect the conceptualization, planning, implementation and closure of projects. The history of a single project and of project management in general impact on project practice and thus on innovation (Engwall, 2003; Koskela & Howell, 2002; Cicmil & Hodgson, 2006). Recent improvements in information and communication technologies have created new opportunities to increase the visibility and effective communication of projects (OECD, 2000; CEC, 2004b). At the same time, donor demands on project performance, reporting, and accountability add to the complexity of projects and their contexts (Roodman, 2006; Crawford & Bryce, 2003). Development cooperation projects could be understood as complex systems (Gann & Salter, 2000; Hobday, 2000; Davies & Hobday, 2005), due to the multiple stakeholders, matrix structures and mixed agendas of those involved.

There is a need to ensure the cultural fit of project approaches, and it is recognized that the definition of innovation may not be the same in the developed and developing country contexts (Hofstede, 1980; Trompenaars & Hampden-Turner, 1997). Drawing a parallel from another field of project management, Alsakini *et al.* (2004) note the implications of the complex environment to the planning of the projects; they advocate a dynamic approach

to planning, where site organisations are closely integrated into the planning and control processes. This essentially means integrating bottom-up and top-down processes.

As Engwall (2003) notes, projects tend to be viewed as lonely, singular initiatives with short time frames. This limits both the study of innovation in projects and project innovations, which are based on transfers of knowledge and a build-up of competence over time. Engwall further notes that the notion of universal success factors (e.g. Pinto and Covin, 1989) are undermined by the findings that suggest that the performance in projects is largely dependent on context-specific issues, especially to the social arrangements of the players and organisations involved. Thus the technical content, while being important, seems to be only one half of the equation. In practice, this has been found to hold true in development projects (World Bank, 1998; CEC, 2004; Essay 1 in this study)

5.1.4 Balancing benefits

The advantages related to projects as a way of organizing work appear to favour donors. Projects typically have set objectives, aims and performance measures, and it is possible to verify and influence progress-related decisions. Projects also have finite time spans and external experts can be assigned to monitor and manage the projects on need. The advantages of projects are not so clear for the beneficiaries. The issues related to project design, control and ownership can be problematic as the asymmetric capabilities between donors and officials from developing countries often appear to lead to agendas based on donor convenience and not on beneficiary needs (Morss, 1984; Ostrom *et al.*, 2002; CEC, 2004; Roodman, 2006).

Additionally, the finite time spans of projects are often too short to allow for a permanent reconfiguration of resources, organisation or institutional arrangements. Development projects (as well as other development instruments) place a significant administrative burden on the recipient organizations, which makes a comprehensive management of benefits difficult due to limited local

resources (Morss 1984; CIDA, 2003). Similarly, while monitoring, evaluating and reporting processes and procedures for accountability and transparency of progress and resource usage are evidently of interest to all parties, these are difficult to manage well, as they are often time-consuming and require expert knowledge.

Furthermore, while local partners are routinely consulted in the processes of conceptualizing, planning and implementing projects, initiatives often fail to address issues of local governance, private sector partnerships and real ownership in the change processes (Franks *et al.*, 2004; Hickey & Mohan, 2004). The EU, among other such donors (CEC, 2004; OECD, 2004), has identified a need to adjust development aid delivery to promote local ownership of the processes. Cooperation has increased with civil society actors groups focused on human rights, gender issues, child protection, environmental movement, farmers' unions, trade unions, consumer associations and other NGOs (CEC, 2004; Diallo & Thullier, 2004); these add to the complexity of setting up and managing projects.

5.1.5 Participation and ownership

The political nature of projects, stakeholder participation and operational environments suggest that projects in development need to involve holistic, participatory approaches and be viewed from a constructivist perspective (Koskela & Howell, 2002; Cicmil & Hodgson, 2006).

As Hickey & Mohan (2004) note, participation in itself is not a guarantee of transformation or empowerment. What is needed is a process that aims for a wide involvement and a voice of the local party. Essentially Hickey & Mohan argue for a political process of citizenship rights in development: one that translates into an effective engagement for social change.

Ownership in projects (understood both as the responsibility for the project and as the holding rights to any physical property) tends towards the complex in many ways, with public-private partnerships, participatory and community level interventions, strategic alliances and non-traditional contracting arrangements;

ownership in projects is also more unstable than in the past (Crawford *et al.*, 2006; CEC, 2004).

The case studies (the second and third essays) confirm the social constructivist nature of both development and projects (e.g. Cicmil & Hodgson, 2006). In both cases the stakeholder involvement and negotiation processes impacted significantly in the operational environment of the projects and programmes. The second essay highlights the role of participation as a key contributor to project success, with recipients retaining to a major degree the ownership of the processes at hand (Cooke & Kothari, 2001; Hickey & Mohan, 2004; CEC, 2004, CIDA, 2003). The case studies furthermore highlight the impact of the complex operational environments in the projects.

5.1.6 Asymmetry of knowledge and capability

In the 50's and 60's, most international development support took the form of programme aid, directed towards large infrastructure investments and sector support (Morris, 1984). The projectification of aid, starting in the 70's, was a result of a demand for more transparency, effectiveness and results. As Roodman (2006) notes, the number of projects grew exponentially, especially after the post-WWII beneficiaries of Marshall Aid became donors themselves. The proliferation of projects has added an additional administrative burden on the governance structures in developing countries.

Youker (1999) notes the asymmetry of knowledge in the interaction between the donor institutions and the recipient governments/organisations, which makes it difficult to apply good project management principles. Local stakeholders are often left out, or have a minor role to play in the project identification and development, and while donors demand dedicated management structures, timely support is not often available to manage the set up and staffing (Youker, 1999; CEC, 2004; World Bank, 1998). This asymmetry of knowledge between the parties in the projects is a key inhibitor to success and projects are undertaken in the development field with extremely varying competence. The international nature of the aid projects adds a level of complexity to the projects

that exacerbates the asymmetry of knowledge between the donor and the beneficiary.

The first essay observes the weak evidence that exists of the use of knowledge management tools in and within development projects (CEC, 2004b; Essay 1 in this study). This is perhaps an indicator of the fact that knowledge management is not taken onboard as comprehensively as it should; this certainly does not ease the asymmetry of knowledge between the parties.

5.1.7 The changing nature of projects

There is an ongoing trend and shift from hard engineering projects to soft projects, involving e.g. social services, education and health, often undertaken at the community level. These projects require distinct abilities from engineering projects, in terms of managing the planning, execution and control (Pollack, 2007). Projects are historically embedded in industrial and technical contexts, with technical monitoring, evaluation and/or assistance frequently provided by third-party consulting organisations (Koskela & Howell, 2002; Cicmil & Hodgson, 2006). These methodologies that depend on expert management may not sit well with participatory approaches that involve extensive consultation with numerous stakeholders.

As observed in the case studies, the political nature of projects and the observed way in which stakeholders participate suggest that projects in development need to involve holistic, participatory approaches (Diallo & Thullier, 2004; Muriithi & Crawford, 2003). This leads in the direction of understanding projects as socially constructed temporary organisations (Koskela & Howell 2002; Cicmil & Hodgson, 2006).

The idea of uniqueness in projects (as in projects being dissimilar to each other) is confirmed in the case studies but universality in project management is found not to hold true in the project examined. Neither one of the projects reviewed in the case studies was planned in a way that would have taken into account the operational environment in a coherent and holistic fashion. In both cases,

operational principles and methods had to be revised extensively during the implementation phases.

Projects in international development can be compared to complex organisational change projects, which, according to Crawford *et al.* (2006), are characterized by non-tangible outputs and outcomes. They are also extremely dependent on the goodwill, participation and interaction of the stakeholders, and cannot be isolated from their contexts (World Bank, 1998; CEC, 2004; Van Dijk & Sandee, 2002; Muriithi & Crawford, 2003; Diallo & Thullier, 2004). The initiatives tend to possess high levels of differentiation and interdependency, which are hard to model in non-engineering contexts (Crawford & Pollack, 2004).

5.1.8 Knowledge and learning perspectives

A key issue in projects, both internally and externally, is linked to the transfer of knowledge between projects (Brady & Davies, 2004, Defilippi, 2001, Keegan & Turner, 2001). The discontinuity gap in development projects is very effective in inhibiting learning across projects, from one project cycle to another. This is due to project teams disbanding; project related knowledge is not easily codifiable or transmittable and it also appears to possess a shelf-life.

The gap is also assumed to render knowledge obsolete, just as technology is made obsolete over time. Bridging this gap is the key challenge of any project environment (Hadjikhani, 1996), including the development cooperation context. There are, however, potential opportunities to overcome the issue, through paying attention to the organisational embeddedness of, say, the PMO or the programme functions (Hobbs *et al.*, 2008) or through developing systems of learning and knowledge transfer (e.g. Brady & Davies, 2004; Davies & Hobday, 2005). The typology of knowledge matters very much in this regard as tacit transfers appear to be the most successful ways to enable innovation diffusion (Tsoukas, 1996; Essays 2,3 in this study).

Research has demonstrated (Elkjaer, 2003; Brady & Davies, 2004; Bourgeon, 2007) that collective learning in projects does take place and can be enhanced

through a rotation of functional staff members, especially project managers. It is recognized that this may be extremely difficult in development consulting organisations that hire staff for projects on a one-off basis. That being said, as Welch *et al.* (2005) note, there exists a tendency for professional staff to engage on a serial basis with specific consulting houses, thus building up long-term relationships; in some cases not only with the consulting house but clients also. Serial relationships are evidently favoured by consulting houses and the field professionals, as it reduces significantly the transaction costs for all parties. This also supports the view that a fluid community of development practitioners exists, within which professionals engage with each other on a constant basis. Anecdotal evidence seems to indicate that professional project managers and project staff tend to move in waves and that permanence in a geographical region is usually longer than the initial engagement.

Communities of practice in development have been identified both on the field (Essays 2, 3 in this study) and in the literature (Alasuutari, 1999; Leinikki, 1998; Welch *et al.*, 2005) as a potential means of transferring knowledge between projects (Wenger, 1998; Wenger *et al.*, 2002). These communities are subdivided tentatively into several main groups: communities linked to institutional donors, the beneficiary public sector, NGO operators and finally communities linked to various types of service providers and the academia. Anecdotal evidence, participatory observation and Welch *et al.* (2005) suggest that there are exchanges between the communities. These communities can be seen to be both repositories and transmitters of knowledge between organisations, programmes and projects (Wenger, 1998; Wenger *et al.*, 2002). The communities also tend to co-evolve over time, when best practices are diffused through the field (Hobbs *et al.*, 2008). Co-evolution between specific elements in projects and the host organisations may also occur (Hobbs *et al.*, 2008; Elkjaer, 2003).

Kasvi *et al.* (2003) note the inadequacy of knowledge management practices in the developed country and business project context. The data behind Essay 1 points to the same issues in development projects. In both cases, retrospective

reporting processes were identified as working well but significant issues were found in all other respects. The downside of post-initiative evaluation is that it cannot guide or inform projects and programmes while they are ongoing. Paper documents were seen to be the key media used to transmit knowledge, and electronic filing systems and document repositories were either missing or weakly arranged and managed, both in developed and developing countries. While new knowledge was clearly created, the accumulation, storage and reuse was found to be problematic. It can be inferred that the projects are challenging for knowledge management practices, irrespective of the location and nature of projects.

5.1.9 Capabilities and constraints

The key issue in terms of internal management of projects is linked to the balance between the capabilities that exist in the project and the social constraints that inhibit the use of these capabilities. Within projects, individual capabilities and social constraints are seen to form a pair of opposing forces (Sen, 2000; Nussbaum, 2000; Robeyns, 2003). Enabling continuous innovation in projects is dependent on capabilities overcoming constraints.

Social constraints are formidable, especially in projects that aim for permanent reconfigurations in and across organisations, as is the case of initiatives that include significant novelty factors and transfers between jurisdictions. The fourth essay is seen to provide a framework of thought that can be applied to the balancing of individual capabilities with social constraints within projects (Sen, 2000; Nussbaum, 2000; Robeyns, 2003); this balancing act is seen to enable/inhibit continuous innovation.

In terms of the role of managers and management, Clark & Fujimoto (1991) identified experienced project managers, concurrent engineering and supplier-customer integration as key success factors in product development project success. Later on, Wainwright & Clark (1992) noted the need to distinguish between project typologies, organisational forms and managerial action. Maidique and Zirger (1990) note the managerial excellence needed to achieve

success in transforming inventions into innovations. In the development project context, Muriithi and Crawford (2003) and Diallo & Thullier (2004) observed the need to take into account social and political issues as success factors in project management in the developing country context.

Crawford *et al.* (2006) have noted that the current project management training standards do not enable managers to operate in complex, challenging project or programme environments. In many cases managers have no clarity as to the delineation between execution (with defined objectives, cost and time) and the ambiguous front end of setting up projects. It is also noted that the certification systems intended to classify and certify professional expertise in conventional project management are problematic, as they self-propagate the existing inadequate theory base of project management (Crawford *et al.*, 2006). It has been suggested that project management capabilities may need to look towards reflective practice (Schön, 1983) and education that engages the learner (Brown & Duguid, 2000). On another level, Frimpong *et al.* (2003) observe the weaknesses in the planning and management of engineering projects in the developing country context, identifying weak financial planning as one of the key issues that causes delay through slow payment for services, goods or works. Thomas & Mengel (2008) call for the development of abilities related to the management of complexity.

The frequently present change management aspect of project management makes it distinct from running stable systems (PMI, 2004). Typically developing country public sector staff is not as familiar with projects as they would be with operational and ongoing work. Assigning roles, duties and staff on a temporary basis requires a mental task orientation and negotiated working relationships, which are sometimes problematic (Morss, 1984; Roodman, 2006). In projects, management authority is often not clear (as in matrix organisations; see for example the third essay in this study) and information sources may be lateral and ambiguous. It is difficult to assume these aspects of projects as the normal state of affairs in the short run and in some cases the very existence of the project may be threatened by more permanent structures. All of these issues are

typically present in development projects in the public sector; additionally there is usually a major difference in the ability of a host organization and the project to deal with risk. Embarking on change implies accepting a degree of risk, even embracing it; this may be difficult if the organizational host is extremely risk averse and closed to outside influences, as noted in Essay 3 in this study.

The role of the individuals is also problematic: in projects there is an emphasis on control through the hidden, informal and individual management, while the public sectors in developing countries most often still subscribe to the open, formal and explicit controls of traditional bureaucracies (although in most organisations there are underlying political agendas and implicit demands) (Diallo & Thullier, 2004; Ostrom *et al.*, 2002). This creates problems for individuals that need to operate simultaneously within both frameworks, as is often the case of donor funded public sector projects that operate within the host organisation (North, 1990; Ostrom *et al.*, 2002). Projects are often also seen as resource intensive, fast-paced, challenging and even exciting environments with opportunities to enhance personal knowledge and wealth, in contrast to the slow, cash-strapped and plodding public service. This internal dichotomy (sometimes within a single department of an organisation) is evidently a potential flashpoint and a source of tension, which in some cases effectively stops development.

5.1.10 Exploration, exploitation & continuous innovation

Projects in development may possess both exploratory and exploitative characteristics (e.g. Artto *et al.*, 2007); reconciling these perspectives may contribute to explaining the transfer of knowledge between projects cycles (Brady & Davies, 2004; Davies & Hobday, 2005). Continuous improvement/innovation and the process perspective appear to be useful as a basic approach to partly describe and model administrative innovation in the development project context (Bessant & Caffyn, 1997; Boer *et al.*, 2006; Deming, 1986; Van de Ven, 1986).

5.2 On the contribution of projects

This sections starts off by examining the theoretical aspects of the proposed definitions for the three main elements of this study: projects, innovation and development. Thereinafter a definition for an innovative development project is attempted, leading to a review of the contribution that the present practice of development projects makes to administrative innovation.

5.2.1 Development

Human development was defined as the *process of enlarging a person's functionings and the capabilities to function, together with the range of things a person could be and do in his/her life* (Sen, 1989, 2000). Seen from this viewpoint, human development aims to improve lives through expanding the range of things that a person can do or be. This includes being well nourished and healthy, being able to participate in the life of communities and being educated and knowledgeable. This viewpoint involves the idea that obstacles like illiteracy, ill health, lack of access to resources and lack of civil and political freedoms need to be removed. Often these obstacles are linked to poverty and the lack or unsatisfactory distribution of resources. International development cooperation has been here defined (by the author) as *the cooperative process of promoting human development* that is supported across national boundaries.

Adopting this perspective to human development (Sen, 2000) implies that development projects have the ultimate aim of removing constraints that limit individuals from achieving their full potential. These constraints are seen to be socially constructed and relate to personal, social and environmental issues like religion, social class and the cultural environment (Sen, 1989, 2000; Clifford, 1988).

The view that constraints are socially constructed has an evident implication in terms of the mechanisms that aim to change or remove them. It is argued that

any change will also have to be socially constructed as a further (incremental or radical) development from the previous social arrangement. This means that novelty, in one form or the other, has to be accepted, embraced and assimilated to the degree that it becomes integrated into the current social arrangement.

The key reason for seeking and embracing new knowledge is to create new wealth and human well-being through new opportunities and enhanced productivity that enables growth (e.g. Cantwell, 1999). The individual freedom of choice embedded in the adopted view on development is an instrumental driver in this regard (Sen, 2000). The central issue with new knowledge is linked to enhancing the absorptive capacity (Cohen and Levinthal, 1990; Zahra & George, 2002) within the project context, to enable the actors to see, understand and reconfigure novelty into the existing social arrangement. Novelty in this context is understood as knowledge that is either codified or tacit, and possibly embedded in artefacts.

This implies in turn that the perspective of knowledge to be adopted in this context needs to involve a cultural situatedness and social construction (Tsoukas, 1999); tacit and explicit knowledge are also seen to be inseparable (Warr & Sternberg, 1969) and knowledge is seen mainly as being embedded in what people do (Blackler, 1995). This also has implications on learning: while the cognitive processes may be mostly individual, the situatedness of learning has an impact on the outcomes in the social context (Wenger, 1998). Specifically in projects, communities of practice can be important elements in terms of learning (Wenger, 1998). In the context of projects, Lindkvist (2005) has also proposed that collectivities of practice may exist, when groups are not as tightly knit as in the case of communities of practice and where communal frames of mind are not as well developed.

5.2.2 Innovation

Innovation in the administrative context has been defined as the *“creation or adoption of an idea or behaviour new to the organization”* (Lam, 2005, p.115). This has been taken to be concerned with organisational and social structures

of administrative and participatory processes and may or may not embed technical innovation (Afuah, 2003).

In line with the development perspective, learning and knowledge (Nonaka & Takeuchi, 1995) are seen to be the foundation of (administrative) innovation, through the creation of new knowledge through learning. As the central challenge is to achieve success in enhancing the absorptive capacity, new structures and processes are needed to create, sustain and regenerate opportunities and enhanced productivity that aims for growth and wealth generation.

The fundamental nature of innovation implies a concurrent coexistence of novelty, utility and success (e.g. Sundbo, 1998). This means that the organisational or social structures and the administrative and participatory processes that projects aim to incubate, promote or develop must demonstrate fundamental new changes with improvement (possibly embedding technology) to be considered innovative. They must also be effective in achieving tangible results, demonstrate significance in terms of addressing useful issues and show evidence that these experiences and models can be transferred to new contexts (using the criteria set in Essay 1- see also section 5.3.3).

5.2.3 Projects

In this study, a project has been defined as *“a temporary organisation and a process set up to achieve a specified goal under the constraints of time, budget, and other resources”* (Shenhar & Dvir, 2007, p.94), while project management is understood as *“the managerial activities needed to lead a project to a successful end”* (Shenhar & Dvir, 2007, p.94). Projects by nature are linked to needs and do not exist without an underpinning frame of identified objectives, means, expected outcomes and an operational context.

As defined in the previous section, projects in development cooperation are seen have the overall developmental objective of reducing or removing the constraints that limit individuals from realizing their ultimate potential.

Development projects aim for changes and improvement in social settings, within organisations and social arrangements that have wider-than-individual aims (CEC, 2004; Krohnwinkel-Karlsson, 2004; OECD, 2004). It is argued that this inbuilt individual-collective tension can only be resolved through participation and the social construction of the project objectives, methods and impact. Thus individual stakeholders of the project should be able to have a voice in the project, within the wider context of a socially negotiated contract; a healthy balance between the two helps to keep the project manageable and predictable.

In this sense the internal project constraints of time, budget and other resources have to be determined in such a way that they enable the participatory process to unfold. Similarly, the donor commitment towards this participation is a necessary condition, as is also the will and ability of the beneficiary community to be involved in the process in a deterministic role.

As noted earlier, one of the key aims of projects is to contribute to the development of absorptive capacity (Cohen & Levinthal, 1990) in the context of the project. This implies that learning and knowledge transfer processes need to be incorporated into the operational configuration as a necessary condition (Ayas & Zeniuk, 2001; Elkjaer, 2003). Similarly, projects need to demonstrate significance in terms of their objectives and outcomes. Developing capabilities in projects is also a necessary condition as they are needed to overcome the social constraints.

At the same time, projects need to demonstrate internal effectiveness and efficiency in their delivery processes (CEC, 2004). This demand usually comes from the donor side and needs to be taken into account in the conceptualization, planning, implementation and closing of the project. A necessary sub-process is linked to the learning and knowledge management that happens between projects, enabling project delivery systems to evolve over time from exploratory to exploitative structures over time (Brady & Davies, 2004).

5.2.4 Defining innovative development projects

Based on the previous sections, a tentative definition is proposed by the author:

Innovative international development cooperation projects are temporary organisations based on participatory approaches that aim to foster and diffuse novel processes, structures and knowledge to create new capability and opportunities to successfully reduce constraints to human well-being.

This definition implies that that there may exist development projects that are not innovative if there are no new processes, structures or knowledge present. Alternatively, innovation in development may take place without projects, if the initiative is not undertaken through a project. In the third case, an innovative project is not developmental in nature if it does not create new opportunities to enhance human well-being.

Based on the previous sections, Fig. 5.0 illustrates the key issues in the study.

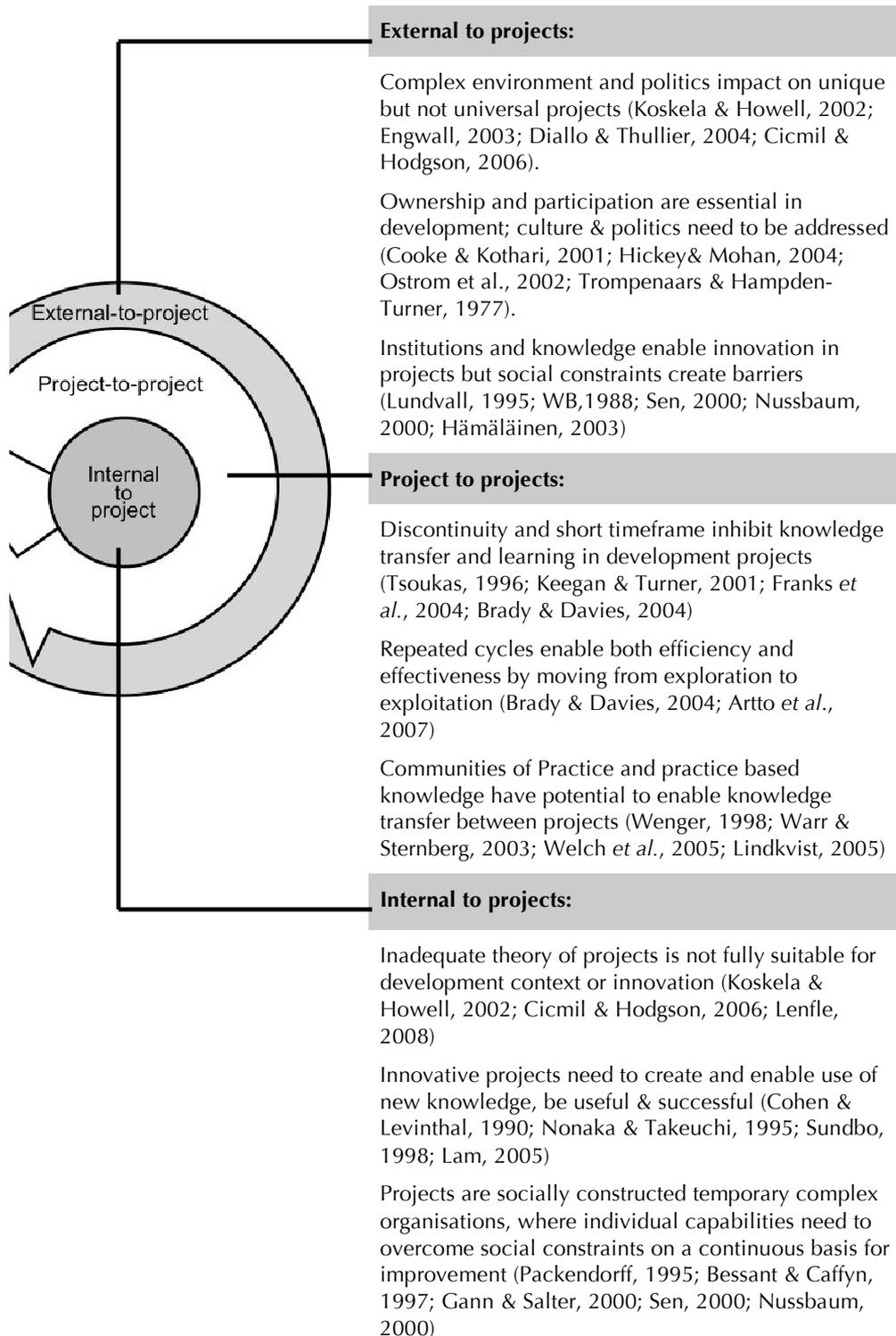


Fig. 5.0 Consolidated issues

5.2.5 The contribution of the present practice?

The first research question was initially formulated as: *“To what extent do current development cooperation projects contribute to administrative innovation in their contexts?”*

The initial part of the research, reported in the first essay, has had a focus on responding to the first research question and in examining the evidence of potential contributions through a case set of seventy-nine projects in three countries (Mozambique, Nicaragua and Vietnam), funded by six institutional donors.

The study examined whether the case projects successfully addressed important problems of public concern (significance), while achieving tangible results (effectiveness), demonstrating leaps in creativity (novelty) and promises of transferability (diffusion of innovation). The presence of commonly used knowledge management (KM) tools was also assessed. These elements were seen to constitute the basic building blocks of administrative innovation, addressing novelty, utility and success.

The evidence from the seventy-nine cases indicates that the present practice of development cooperation projects does not fully contribute to administrative innovation in the project contexts in all of the examined elements at all times, although there is evidence of partial contributions. The key findings indicate that the focal elements that have been used as indicators of innovation (novelty, effectiveness, significance, transferability and the use of KM tools) are not evident concurrently in the projects. The most problematic element was linked to the presence of knowledge management tools, which were only somewhat apparent in the final project evaluation reports examined. The element of transferability was less evident than the elements of novelty, effectiveness and significance.

The case projects were also subject to an analysis of the effects of location and the donor. There is evidence of a location effect, i.e. each one of the countries has consistent differences in cumulative and mean scores when compared to

the other two countries. The operational environment clearly has an influence in the perceived results of the projects as reported in the examined documents. This observation was validated and further triangulated in the second and third essays of this research. The donor effect could not be fully verified, due to sample size. The findings related to the use of specific knowledge management tools turned out to be inconclusive.

5.3 A framework model: thinking innovation

The second research question was posed as: *“How could the contribution of development projects to administrative innovation in their contexts be further enhanced?”*

The approach taken in this study is to look at answering this question from the perspective of *“what needs to be in place”* so that administrative innovation is enabled in development cooperation projects. The key issue emerging from the contextual review and the essays is the need to have a framework of thought that underpins the efforts to enable administrative innovation. It is argued that a model is needed, as there exist a series of elements that influence and enable administrative innovation. However, distilling the various elements of project management, development and innovation into one model is not an entirely straightforward exercise. At the moment such a model appears to be lacking in the context of development cooperation projects (and does not appear to exist in other project contexts either, although this cannot be verified). If these various elements are examined separately from each other, there is a danger that the complex concurrent alignment of the various pieces will not happen. This concurrent alignment is needed if administrative innovation is to be enabled.

By examining a project through the model, one should be able to come to an understanding as to whether the thinking in the project enables or inhibits innovation. It should be noted (again) that not all projects strive for innovation, nor is there need to introduce novelty to every circumstance. The model is not

prescriptive as such, as it does not tell the audience the exact steps to take to achieve the aim. It is more akin to an auspicious constellation that can be referred to when management thinks and acts.

5.3.1 A layered approach

The basic structure adopted in model is built on a layered thinking. The External-to-project layer is the interface between the project and the organisational and socio-economic context that the project operates in. It determines the success of the project in terms of the set-up of the initiative. This layer is concerned with the significance and relevance of the project (in other words the utility of the project) and the relationship that the project has with novelty.

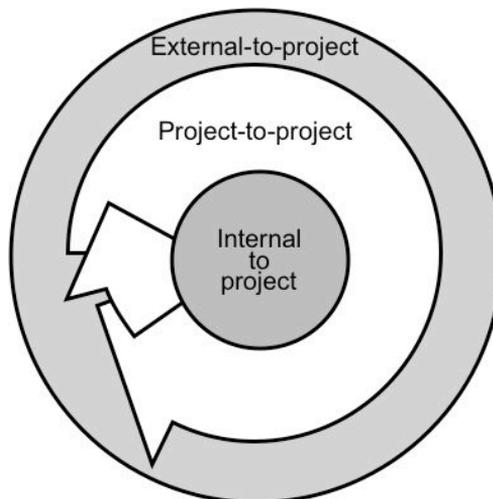


Fig. 5.1 Layers of proposed framework

The middle layer of the model, Project-to-project, is concerned with the transferability aspect of innovation (note: the term is “on loan” from the work of Brady & Davies (2004) although it is used somewhat differently from the

original context). The transfer of knowledge to and in between initiatives is a key challenge in projects, due to the inbuilt discontinuity created by the fact that projects have an end. This layer involves the conceptualization and examination of the knowledge transfer mechanism and the progression of projects along the exploration - exploitation continuum.

The Internal-to-project layer is concerned with the internal performance (effectiveness and efficiency) of projects; the balance of internal project capabilities versus the constraints that inhibit the full use of these capabilities.

While the model is presented as an idealized onion with segregated layers (see Fig. 5.1), it should be noted that there is significant “cross-town traffic” between the layers. Success in transferring knowledge between projects is also a key enabler of the effective and efficient running of the project; it is also instrumental in diffusing novelty. Similarly, the internal capabilities are central to the diffusion of novelty within the project context. They also determine the success of the original conceptualization and set-up of the project on the operational level.

It is clear that such a model is a compromise, and the requirement of generic simplicity demand that intensities and frequencies be eliminated from the model.

5.3.2 A process view

Additionally to layers, the framework model is based on a continuous process view (Deming, 1986). The plan-do-check-act cycle is useful as a tool to describe the business process, and can be varied in detail to provide for the contextual needs. The original Deming cycle has been chosen as the basic representation of the management activities of the project cycle (Fig. 5.2). A cyclic view has also been adopted as development (and evidently aid up to certain point) is considered to be an ongoing process; projects contribute to this ongoing process in a cyclic manner. Innovation can also be considered a process, especially in the context of continuous innovation. The cyclic image

furthermore allows for the identification of the discontinuity caused by project ends in a clear manner.

In terms of a development application of the Deming cycle, the EU model (CEC, 2004) is essentially a derivative (Fig. 5.3) in which the *plan* element of the Deming model has been divided into three sub-elements of *programming*, *identification*, and *formulation*, all of which are argued to be activities that are constitutive of a planning phase in project management theory (e.g. Koskela & Howell, 2002). Deming's *do* corresponds with the EU model's *implementation*; in management theory, *execution* is used to signify the same stage. The third element in management theory, *control*, in Deming's model is divided into two elements: *checking* and *acting*. In the EU model control is divided into three elements, of which *monitoring* (also called *formative evaluation*) takes place during the planning and doing stages, while *evaluation* and *audit* are ex-post or after completion activities.

As we can see, both the Deming model and the EU model are essentially equivalent when examined from the management theory perspective of planning, execution and control.

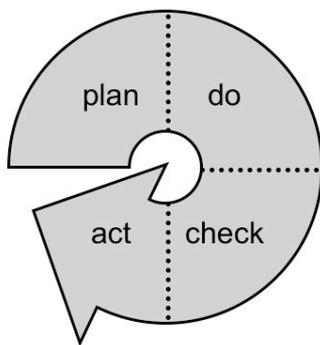


Fig. 5.2 Deming cycle & projects

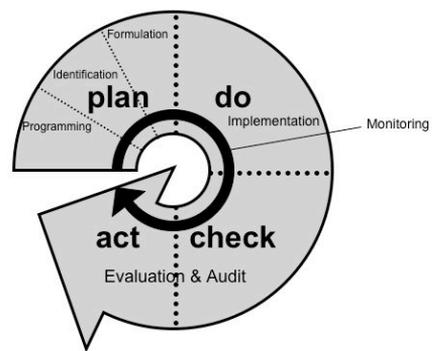


Fig. 5.3 Deming cycle & PCM

5.3.3 Elements of administrative innovation

Administrative innovation in this study has been examined through the elements of novelty, effectiveness, significance and transferability. The source of this definition has been the criteria set for the Innovations in American Government Award (Ash Institute for Democratic Governance and Innovation, Kennedy School of Government, Harvard University), modified and abridged by the author for the analysis purposes in the first essay.

In this context, *novelty* is understood as the degree to which the program demonstrates a leap in creativity. This in turn has been divided in to three main dimensions: whether the initiative represents a fundamental change in the governance, management, direction or policy approach of a particular jurisdiction; or if there is evidence of a significant improvement in the process by which a service is delivered; and lastly, if the initiative introduces of a substantially new technology or service concept.

Effectiveness in turn is taken to mean the degree to which the initiative has achieved tangible results. Thus there is a need to understand if the initiative responds to the needs of a well-defined group of clients; or whether the undertaking demonstrates its effectiveness in meeting its stated goals and objectives quantitatively and qualitatively; and still yet, if there is evidence that the initiative produces unanticipated benefits for its clients.

The third element, *significance*, in turn is understood as the degree to which the initiative successfully addresses an important problem of public concern through addressing a problem of national import and scope. It is also of interest to examine the indications of substantial progress in diminishing the problem within its jurisdiction and the change induced in the organizational culture or the traditional approach to management or problem solving.

Lastly, *transferability* is taken to be the degree to which the initiative, or aspects of it, shows promise of inspiring successful replication by other governmental entities. This involves searching for evidence that the initiative can be replicated in other jurisdictions and verifying to what extent can the initiative serve as a

model that other jurisdictions will seek to replicate. Finally, it seen to be pertinent to review the extent in which the initiative components, concepts, principles or insights are transferable to other disciplines or policy areas.

The use of knowledge management in the context of these elements is also an additional element to study; a widespread use of relevant knowledge management tools would indicate that transferability (through the transfer of knowledge) and effectiveness (through the re-use of knowledge) are being addressed in operational terms. Knowledge management tools contribute to the overall diffusion process of innovation.

As such, the individual elements in themselves are not too complex or unachievable. However, the concurrent presence of at least some of the dimensions in all four main elements has been found to be elusive and difficult to achieve (as concluded in the first essay). It is suggested that novelty and transferability present the exceptional challenges, as they are not normally explicitly planned for, monitored or evaluated in the current development project practice.

5.3.4 The External-to-project layer

As noted previously, the External-to-project layer is the interface between the project and the organisational and socio-economic context that the project operates in. The project environment and context have a major impact on the way in which the projects are conceptualized, planned, implemented and closed. Neglecting consideration for this will lead to potentially failed projects that are non-aligned contextually.

The factors that constitute the layer are interrelated (see Fig. 5.4). An innovation mindset is also conducive to achieving an auspicious alignment of the other factors, while participation enables ownership, and donor commitment an innovation mindset. Each one of the factors involves a series of issues that will depend on the specific circumstance and context of the project. They are, taken

together, a necessary but still not sufficient condition to achieve innovation in development cooperation projects.

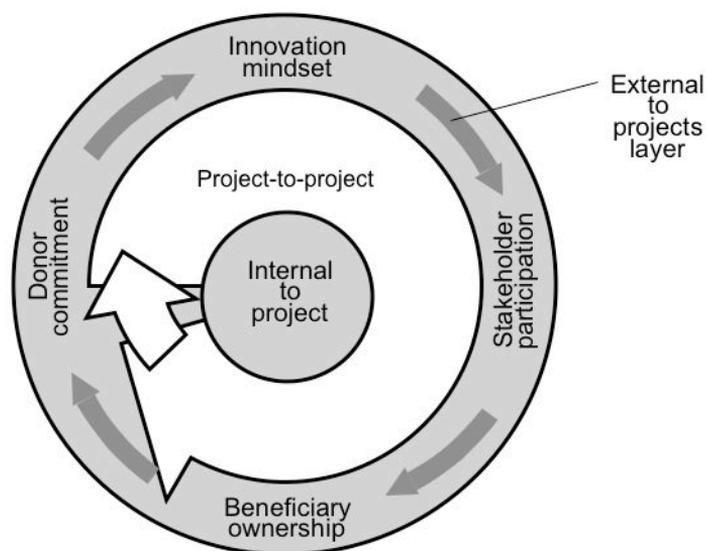


Fig. 5.4 The External-to-project layer

Participation, ownership, commitment

As development is the aim, projects have to adopt a worldview that involves social constructivism, participation and ownership by the beneficiaries and other stakeholders. To achieve this, there must be an aligned commitment by the donors and the beneficiaries in terms of situating the ownership with the local parties. This is seen to be achievable through a process of participation, which needs to be built into the fabric of the project (Hickey & Mohan, 2004). The participatory approach also implies the presence of other elements, such as participatory planning mechanisms, management through a consensus-making process, an inclusive managerial approach, communication systems that enable real time information for stakeholders and a channel for voicing concerns, systems of proactive control through process monitoring, to name a few.

Innovation mindset

An innovation mindset is also needed in the conceptualization, planning, implementation and closure of the projects. This is seen to involve the idea that the project must be seen as significant for the stakeholders. Insignificant projects lack utility and do not fall into the category of innovative initiatives, besides being a total waste of time and money.

Projects also need to be developed so that they can operate effectively (e.g. CEC, 2004). This can mean responsiveness to the needs a well-defined group of clients, the achievement of quantitative and qualitative goals or an efficient use of resources. Similarly, projects need to be designed from the start so that the learning and knowledge can be transferred from and to the project and to other initiatives. Taken together, effectiveness and transferability amount to success in administrative innovation.

Last, but not least, the innovation mindset in projects needs to carefully consider how the initiative is positioned in terms of novelty, which is seen to be link to three key issues. In the first place, whether the initiative represents a fundamental change in the governance, management, direction, or policy approach of a particular jurisdiction; secondly, whether the initiative represents a significant improvement in the process by which a service is delivered; and thirdly, whether the initiative introduces a substantially new technology or service concept.

From the findings of the first essay, technological novelty appears to be easily accommodated, as it tends to be seen as progressive, modern and desirable; in other words the buy-in from the stakeholders is often not difficult or complex to obtain. Process innovations in services are more difficult, and a fundamental change is extremely challenging to achieve. There appear to be clear advantages of incorporating technology into project contexts.

5.3.5 The Project-to-project layer

As indicated previously, the Project-to-project layer is mainly concerned with the transfer of knowledge, and through that, with the diffusion of innovation overall. Due to inbuilt discontinuity caused by projects ending, the transfer of knowledge to and in between initiatives is a key challenge in projects. Three specific issues are examined in this context: the discontinuity itself, the impact of single vs. repeated project cycles, and the shift from exploration to exploitation.

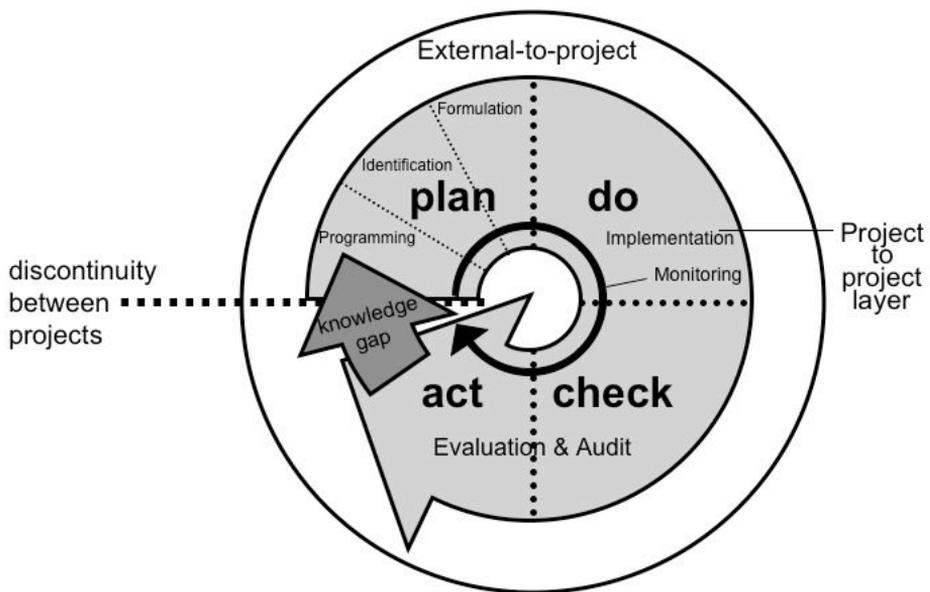


Fig. 5.5 The Project-to-project layer

Discontinuity gap

The application of the Deming circle into project environments allows for a visualization of the inherent knowledge gap that exists between projects (see Fig 5.5). As projects have been defined as temporal set-ups they have an end. At

this point in time, something needs to happen to the organisation, staff and knowledge accumulated during the project life cycle. In some cases the project organisations and set-ups are simply disbanded and the information archived.

In other cases this involves progressing to the next project cycle, in which case the key challenge is to bridge the discontinuity gap between the initiatives. This frequently involves a time lag and a new operational location. While this gap has been identified (e.g. CEC, 2004), there appears to be no standard solution for effectively bridging it. Codified knowledge in the form of reports and evaluations are often indicated as the main means of knowledge transfer, but both tacit and explicit knowledge have a shelf life, and as time passes, the value of the codified knowledge depreciates; the reports very quickly become redundant and tend to disappear from circulation. At the same time, the tacit knowledge that is carried by individuals is usually no longer available, due to other engagements. The knowledge embedded in artefacts usually requires translation by someone with applicable tacit knowledge; it is thus not always available on demand.

As one example of the effect of discontinuity, Maylor (2001) notes that mistakes will be repeated due to lack of evolutionary feedback (so-called re-inventing the wheel in project management), which is due to managers giving an overt weight to the unique nature of projects. In the case of the Tsunami operation (discussed in the third essay), learning has not been passed on to other South Asian countries as the operation was considered so problematic that nothing could be learned from it.

It appears that knowledge across and between projects travels best in tacit form and through individuals who are involved in the initiatives personally or through other professional roles; the problems associated with codifying the project learning and knowledge are well recognized. This is the key reason why donor organisations very carefully scrutinize the formal and personal qualifications of key project managers, often failing however to verify the local capabilities, which are key elements in terms of participation and ownership.

In this context, the practice-based view of knowledge has been identified as being well suited for the development cooperation project context (Tsoukas 1996; Polanyi 1969; Werr & Sternberg, 2003). It has also been noted that there exists a series of communities of practice that are linked to development (Welch *et.al.*, 2005).

It is therefore proposed that a key mechanism for transmitting knowledge to and across projects would be through development linked communities of practice (Lave and Wenger, 1991, Brown and Duguid, 1991, Wenger, 1998). Thus it is of interest to identify, engage and foster the involvement of communities of practice in development projects. While currently professional communities implicitly benefit projects through indirect involvement, it is argued that the contribution to the transfer of knowledge to and across projects can be significantly enhanced through promoting an active and explicit engagement. This is particularly needed and effective in one-off projects that cannot rely on progressive learning through multiple and sequential project cycles.

It is also noted that in development cooperation projects there tends to exist a significant asymmetry of knowledge between the local and international parties. This often acts that as an inhibitor to success; engaging with professional communities that involve local and external parties is a way to develop and harmonize a common knowledge base. This can be facilitated through an institutional embeddedness of resident project management competence, as in the case of PMOs (Hobbs *et al.*, 2008).

Single vs. repeat project cycles

The second central aspect of the Project-to-project layer in the proposed model is linked to its dynamic nature. While frequencies and intensities are not measured, the project cycle is still assumed to rotate. Due to the need to achieve simple representation, only a single cycle is shown in the model. This rotation represents the progress of the project through its various phases and a full 360-degree rotation is indicative of a completed project. As an assumption, the cycle is seen to rotate clockwise, in iterative positive development (an

adopted convention). The rotation of the cycles is linked to performance in project management. The more learning is passed on from one project to another, the more efficient and effective the subsequent project is assumed to be. This is where specialized project management organisations derive their competitive advantage.

If one only considers a single, one-off project, then there is a single cycle rotation and a stop. The knowledge acquired during the rotation needs to be captured and stored during the implementation period of the project, to be used if and when needs arise. That being said, as noted previously, there is a shelf life for both tacit and codified knowledge. The project is as efficient and effective as the enabling inputs and the transformation process adopted to create the outputs. Communities of practice can be seen to bring valuable initial inputs to the projects and previous experience in implementation usually makes the transformation process more efficient and effective.

That being said, the efficiency and effectiveness of a single-cycle project has a limit imposed by the one-off inputs; there is no enhancement due to repeat cycles. Due to this, setting up one-off project management offices from scratch is an inherently ineffective way of organising for the delivery of projects. This can be clearly seen in the case operation of the third essay, where the management organisation of a multi-million dollar operation was set up from scratch. The case of the second essay is similar, except that an embryo of the PMO already existed at the inception of the project. Tacit knowledge contribution was brought to the upgraded PMO also from staff members who had recently completed a similar project.

Shifting from exploration to exploitation in projects

In a series of projects the rotation is seen to happen as a constant, with a frequency and intensity that depends on the project type, the environment and the context.

In situations where repeated project cycles occur either in the same, subsequent or adjacent operational context, or with the same set of actors (and when time

lags between projects are not too long), it is possible that the nature of projects can shift from exploration to exploitation, in line with the idea of transformative learning in projects (e.g. Brady and Davies, 2004). There is a strong efficiency incentive to develop standardized (exploitative) practices in projects, even in the development context, and repeated project cycles are seen to enable this. Figure 5.6 illustrates the concept: while the initial discontinuity gap is seen to be wide and make the transfer of knowledge across the project divide problematic, subsequent rotations can be seen to narrow the gap and enhance the efficiency and effectiveness of the subsequent project.

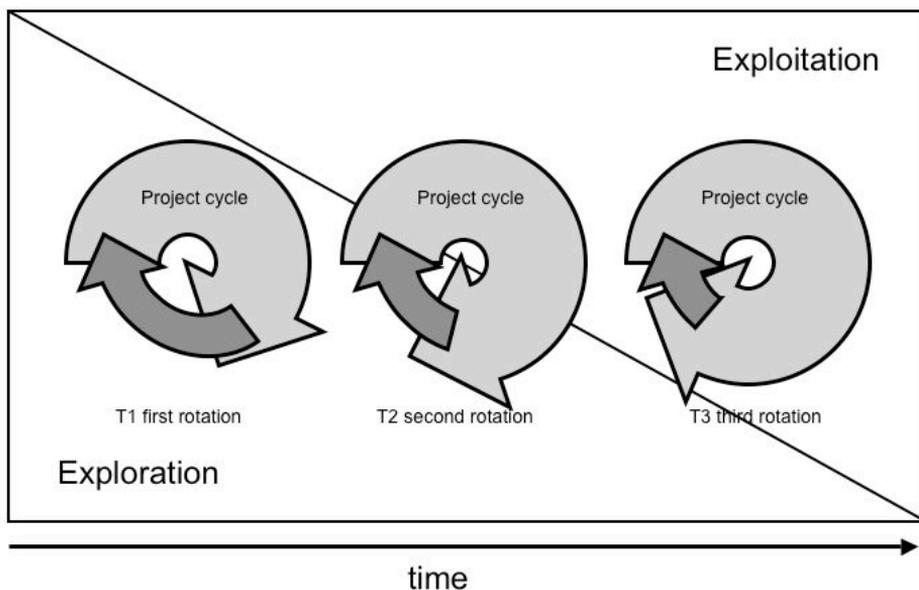


Fig. 5.6 Exploration, exploitation and knowledge transfer. Source: Brady & Davies, 2004; modified Koria, 2008.

There can be significant productivity enhancement as new cycles are undertaken; this can also lead to a wider diffusion of good practices, learning and diffusion and build-up of incremental administrative innovation. This does, however, apparently require that projects in the series are not too heterogeneous between themselves or that the time lag between projects does

not significantly decrease the value of the learning from the previous project cycle. As Brady & Davies (2004) note, sequential learning from projects involves proceeding from bottom-up approaches to top-down ones over time, creating cumulative expertise over time. This can imply improvements in the quality of planning, execution and control.

However, it could be argued that this incremental improvement does not necessarily review the basic premises under which the activities are undertaken.

To illustrate the issue, it is noted that professional project management firms have been developing their working methods over time - but mostly adhering to the conventional problematic project management theory base (Cicmil & Hodgson, 2006). This means that innovations in this context tend to be incremental, and rarely able to address the underlying problematic issues related to projects (especially in development), which would require radical innovations. There is also the downside, as sequential cycles can also mean that bad practices are transmitted from one project to another. These types of lock-ins can be difficult to straighten out; especially in situations where no effective and competent control mechanisms exists and where reflective learning is not present. There is also the effect of diminishing returns, as improvements that are limited to an existing, stationary platforms will meet a ceiling of cost effectiveness at some point in time.

5.3.6 The Internal-to-project layer

The Internal-to-project layer is concerned with the performance (effectiveness and efficiency) of projects; the balance of internal project capabilities versus the constraints that inhibit the full use of the capabilities.

As discussed in the previous section on the Project-to-project layer, successful rotation in multiple cycles can lead to continuous improvement in successive projects through an enhanced transfer of knowledge between projects (Bessant & Caffyn, 1997; Boer & Gertsen, 2003).

However, the operational environment can be thought of as static in terms of a specific project (and cycle) in question – the argument being that the transfer of knowledge is between projects only impacts on projects in a major way in the start (influencing the concept and set-up), when the project is set up in the first place. The learning that happens during the project cycle does not impact on how the project is conceived and set up; thus the operational environment is static to begin with.

Enabling continuous innovation in projects

What then drives projects up the slope to achieve continuous innovation? In line with the thinking that knowledge drives innovation, it argued that (continuous) internal-to-project learning is the key element that improves the delivery and practice of projects during a specific project cycle. This enables the project to achieve improvement within the project implementation and closure phases, and to influence, through the ongoing social construction processes, the operational environment of the project. Enhancing the operational environment of the project will also bring advantages to subsequent projects.

It is argued that external knowledge can only be configured into the project through the individual stakeholders that act within the project itself, through a process of social construction. This process involves capabilities of one hand and constraints on the other. In the model, capabilities pull the project up the innovation slope, while social constraints tend to push the cyclic activity towards a level platform, where only limited incremental innovation is possible (see Fig, 5.7).

Continuous innovation (Boer *et al.*, 2006) is enabled by an upward move on the innovation slope. There is no limit to the maximum improvement possible in this view (except the end date of the project), as the very platform of the project activities is being constantly reviewed, enabling incremental innovation within the project implementation. Theoretically there is no reason why radical innovation could not take place within this thinking, as in case of a failed

project, which requires a re-setting of the direction or possibly when operational contexts evolve or mutate significantly.

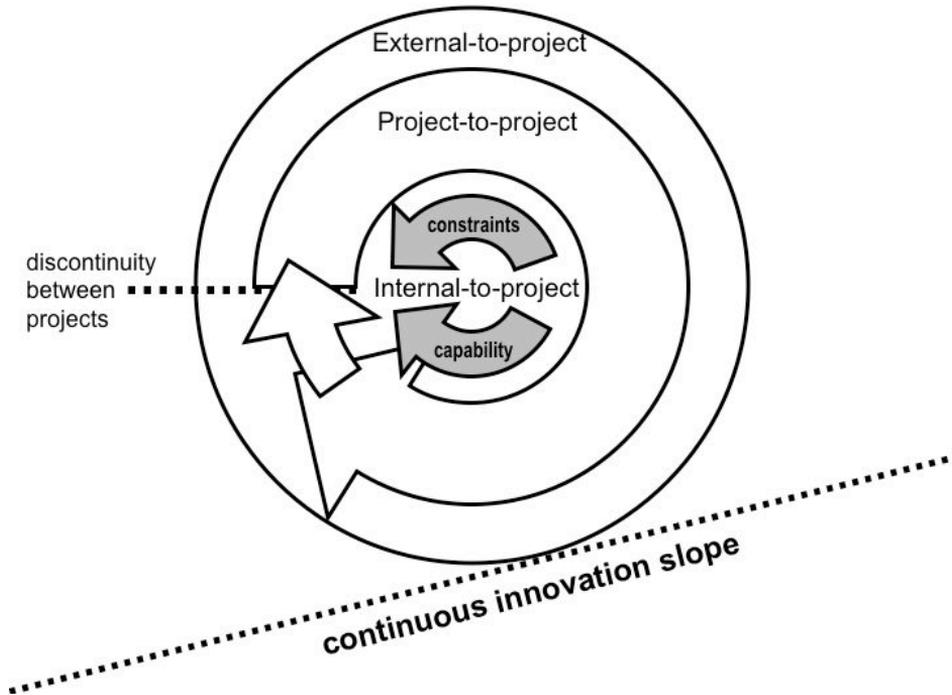


Fig. 5.7 The Internal-to-project layer

Countering forces: capabilities vs. constraints

The Internal-to-project layer needs to address the balance of capabilities and constraints that exist within the individual project environments; the two forces act against each other. Capabilities are considered to be the force that enables continuous innovation to happen, while constraints inhibit the use of the capabilities. These two forces originate from the Capability Approach (Sen, 2000) model, and are described in detail in the fourth essay.

Capabilities that drive a project are seen to be individual and exist in the team members of the PMO or within the stakeholders in the project. Constraints on the other hand are seen to be social and inhibit the use of the capabilities that would otherwise propel the model up the innovation slope. As Sen (2000)

notes, capabilities only really exist in function of the ability to apply them. This is an extension of the view on development that has been adopted in this study (Sen, 1989, 2000).

Knowledge is seen to be the key driver behind the capabilities involved and learning processes are seen to create knowledge and the potential for innovation. The lack of knowledge is seen to strengthen the social constraints, thus keeping the model on the level platform. Enabling learning within projects acts in the opposite direction, reducing constraints and enabling the model to climb the continuous innovation slope. While the knowledge transfer between projects is seen to be a collective affair (Wenger, 1998; Elkjaer, 2003), embedded in institutions and especially in communities of practice, the operational (managerial) level of projects is seen to rest on the individual capabilities of key players. That being said, it is evident that there is significant interplay between the communities of practice and the individuals; the difference is that communities are generic while projects are seen to be specific in nature.

5.3.7 Benefits and limitations of the model

The key benefits of using a model like this are linked to a few key points. The model allows for the examination the static and dynamic issues related to project management in a single framework. It also allows for locating capabilities and constraints into the same model as the primary activity cycle.

It links the transfer of knowledge over the discontinuity gap with the constraints that limit the dynamic change. The environmental constraints are a significant factor in project failure and capabilities are needed to overcome the social constraints in projects, to achieve success.

Lastly, as the representation is a graphic one, it allows the potential users to see the interrelationships between the various elements at a glance, perhaps leading to more rapid diffusion of the appreciation of the problems and issues that are related to innovation in the development cooperation context.

There are also limitations. The model does not describe or take into account the various levels of management (i.e. programmes versus projects), and it does not account for frequencies and intensities. As the model is not prescriptive, it does not give straightforward answers as to how capabilities and constraints should or could be taken into account. There is clearly room for future research in this area. The model is also very experimental and tentative and would need to be validated through further research; it is also extremely sensitive to the choice of the development, innovation and knowledge paradigms adopted.

6. Conclusions

6.1 Framing the study

As noted in the introduction, this study has been concerned with the outcomes and benefits of international development cooperation projects. Perhaps the key benefit is seen to reside in improved socio-economic situations, enabled through enhancing administrative innovation in the project contexts. It is noted that innovation embeds the concurrent existence of novelty, utility and success. Thus the research has been interested in the degree in which the projects contribute to the incorporation of novelty, the effectiveness of achieving tangible results, the success in addressing important problems and the transferability of the initiative within the host organisations and between jurisdictions. Furthermore, the study has been interested in understanding how this contribution could be enhanced.

The first research question was originally set in the study as:

1. *To what extent do current development cooperation projects contribute to administrative innovation in their contexts?*

And subsequently the second research question was framed as:

2. *How could the contribution of development projects to administrative innovation in their contexts be further enhanced?*

The study has been built up in five sections: four individual essays, each one focusing on specific aspects of the research and a joint section which has pulled the findings of the contextual review and the essays together to form a coherent whole. As a research design decision, one of the essays uses both qualitative and quantitative methods, another two are based on case studies, and one of the essays is conceptual in nature.

6.2 Key issues emerging from the study

It has been observed in this study that international development cooperation projects do not fully contribute to enabling administrative innovation in their contexts. Under ideal conditions, the four elements of novelty, effectiveness, significance and transferability would be concurrently addressed in projects. However, this does not appear to be the case. These four elements underpin novelty, utility and success, the essential components of administrative innovation.

It has been found that there is room for significant improvement in adapting and updating the existing theory of projects in order for it to respond to the demands and challenges of international development projects. This is seen to be possible by taking into account local conditions, making projects inclusive and participatory, by having a critical view of management and through enhancing the expertise that is related to the management of projects; all this while ensuring that the inherent knowledge gaps that exist between projects are also concurrently addressed. These elements are essential building blocks in achieving significance and utility in projects. Evidently also novelty has to be accommodated across the board as new knowledge underpins innovation.

Through an extensive contextual review and the essays of the study, a tentative definition of projects in international development cooperation is proposed:

Innovative international development cooperation projects are seen to be temporary organisations based on participatory approaches that aim to foster and diffuse novel processes, structures and knowledge to create new capability and opportunities to successfully reduce constraints to human well-being.

As noted previously, this definition implies that that there may exist development projects that are not innovative and that innovation in development may take place without projects; or that innovative projects are not developmental in nature if they do not create new opportunities to enhance human well-being.

6.3 Towards a Framework Model

The second research question has been concerned with exploring ways to enhance the contribution that development projects could make towards administrative innovation in their contexts.

A framework model has been proposed (Fig. 6.1), based on the contextual review and the findings from the essays, for conceptualizing, planning, implementing and closing projects. This involves a cyclical view of projects, close attention to an observed discontinuity gap and the transfer of knowledge across projects through communities of practice (Wenger, 1998), together with the incorporation of a perspective that links individual capabilities with social constraints (Sen, 2000); all within a frame of participatory action, local ownership and an innovation mindset. The study recognizes the dynamic, temporal nature of both project processes and the operational environment. The closure of projects and the transfer of knowledge between projects are also seen to be dynamic processes.

In the study, a project has been defined as a *“temporary organisation and a process set up to achieve a specified goal under the constraints of time, budget, and other resources”* (Shenhar & Dvir, 2007, 94). The process view of projects is seen to be well suited to examining projects through the lens of the plan-do-check-act (PDCA) framework of Deming (1986). This four step iterative problem solving process underpins the current project cycle management (PCM) framework used by the EU and many other international donors, forming a base for their approach in development project management (CEC, 2004). The PDCA framework also underpins the thinking linked to continuous improvement and innovation (e.g. Bessant & Caffyn, 1997). Taking into account continuous innovation clearly adds to the complexity of the proposed conceptual model. However, it also allows incorporating the dynamic nature of projects into the equation.

An improvement in knowledge transfer between projects is seen to enhance the efficiency of projects, potentially moving projects from exploration into

exploitation (Brady & Davies, 2004). Effective knowledge management systems are seen to furthermore contribute both to the diffusion of novelty in project environments and with related stakeholders, contributing to the effectiveness of projects.

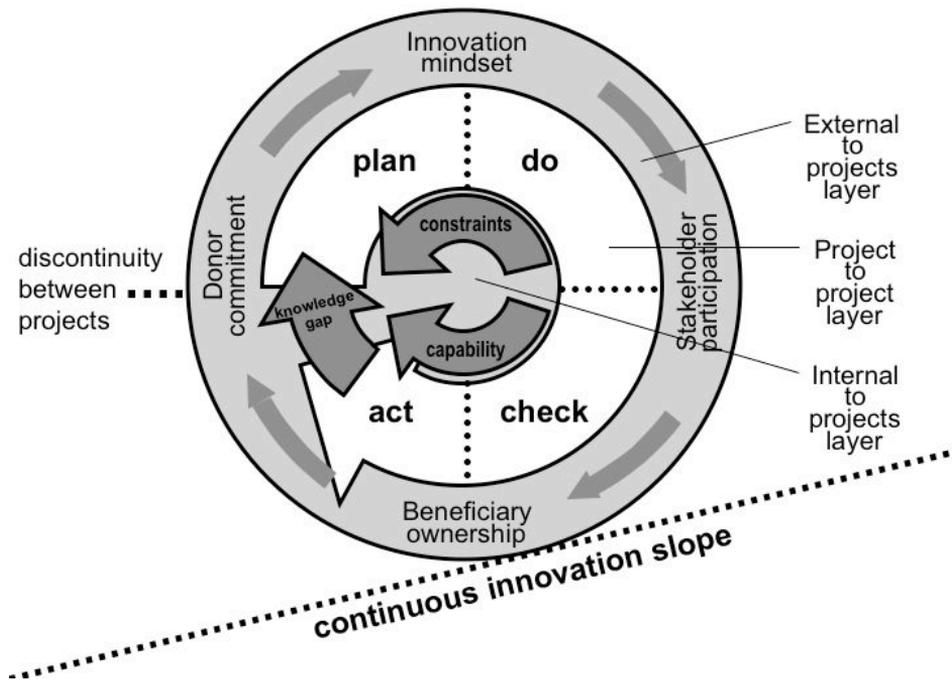


Fig. 6.1 Proposed Framework Model

This developed model can also be understood as a tool to identify, classify and assess the various elements and relationships in real life situations, enabling project managers to evaluate and develop appropriate solutions towards resolving project-related issues. The managerial implications section examines the application of the model, while the section of future research opportunities looks at the potential of developing the current research on this framework model still further.

The usefulness of the proposed model is derived from the joint presence of the key elements that are seen to enable and underpin good project practice while contributing to the enabling of administrative innovation in international

development cooperation projects. The downside is that there are many moving parts and that the model is a simplistic rendering of a complex set of factors. The real life setting of international development cooperation projects is inherently complex. That being said, it is argued that the presented model captures the essential and relevant issues. The layering allows the model to distinguish between sets of issues that are linked to each other on the same level, while situating the internal workings of a project in the context of the external operating environment. The cyclic nature allows for the configuration of dynamic elements on various levels, establishing also their enabling and constraining interdependencies.

6.4 Theoretical contributions

Several theoretical contributions are seen to emerge from the research.

The second essay in the study examines Koskela & Howell's (2002) theory of project and management. In the context of international development cooperation projects, their approach is found to be mostly applicable with the exception that an update is proposed in terms of control and participation in project planning, execution and control. This update addresses the key issues of development, participation and ownership in international development project management. Also in the context of the second essay, critical thinking as applied to projects (Cicmil & Hodgson, 2006) is seen to be highly relevant view in terms of coming to grips with the sense-making and political processes inherent in development projects. Applying critical perspectives is seen to contribute to the significance of projects to stakeholder groups; this in turn enhances the perceived utility in administrative innovation.

Secondly, the findings from the case studies support the idea that communities of practice (e.g. Wenger, 1998) can have a strong role in the knowledge transfer process between projects, through bridging the inherent discontinuity gaps that exists between initiatives. These gaps are deepened by time lags between projects. Bridging these gaps can potentially enable shifting projects from

exploration to exploitation (e.g. Brady & Davies, 2004); this is seen to initially contribute to efficiency, and over time, the effectiveness of projects.

The third theoretical contribution is derived from the process of recontextualising Amartya Sen's Capability Approach (Sen, 2000) into the domain of innovation studies. This brings about the opportunity to describe and understand continuous innovation through the dynamic balance of capabilities and constraints in the framework model developed in the study. It also makes visible the threshold of innovation as capabilities are only useful when social constraints do not inhibit their application. The capabilities to see, understand, assimilate and reconfigure new knowledge are seen to be an essential part of innovation in this context.

Finally, a key contribution is made through the conceptual framework model itself, which joins static and dynamic elements and provides a holistic view of the factors that contribute to enabling administrative innovation in international development cooperation project contexts.

6.5 Managerial implications

One of the aims of the study has been to offer managerial insights to the studied issues. The proposed framework model is seen to be the key vehicle to convey knowledge that is organised into a managerially informative form.

In the first instance, the framework model is seen to describe and explain the elements that are related to (administrative) innovation in international development cooperation projects. The model acts as a graphical checklist and a tool to conceptualize, plan, execute and control projects in the domain of development. It is also seen to be useful as a framework of thought in terms of structuring the elements that impact on project teams and project management offices.

A proposed way to utilize the framework model in practice is to pose a series of questions that project management parties need to make when conceptualizing,

planning, implementing and closing projects (the examples given in Fig. 6.2 are illustrative).

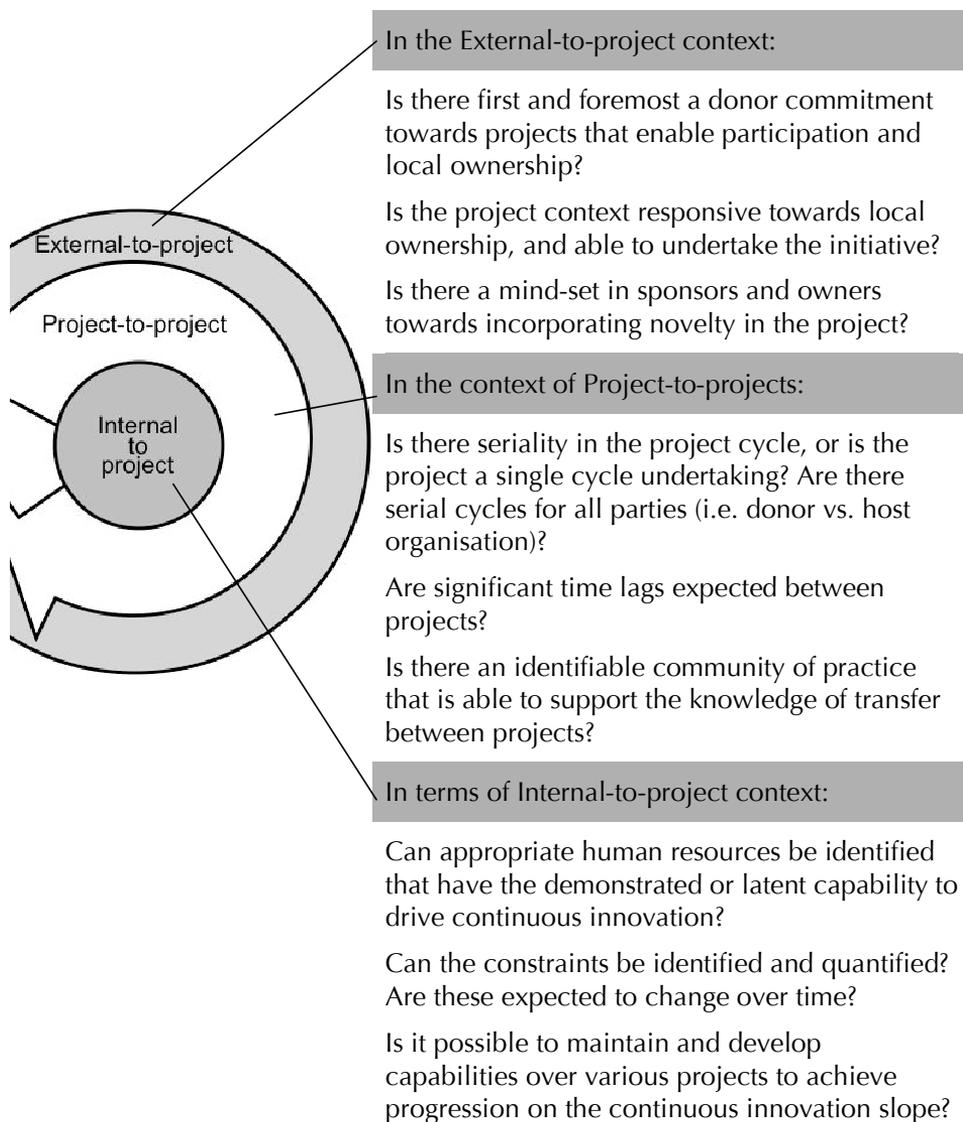


Fig. 6.2 Managerial implications

It should also be noted that issues behind these questions are linked to critical success factors in projects. Evidently a series of similar and more detailed queries may and should be developed at each stage of the project conceptualization, planning, implementation and closure. The model is complementary to other development project planning tools, such as the

Logical Framework Approach (LFA) (CEC, 2004), used by most development cooperation organisations as a tools for planning, monitoring and reporting.

6.6 Avenues for future research

In recent project management literature (Winter *et al.*, 2006; Brady & Söderlund, 2008) potential future research directions have been identified. These include examining complexity in project management and investigating projects as broad social processes with value creation aims, requiring reflective practice. This study has several touching points to these potential research futures.

In terms of theory, this study has been concerned with the applicability of the current theories of projects and management to the context of international development cooperation. In this process, the study has recognized and illuminated the inherent complexity that exists within projects and between projects and their contexts. The research at hand has also clearly gravitated towards the thinking that projects in this context need to have consideration for social interaction and on embedded value creation for multiple stakeholders, including the participants and beneficiaries.

At the same time, the study suggests that broad conceptualizations of projects be studied further, to address multidisciplinary, initial ambiguity, permeability and open-endedness. There is also a need to examine the activities and approaches adopted by practitioners themselves; there seems to exist ample room to study reflective practices and learning in communities of practice and at the workplace.

Several potential avenues for future research have also been identified during the course of this research. In the first place, an improved understanding of the discontinuity gap in development projects (and researching further the related bridging opportunities) would contribute significantly to the ability to manage the asymmetry of knowledge that exists between the donor agencies and the recipient organisations. Furthermore, best practice of knowledge management

and transfer processes in development cooperation projects would no doubt be enhanced by further research. This could involve a focus on the balance between tacit and explicit knowledge and a further review of applicable theoretical approaches of knowledge management in the development project context. Further empirical research into communities of practice (and also collectivities of practice) in development would be welcome. Linked to this, there is also ample room to study the relationship between individual capabilities (as understood in the Senian context) and the knowledge that is embedded in communities of practice.

Further applied research is also needed in transforming the proposed framework model into a more prescriptive one, making it accessible to practitioners. This operationalization can be seen to have a potentially wide impact on the development cooperation project management community. The key issue in this regard is linked to the operationalization of the Capability Approach of Sen, making the constraints and capabilities more quantifiable and explicit.

Lastly, the balance between programme and project management in the development cooperation context is not well defined, and would benefit from further research. While the third essay in this study addressed the issue, the natural mega-disaster context had an extreme nature and it would be beneficial to also study less complex circumstances.

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PART II: The Essays

Koria, M. (2009) "Are international development cooperation projects innovative? Evidence from three continents and six institutional donors", unpublished manuscript. Peer reviewed, accepted and presented at the annual European Academy of Management (EURAM) 2009 Conference, 11-14.5.2009, Liverpool, UK: 14 pages.

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Are international development cooperation projects innovative? Evidence from three continents and six institutional donors¹.

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Abstract

International development cooperation projects are used today as a key vehicle to deliver support to initiatives that aim for planned social change in developing countries, including the development of institutions and administration. In this context there are special demands on project approaches and it is pertinent to ask whether current practices enable administrative innovation in the beneficiary organisations. In this paper, seventy-nine donor-funded development initiatives in three developing countries were examined for novelty, effectiveness, significance, and transferability, in an attempt to establish whether these projects could be considered innovative, using the criteria set for the Innovations in American Government Award. The paper concludes that the degree in which a project successfully addresses an important public issue, together with effectiveness in terms of implementation appears to be linked to novelty and positive, improved change, often involving new technologies and services. There are apparent differences between the three countries and the donors in the study, implying need for differentiated project strategies. The study did not find evidence to support the view that official development assistance is likely to produce unanticipated benefits for its clients, and weak evidence was found for the transferability of the initiatives and the use of knowledge management tools. The study concludes that, while the examined projects overall do not fulfil all the set criteria, they can still be considered to possess some characteristics linked to administrative innovation.

¹ Koria, M. (2009) "Are international development cooperation projects innovative? Evidence from three continents and six institutional donors", unpublished manuscript. Peer reviewed, accepted and presented at the annual European Academy of Management (EURAM) 2009 Conference, 11-14.5.2009, Liverpool, UK: 14 pages. The author would like to thank the reviewers and Dr. Elizabeth Rose for enlightening comments. This paper has been updated from the conference paper to accommodate for the made observations, with the exception that additional quantitative techniques have not been introduced.

1. Development through projects

Since the end of the 1960's, projects have held a central role in the delivery of international development aid from wealthy nations to beneficiary organisations in less developed countries. Development cooperation was initially heavily oriented toward large engineering and technology-intensive projects, in some cases belonging to the mega-project categories [1][2]. In some cases these initiatives also had objectives related to ideological containment in the cold war period. This was followed by the neo-liberal agenda of privatisations and structural adjustments of the 70's and 80's, which in turn created the backlash alternative development thinking based on human needs and capabilities [3][4][5]. The size and scope of individual development initiatives have become very varied in recent years; often the aim is to support the structural transformation of the beneficiary society through planned social change and institutional development [6][7].

Projects and programmes in development cooperation have an aim to support the development of the abilities of the aid recipients, based on needs identified by the beneficiaries themselves. This is expected to result in culturally sensitive approaches that take into account the socio-economic circumstance and place the ownership in the hands of the local actors [8][9][10][11]. In practice the delivery of development cooperation assistance through projects is often fraught with contradictions, mixed agendas, and incoherent signals emanating from the various parties involved in the processes [9][12][13]. The fact that project management practice has traditionally been linked to a positivist worldview and an engineering tradition (in contrast to the constructivist worldview of human development) does not make the situation any easier, and it is only recently that a critical view of the theoretical underpinnings of projects has been put forward within the work of e.g. Cicmil and Hodgson [14], and others [15][16].

Innovation today is recognized as a key driver of economic growth and competitiveness, and national systems of innovation are seen to be key enablers of socio-economic well-being

[17][18][19][2]. The role of institutions is seen to be central to socio-economic advancement, also in developing countries, and sustainable development is seen partly as a function of good governance [20][21][22][23][24]. Due to the central role that it plays in growth and competitiveness, significant attention is given to promoting innovation in developed countries, often through prizes and awards that recognize achievement in the field.

Many of the recent international development cooperation projects aim to develop indigenous institutional competence and capability [25][26][27], targeting improvements in managing and administering the public sector service delivery, while also attempting a wider diffusion of best practice - in other words a search for administrative innovations that could have positive impacts on human wellbeing [27][28]. Administrative innovation, distinct from technical innovation, is concerned with the organisational structure of management and administrative processes that occur in the public and private sectors. Lam's definition of administrative innovation as "the creation or adoption of an idea or behaviour new to the organisation"[29, 115] is seen to be useful in this context. Elements of technology may be embedded in the adopted new processes [30][31][32].

In thinking about international development cooperation and projects, it is not clear whether the actual practice of delivering aid through projects and programmes enables administrative innovation in the public sector organisations that it supports. Would development aid projects qualify for the innovation prizes that are given out annually in the most advanced economies in the world? Or are these projects promoting the back alley of best practice?

This paper looks at the evidence from a series of seventy-nine projects in three developing countries: Mozambique, Nicaragua, and Vietnam. The projects were implemented in 1998-2005, funded by six major institutional donors, and had a focus on the development of public administration in a wide context. The study represents an attempt to understand the degree to which development projects present attributes that could be considered innovative.

This is thought to imply projects addressing important problems of public concern, demonstrating leaps in creativity, being effective in delivering tangible results, and enabling replication across to other entities. In other words, successfully diffused needs-based inventions in administration (with or without technological content). The study is based on external, third party evaluations of the projects.

The paper initially examines issues with projects as a vehicle of international development cooperation, proceeding then to describe the data, the approach to the analysis, and the criteria used. Through a two-stage analysis and a discussion the paper arrives at a series of conclusions, which include managerial implications relevant to the way in which international development projects are planned, executed and controlled.

2. Mixed advantages of projects

Wealthy nations support the socio-economic development of less favoured nations with multi- and bilateral aid channelled through various development instruments, including budgetary support, projects, and programmes. While there is an ongoing debate on the relative merits between the various instruments, projects remain strongly on the agenda, and, for example in the case of the European Commission [36], are seen to be appropriate in the case of decentralized cooperation with non-state actors, emergency action, and in large and complex projects with high transaction costs [32][33][34][35].

Projects are also problematic, as they are not seen to be equally beneficial to all stakeholders. The donors have clear advantages in project approaches, as it is possible to monitor and influence decision-making, align objectives to policies, and gate-keep performance. Finite timelines, standardized procedures, and apparently simple organisations are added advantages [10][36]. To the recipient the advantages are not always so clear. The asymmetric capabilities between officials from developing countries and donor representatives form a major challenge for aid recipients in the political agenda-setting that donor - beneficiary negotiations of aid entail. Similarly, project identification, planning,

execution and control require expertise that is different from operational work in line organisations, and project agendas are sometimes based on donor convenience and not on recipient needs [12][13][37].

A further challenge is linked to time: projects are often too short to allow for a permanent reconfiguration of social, organisational or resource arrangements [14][38][39]. The transfer of knowledge between projects is another major challenge, and multiple projects strain further the (often limited) management capacity of the beneficiary organisations [36][40][41][42][43][44][45]. Additionally, initiatives often fail to address important local issues related to participation and ownership [46][47].

There is also an incompatibility between the positivist worldview underpinning the theory of projects and project management and the constructivist development approach, which emphasises the participation and ownership of the stakeholders, linked also to the post-modernist ideas of power and empowerment [4][9][14][43][48]. This is illustrated in the task and performance oriented project cycle management tools in use [36], which are essentially versions of the industrial production and quality movement systems, tied to efficiency and optimization paradigms [14][49]. They contradict bottoms-up development approaches [3][4][5].

In project environments, structures with hidden, informal and individualized control in management are also often incompatible with the hierarchical, open control in public sector administration. This is evidently problematic for individuals that operate in both systems concurrently [13][20].

3. Innovation and projects

In the context of development cooperation projects, several issues point towards a knowledge and learning perspective of innovation [6][50][51][52]. In the first instance, it can be argued that the asymmetry of knowledge between the parties is an issue that needs to be addressed in equitable development. Secondly, the project environment is particularly challenging, as there exists an inherent discontinuity in

learning and knowledge between projects. Finally, the approach to development today builds on ownership and participation, with authorship based on educated decisions and knowledge [6][13][44][52].

If projects are to contribute to the development of administrative innovation, they must enable the host organisation to see, assimilate and apply new knowledge in a constant, systemic way, searching for avenues of continuous improvement [53][54][55][56], aiming for permanent reconfiguration of socio-economic arrangements. The need for consistent and continuous effort makes projects problematic in terms of innovation. Long term sustainability, participation and ownership are often compromised in favour of short-term efficiency of delivery, while learning and knowledge transfer are often not addressed at project closure.

That being said, it is argued that projects can contribute to positive change in management, governance, policy formulation, organisational culture, and the diffusion of the experiences. To be innovative, projects need to be concurrently significant and effective and able to incorporate novelty and to transfer it onwards.

4. The research design

In order to address the questions posed, three issues needed to be resolved in the research design: the source and nature of the data, the criteria for the analysis, and a methodological approach.

The data sources had to involve projects with aims to develop institutional competence and capability; at the same time detailed information of the projects had to be available in reliable and comparable formats. It was recognized early that institutional donors report on their initiatives to their stakeholders through completion reports of projects; these gave the study at hand the needed full narratives of the projects. The requirements of validity and reliability were met by project evaluation reports that were commissioned from independent, external parties (experts in development evaluation), complying with fairly standard formats, enabling cross-case comparisons.

In order to compare the reports of the projects, a set of criteria was furthermore needed. In order to evaluate novelty, utility and success in and between projects the criteria of the Innovations in American Government Award was used, together with definitions of standard well-recognized knowledge management tools.

The methodology also provided challenging; three main steps had to be completed in the analysis. In the first instance, through a content analysis (keywords and concepts derived from the award criteria) the reports were read by the researchers; based on their perception of the presence, prevalence, and frequency of elements linked to the dimensions a five-step valuation was given for each dimension in every project. As the reports are seen to be socially constructed documents, there are evident limitations in terms of applying nominal values to perceptions. The coding was used as the basis for basic analysis using descriptive statistics and basic quantitative tools. The findings were then analysed and reported on.

5. The data

To achieve validity and reliability in evaluation reporting, institutional donors commission as standard practice, post-completion evaluation reports of projects. In most cases today, these documents are public and downloadable (as they have been publicly funded), and they give a comprehensive overview of the objectives, implementation and impact of the project. The various organisations refer to these documents alternatively as evaluations, implementation completion reports, project performance assessments, project performance audits, technical assistance performance audits, project completion reports, and/or technical assistance completion reports. The documents used in this study were all made public between 1998 and 2005. Some documents referred to projects that were completed several years before the publication of their report.

In order to obtain a representative number of projects for the study, the public domain sources of the Asian Development Bank (ADB), the African Development Bank (AfDB), the Danish International Development Agency (Danida), the European Union's Europeaid, the

Inter-American Development Bank (IADB), the Norwegian Agency for Development Cooperation (Norad), the Swedish International Cooperation Development Agency (Sida), and the World Bank (WB) were widely reviewed. These donors represent a range of different development actors; they are also seen as reputable long-term operators that share similar evaluation practices and formats.

An original screening of close to 700 project-related documents available on the internet was reduced substantially by limiting the content to independent evaluations and assessments of completed projects. In terms of time, only projects from the last five years (publishing date of report) were included, to minimise the effect of policy lag.

As the proposal was to review the substance of the project in a generic fashion, limitations to the project type and sector were defined widely, with the only main parameter being that the projects had to have aims to develop the public sector in one way or another. While all of the chosen projects contributed to the overall development of the public sectors, 18% of them focused specifically on infrastructure related development, and 18% on the social sector (mostly health and education), while the

geographical areas of donor intervention, sharing somewhat similar political and economic backgrounds. All of the countries have received substantial aid from the donor community over the last decades.

The selection criteria restricted the material for the study to seventy-nine reports of development initiatives, with geographical and donor distribution shown in Table 1. All of the documents that fulfilled the criteria were incorporated into the initial first analysis of the study. As is seen from Table 1., there are some limitations to the use of the data, as not all donors operate in all geographical areas, and there are in some cases very limited numbers of projects per country and donor. The examined projects were funded by six international donors (ADB, Danida, Europeaid, Norad, Sida and WB) and belong to more than twenty-five different sub-sectors of the public sector (from banking and finance to health and human rights, from energy and infrastructures to agriculture and environment). Many of the projects involve multiple sectors.

6. The evaluation criteria

The documents were analysed using a mix of the criteria of the Innovations in American

Table 1. Distribution of projects by country and donor

Country / Donor	ADB	EU	Danida	Norad	Sida	WB	Total
Mozambique	-	3	-	-	10	4	17
Nicaragua	-	4	4	1	15	3	27
Vietnam	18	-	-	-	7	10	35
Total	18	7	4	1	32	17	79

remaining 64% of projects involved public administration development in governance, finance, law and democracy issues. Thus private sector and commercial initiatives were left outside of this study (with the exception of small scale support to the implementation of micro-credit programmes in some projects).

As a further research choice, the projects were also delimited in terms of geography, and only projects from Mozambique, Nicaragua and Vietnam were considered. The choice of these countries assured a wide geographical distribution, and they represent three major

Government Award and standard well-recognized knowledge management tools.

Innovations in American Government

Since its inception in 1986, the Innovations in American Government Award has become a major award for public sector innovation. The award, a program of the Ash Institute for Democratic Governance and Innovation, Kennedy School of Government, Harvard University, administered in partnership with the Council for Excellence in Government, has a focus on innovation in federal, state, city, town,

county, tribal, and territorial governments, evaluating projects and programmes in all policy areas.

This paper has adopted the award criteria as the basis for evaluating the innovation content of the development projects. Some of the principles have also been adopted by an international network of local governance and incorporated in innovation awards in Peru, Brazil, China, Chile, Mexico, Uganda, Tanzania, among others. Please see Appendix 1. for a full listing of the criteria.

Knowledge Management tools

The second series of analysis was done using a set of indicators of knowledge management tools. These are standard tools used in monitoring and mapping, document management, information analysis, decision support, and knowledge distribution and management. The list has been adapted from an academic study commissioned by the European Commission [7]. The thirty-nine tools are organized into five main categories; it is by no means expected that all of these tools would be used in all of the initiatives, but the existence of some is a proxy for managing knowledge that is introduced to the projects, created by them, and recycled into new uses and forms. Please see Appendix 1. for a full listing of the criteria.

7. The analysis of the data

Coding Process

The evaluation criteria consisted of eighteen dimensions representing five main categories of novelty, effectiveness, significance, transferability and knowledge management; the five main dimensions in the knowledge management category consisted of thirty-nine distinct knowledge management tools (see Appendix 1.).

Evidence of the existence of each dimension (and tool by tool for the KM dimensions) was assessed individually, based on a multiple reading of the text, and given a Likert scale value from 1-5, with one corresponding to "none apparent" and five to "highly". The researcher used both the descriptions of the dimension and key words in the content analysis of the text. The coding was done

manually and entered into a spreadsheet. Each report was printed out and assessed individually.

After an initial pilot group of fifteen project reports was coded, the coding process was calibrated and adjusted to suit. The original pilot group was later re-assessed. A second researcher made independent valuations of a series of reports to calibrate and validate the findings of the principal evaluator.

Rounds of analysis

The data was analysed in two stages. After the coding, the full caseload was analysed through aggregating mean scores for dimensions and categories, while separating between the countries to allow for a closer inspection of the impact of location.

In the second stage of the analysis, the objective of analysis was to gain understanding of the correlations between the key dimensions, thus verifying the relationships that individual dimensions have with each other.

Dimensions as indicators

In setting up the study, five dimensions were established as proxy indicators of innovation.

As innovation explicitly involves absorption of novelty that drives change in governance, management, Dimension 1.1 (*Does the initiative represent a fundamental change in the governance, management, direction, or policy approach of a particular jurisdiction?*) was chosen as a proxy of novelty.

Dimension 1.2 (*Does the initiative represent a significant improvement in the process by which a service is delivered?*) was included in the further analysis, as administrative innovations are often linked to service provision to populations.

To understand the impact of technology in the process, Dimension 1.3 (*Does the initiative introduce a substantially new technology or service concept?*) was included in the closer analysis of the second stage

Innovation is also assumed to be useful and thus Dimension 2.2 (*Does the initiative demonstrate its effectiveness in meeting its stated goals and objectives quantitatively and*

qualitatively?) is used as a proxy of utility; the idea of significance² is embedded in this choice (i.e. significant and effective endeavours are seen to be useful).

The diffusion of innovation is seen to be observable through the changes in organisational culture and management practice, and thus Dimension 3.3 (*To what degree does the initiative change the organisational culture or the traditional approach to management or problem solving?*) is indicative of the organisation-wide acceptance of the novel practice.

8. Initial findings

Preliminary observations

Table 2. indicates the aggregate scoring in the categories (full scoring of all of the eighteen dimensions and five categories in given in Appendix 1.).

Several preliminary observations were made after the coding was completed. Scoring for already completed, independent evaluation (Dimension 2.4) was seen to be redundant, as the data sources were independent final evaluations of the initiatives: The value indicating the existence of unanticipated benefits to clients (Dimension 2.3) was consistently low (sample mean 1.4, or just above the threshold of observation). The same observation was made overall for the knowledge management dimensions (5.1-5.5), with the average scoring of the category being at 1.3, again just above the threshold.

Novelty

The mean scores for the Novelty category demonstrate a clear leap in creativity in the initiatives, although there is clear difference between the scores of Mozambique (2.8) and the other two case countries (3.8 and 3.8 for Nicaragua and Vietnam respectively). The reading of the evaluation reports indicates that there is an overall improvement in the service

delivery (Dimension 1.2; sample mean 3,7), and that change is observable in terms of governance, management, or policy (dimension 1.1; sample mean 3.4). There is clear evidence that many of the initiatives introduce new technology or a service concept.

Effectiveness

The initiatives on the average were seen to respond to the needs of a well-defined group of clients (Dimension 2.1; sample mean 4.2). Out of the caseload of seventy-nine initiatives, only five were seen to be only somewhat responsive; all other seventy-four were clearly, extensively or highly responsive. In terms of meeting the stated goals and objectives quantitatively and qualitatively, the initiatives were seen to be achieving results either clearly (as in the case of Mozambique and Nicaragua) or extensively (as in the case of Vietnam).

Significance

Overall the basic assumption is that initiatives that are undertaken with aid funds would be, by definition, significant and relevant in their context. The analysis of the cases supports this in terms of the initiatives addressing problems of national importance and scope (Dimension 3.1; sample mean 4.6), confirming also that these endeavours make a contribution towards diminishing the problems at hand (Dimension 3.2; sample mean 3.9). There is less clarity about the degree in which organisational changes are observed (Dimension 3.3; sample mean 3.3). There appears to be a clear, observable difference between Mozambique and the other two case countries.

Transferability

The findings suggest that initiatives can be transferred, with a mean score of 3.01 for the category overall. In the African context, the initiatives seem to be the least transferable, while the Asian projects and programmes appear to enable transferability to a higher degree.

Knowledge management

The findings on knowledge management are elusive, and clear indications of the widespread use of knowledge management tools cannot be readily read from the whole case-load. There

² Significance is widely used in development evaluation as a synonym for importance; this should not be confused with the use of the term in statistical analysis.

Table 2. Category cumulative mean scores of 79 cases

Categories	Country mean scores		
	Mozambique	Nicaragua	Vietnam
1. NOVELTY: the degree to which the initiative demonstrates a leap in creativity	2.8	3.8	3.8
2. EFFECTIVENESS: the degree to which the initiative has achieved tangible results	3.2	3.8	3.6
3. SIGNIFICANCE: the degree to which the initiative successfully addresses an important problem of public concern	3.5	4.1	4.2
4. TRANSFERABILITY: the degree to which the initiative, or aspects of it, shows promise of inspiring successful replication by other governmental entities	2.7	3.0	3.3
5. KNOWLEDGE MGMT: the evidence of the use of knowledge management tools to improve the capacity to see, assimilate and apply new external knowledge	1.2	1.4	1.4

Grading: none apparent-1, somewhat-2, clearly-3, extensively-4, highly-5

are altogether 23 cases that have a “none apparent” scoring for all of the KM dimensions. Even eliminating those cases, and using the reduced number of 56 initiatives gives an inconclusive reading of the matter.

9. Complementary analysis and findings

For the five dimensions used as proxies, correlations were examined for the whole case load of seventy-nine projects (Table 3.)

Novelty, utility and technology

The first variables deal with perception of change of the project. Fundamental change (Dimension 1.1) was found to correlate positively (.405) with effectiveness (Dimension 2.2). Additionally, there are positive and significant correlations (.435) between change in organisational culture (Dimension 3.3) and perceived effectiveness (Dimension 2.2), and between fundamental change (Dimension 1.1) and change in organisational culture (Dimension 3.3) (.761).

Thus change in governance, management, or policy is positively correlated with effectiveness in the delivery of the initiative. Thus effectiveness is also positively correlated with a perceived change in the organisational culture or the traditional way of management, while fundamental change is strongly linked to a modified organisational culture.

The relatively high scores of Dimension 1.2 correlate significantly with the novelty overall (Dimension 1.1), the introduction of new

technology (Dimension 1.3) and the overall effectiveness of the initiatives (Dimension 2.2).

While the perceived effectiveness (Dimension 2.2) of the initiatives has a clear and significant correlation with novelty (Dimension 1.1) improvements with services delivery (Dimension 1.2), and cultural change (Dimension 3.3), the correlation with the introduction of new technology is weak (.283). That being noted, there is a strong correlation between the introduction of new technologies or service concepts and the improvement of service delivery (.518).

Diffusion

In an additional exercise (not shown in Table 3.), the categories Novelty and Transferability was found to be weakly correlated. (.34); the change in organisational culture (Dimension 3.3) was weakly correlated with Transferability (.18); and Effectiveness had a very low correlation with Transferability at (-.02).

Country and Donor effects

The final part of the examination is concerned with the specific effect of the country and donor in the perceived change. Due to the small sample size, analysis methods based on statistical analysis were not applied. For the same reason, great caution should be exercised in drawing generalizations from Table 4., which relates the evaluated changes Dimension 1.1 with the various countries and donors. Only one donor, Sida, has a sufficient number

Table 3. Key individual dimension correlations

		Dimension2.2	Dimension 1.1	Dimension 3.3	Dimension 1.3
Dimension 1.1	Pearson	,405(**)			
	Sig. (2-tailed)	,000			
Dimension 3.3	Pearson	,435(**)	,761(**)		
	Sig. (2-tailed)	,000	,000		
Dimension 1.3	Pearson	,283(*)	,707(**)	,639(**)	
	Sig. (2-tailed)	,012	,000	,000	
Dimension 1.2	Pearson	,484(**)	,548(**)	,492(**)	,518(**)
	Sig. (2-tailed)	,000	,000	,000	,000
		** sign.. at the 0.01 level *sign. at the 0.05 level			

Dimension 1.1	Does the initiative represent a fundamental change in the governance, management, direction, or policy approach of a particular jurisdiction?
Dimension 1.2	Does the initiative represent a significant improvement in the process by which a service is delivered?
Dimension 1.3	Does the initiative introduce a substantially new technology or service concept?
Dimension 2.2	Does the initiative demonstrate its effectiveness in meeting its stated goals and objectives quantitatively and qualitatively?
Dimension 3.3	To what degree does the initiative change the organisational culture or the traditional approach to management or problem solving?

Table 4. Country / Donor assessed values of fundamental change (Dimension 1.1)

Country / Donor	ADB	EU	Danida	Norad	Sida	WB
Mozambique	-	33%*	-	-	60%	60%*
Nicaragua	-	70%*	80%*	40%*	80%	80%*
Vietnam	64%	-	-	-	94%	76%
* sample size <5						

of projects in a single country that could permit some indicative understanding of the degree of differences in terms of projects in all three countries. Table 4. indicates the country and donor specific values.

10. Discussion

The findings confirm that initiatives are significant (i.e. perceived as important, using the development terminology) and relevant in their context. Altogether fifty-nine of the cases were classified into the highly significant category, while twelve were seen as extensively significant, and only eight out of seventy-nine were only clearly significant. In the assessment none of the projects were seen as insignificant or only somewhat significant. There may be myopia present in the results, however, as the original evaluators of the projects would

evidently find it hard to consider completed projects as a total waste of time and money.

Effectiveness and novelty in the studied projects are correlated. The scores of significance would imply a positive perception of utility (as inventions with no application would not be considered innovations), and positive perception of effectiveness would in turn imply success.

The criteria originally defined novelty through change processes – this does raise the question of the connection between change and creativity: is a fundamental change necessarily creative? And would this translate into innovation? In a search for an answer, it is suggested that it is specifically the concurrent existence of significance (utility), effectiveness (part of success), and novelty which form the basis for the assumption that innovation can be

claimed to exist. Effective projects also enable organisational change, which is an indicator or potentially permanent re-arrangements implying that an internal diffusion process has taken place (i.e. contributing to the success of the projects).

This analysis still lacks the wider diffusion element, the external acceptance and buy-in. While the observed changes in organisational culture can be seen to signify diffusion of new ideas within the organisation, it does not say very much about the potential that these ideas have for a wider diffusion. The category of Transferability is seen to address this issues, but in the study, the findings are elusive and inconclusive, and perhaps only a longitudinal study could establish whether this transfer/diffusion has actually taken place.

Another point of reflection is linked to the results of the knowledge management section of the study. The results imply that knowledge management is either practically non-existent in the initiatives – or then it is not evaluated and recorded as are other attributes in the projects and programmes. It is not possible to say which is the case, but anecdotal evidence from other projects (that the author has had involvement with over the last two decades) would tend to indicate that knowledge management practices are not widely adopted in development cooperation projects, and thus they are also not necessarily evaluated and reported on.

The study results suggest the presence of a history and path dependency of development (the differences between countries may be explained through this) and the role of technology as a driver for change (as in the context of new technologies being related to improvements in terms of service delivery).

In terms of the variation between countries and donors, Sida's results are interesting, and could give some indications as to the direction that the country and donors would influence perceived change. Due to the small sample and the fact that not all donors cover all countries it is not possible to fully reject or accept that there is a donor effect.

11. Conclusions

This paper looked at the issues related to innovation in international development projects funded by international donors, attempting to establish whether there is evidence of these initiatives possessing innovative attributes and outcomes. Overall it could be tentatively affirmed that significant projects can be effective, and that effective projects may be somewhat innovative, through the fact that they are able to enable positive change in terms of governance, management, direction, policy change and organisational arrangements. The long-term sustainability of change cannot be established from the data.

The main issue lies with the need for a concurrent presence of novelty, effectiveness, significance, and transferability (these translate into novelty, utility and success, and are thus linked to the initial definition used). In the examination done for this paper the transferability aspect remained inconclusive. It would appear that many of the projects bore evidence of the presence of three of the four attributes to some degree. Another aspect that may be indicative of a lack of innovation is the fact that there was no clear presence of unintended benefits for the clients in the projects, or that they may not have been registered as such. There is evidence that the introduction of new technology corresponds favourably with improved service delivery.

While the project framework may not be the most adequate vehicle of development, due to problems of duration, externality and ownership, it still remains a key method of delivering development initiatives. Perhaps projects could be developed into improved delivery platforms of institutional innovation if attention would be paid to the concurrent presence to novelty, effectiveness, significance, and transferability. To this end, there is clearly room for further research, especially in the area of diffusion of knowledge in and between projects, as this is a key enabler of transferability.

The study has several implications to the setting up, implementation and evaluation of projects. The study was not able to find evidence of the existence of unintentional benefits; projects

seemingly do not plan for incongruities and/or are not able to see, absorb, or report them. To allow for the unexpected to become a source of innovation, implementation needs to be flexible, enabling real-time changes in the programming and even objectives of the intervention. Due to history and path dependency, it would appear that projects in each country would need specific strategies to address novelty, utility and success. Furthermore, there is room to enhance the planning and monitoring of the projects, to include innovation on the agenda.

Still yet, there is ample room to deepen the analysis of the existing data through applying further quantitative techniques.

And finally: would the projects assessed be eligible for innovation prizes, such as the Innovations in American Government? The author would suggest that for the time being there is a need to have two categories in the competition.

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Categories & Dimensions	Appendix 1. Description of categories and dimensions, with averages of all analyzed cases by country and as a aggregate totals	Mozambique	Nicaragua	Vietnam
1. NOVELTY: the degree of demonstrated leaps in creativity		2.75	3.75	3.78
1.1	Does the initiative represent a fundamental change in the governance, management, direction, or policy approach of a particular jurisdiction?	2.71	3.85	3.69
1.2	Does the initiative represent a significant improvement in the process by which a service is delivered?	2.88	4.04	4.31
1.3	Does the initiative introduce a substantially new technology or service concept?	2.65	3.37	3.34
2 EFFECTIVENESS: the degree of achieved tangible results		3.24	3.45	3.61
2.1	Does the initiative respond to the needs of a well-defined group of clients?	3.94	4.19	4.57
2.2	Does the initiative demonstrate its effectiveness in meeting its stated goals and objectives quantitatively and qualitatively?	3.12	3.74	4.40
2.3	Does the initiative produce unanticipated benefits for its clients?	1.29	1.26	1.51
2.4	Does the initiative present evidence of already completed, independent evaluation?	4.59	4.63	3.94
3 SIGNIFICANCE: the degree of successfully addressing important problem of public concern		3.47	4.17	4.22
3.1	To what degree does the initiative address a problem of national import and scope?	4.47	4.74	4.63
3.2	To what degree does the initiative make substantial progress in diminishing the problem within its jurisdiction?	3.41	3.96	4.46
3.3	To what degree does the initiative change the organizational culture or the traditional approach to management or problem solving?	2.53	3.81	3.57
4 TRANSFERABILITY: the degree of inspiring successful replication by other governmental entities		2.73	3.04	3.26
4.1	To what extent can this initiative be replicated in other jurisdictions?	2.82	3.22	3.57
4.2	To what extent can this initiative serve as a model that other jurisdictions will seek to replicate?	2.35	2.93	3.00
4.3	To what extent are initiative components, concepts, principles, or insights transferable to other disciplines or policy areas?	3.00	2.96	3.20
5 KNOWLEDGE MGMT: The evidence of the use of knowledge management tools		1.16	1.41	1.42
5.1	Is there evidence of the use of monitoring and mapping tools (business intelligence, environmental scanning, knowledge mapping, concept mapping, knowledge audits, technology watch, web mining, use of internet search engines, yellow pages)	1.41	1.96	1.83
5.2	The use of document management tools (automatic classification tools, bibliometrics, document management, content management, data warehousing, IPR management)	1.12	1.41	1.46
5.3	The use of information analysis tools (cluster analysis, content analysis, data mining, internal and external benchmarking, semantic analysis, workflow tools)	1.00	1.26	1.26
5.4	The use of decision support tools (comm. of practice, CRM systems, decision support systems, PM tools, balanced scorecard, brain storming, case based reasoning, collaborative technologies, executive information systems, SCM, Dephi method)	1.06	1.30	1.29
5.5	Is there evidence of the use of e-techniques in knowledge distribution and management (corporate intranets, e-learning platforms, groupware tools, voice recognition, creativity software, e-mail, internet)	1.24	1.15	1.29

Scores: none apparent-1, somewhat-2, clearly-3, extensively-4, highly-5

Building with technology, management and innovation: challenges for Vanuatu

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Abstract: While small island developing states are seen to possess specific and exceptional characteristics, it is not known whether technology application or management practice in development projects in these states would necessarily be specific and exceptional in nature. This paper examines a school building project in the Republic of Vanuatu and reviews the technology and management aspects of project delivery. The paper concludes that there is evidence of specific attributes. In recognising the key role of management as an enabler of technology application, the paper proposes an update to existing project management practices, suitable to the development context. Including a knowledge perspective as an evolving method of control enables management to assume a wider developmental role and importance through the project management office structure, potentially enabling administrative innovation and co-evolution of the office and the host organisation. This wider role is made possible through the specific attributes of the small island developing state context.

Keywords: project management; educational project; building code; technological applications; Vanuatu.

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1 Introduction

Small Island Developing States (SIDS) are considered to possess specific and exceptional characteristics, owing to, *inter alia*, small populations, openness, limited resources, insularity and remoteness, weakness and vulnerability to natural disasters and external shocks (Briguglio, 1995; Armstrong *et al.*, 1998; Easterly and Kraay, 2000; Commonwealth Advisory Group, 1997; Commonwealth Secretariat – World Bank Joint Task Force on Small States, 2000). Many SIDS are eligible for preferential trade arrangements and aid in the form of grants and subsidised credits. This development support is often delivered through projects, used as delivery vehicles in public, private and third-sector interventions in, *inter alia*, physical infrastructure and capability development, both in the context of commercial services and public utilities.

Projects, as unique, temporal organisations set up to deliver a product or service, often embed technology in the delivery process or the outcome. The choice of technology within projects raises a question: if one accepts that SIDS have specific and exceptional circumstances, as has been argued, should this not impact on the technological choices in projects implemented in the SIDS context, driving them also towards the specific and exceptional? Does the specific and exceptional context influence the management of projects? Furthermore, do these choices have a bearing on innovation in the SIDS context?

This paper examines the delivery of a school construction project in the small island Republic of Vanuatu, in the South Pacific, for the local Ministry of Education (MoE) over the period of 1999–2003. With a current population of just 211.000 inhabitants, an economy based on small subsistence agriculture, tourism and offshore financial service, Vanuatu is classified as a least developed country with an uneven internal distribution of income, wealth and opportunities. Growing urbanisation, a young population with high unemployment, unsustainable use of natural resources, issues with energy and waste management, and the mixed impact of tourism are impacting on the environment and social arrangements (Huffer and Molisa, 1999; ADB, 2000; ADB and the Government of Vanuatu, 2000). In this paper, a case study approach has been used for an in-depth, longitudinal examination. The descriptive and exploratory paper is based on participatory observation over a period of four years, from 1999 to 2003, and triangulated through project-specific documentary evidence. Initially, the paper broadly examines the choices made in construction technology and management in the planning, execution and control of the project, focusing thereafter on the management aspects in the function of the operating environment, examining the evidence for the specific and exceptional. In the last section, the Project Management Office (PMO) is explored as a potential source of innovation.

2 An educational project in the Republic of Vanuatu

The scope of the case project was initially driven by the educational needs assessments and the objective set was the doubling of the number of students enrolled in junior secondary education, with an improvement in the quality of the education delivered (MoE, 2002). The Asian Development Bank Report for Vanuatu 1997 (ADB, 1997) was indicative of the needs, noting that the general level of education was low, skills were in

short supply and entrepreneurship was underdeveloped. In the mid-1990s it was already recognised that the lack of starting places in the junior and senior secondary streams was creating a bottleneck in the educational delivery system.

At the time of the project identification, various international donors, among them the World Bank, AusAid, and the EU (also with direct support from various member states), had supported the development of the education sector, through a series of projects that were destined to develop the facilities on various levels, ranging from primary education to teacher training. The case project was another step in this process. While the project had components of developing curricula, educational advisory services, management information systems, educational material and staff regrading systems, this paper looks specifically at the planning and execution of the rural school construction works in the project. Altogether 18 junior secondary schools (years 7 to 10 level) on 11 different islands were upgraded or expanded. New and renovated buildings were furnished and equipped. In addition to the rural schools, the project undertook to construct a media centre and library for a teacher-training institute, and the new office facilities for the MoE (to replace the ones destroyed in a major earthquake) and an examination centre.

The project was supported by an international donor, and delivered through the technical support of an international development consultancy firm. The project was infrastructure-oriented. It used 71% (MoE, 2003) of the available funding to (re)build and upgrade the physical facilities of the education delivery network. It relied heavily on the procurement of goods, works and services from the private sector, with the line ministry being a client. The management of the day-to-day activities of the project (and similar other initiatives) was managed by a technical unit in the ministry structure. The project was externally evaluated in 2002 and found to be relevant, efficient, effective and sustainable (MoE, 2002).

3 Challenges in building technology, management and participation

As an initial construct, various key elements in the project environment are thought to have affected the conceptualisation, planning and implementation of the project. In the first place, these include the physical environment, which impacts through insularity, limited local resources, remoteness and difficulty of access, and a vulnerability to natural disasters. Secondly, the resources that are made available determine in broad outlines what is possible within the project. Thirdly, the mechanisms that are used to deliver the project are instrumental in shaping not only the processes of the project but arguably also the outcomes. This first section of the paper looks at the key factors that influenced and informed the technology and management choices in the project.

4 Physical factors

4.1 Earthquakes, cyclones, floods and tsunamis

The Vanuatu context is volatile in terms of natural disasters. As a basic premise for the project, all key new buildings were to be designed to withstand major earthquakes and cyclones. As schools are usually located in communities, they serve as bases for disaster management and mitigation initiatives, and as shelters for the community. Using schools

for other civic activities enhances the use of the structures, and the value of the new school buildings as examples of good construction technology cannot be underestimated – especially since community members were involved in building the structures.

While the Vanuatu building code was still in a draft form at the time of the project, structural engineering decisions were based on the best practices of New Zealand and Australia. The basic structures were designed as load-bearing concrete block wall structures, reinforced with all hollow blocks being filled with structural strength concrete. The reinforcement was bi-directional, and the ring beam and foundation beams were extensively reinforced. They linked to the bearing walls, enabling a robust design that could accommodate varying soil conditions. The reinforced concrete-filled block frame, with foundation and bond beams, was also chosen as a result of a preliminary assessment of various damaged schools in which a common denominator was found: in almost all cases, a concrete block frame had withstood both earthquake and cyclone damage, and while roofs and auxiliary building components had been damaged or become detached, the frame remained and was repairable. The project executed several cost-effective building shell repairs and noted that skills were usually locally available for this repair work at the community level – very encouraging in terms of future maintenance and repair. Constraints linked to logistics, cost and time taken together resulted in the use of sheet metal roof cladding supported by a robust timber frame, made of either local hardwoods (when available), or imported, farmed and treated softwoods. Critical detailing included the fixing of sheet metal cladding to the roof structure.

Combining both earthquake and cyclone resistance into a building design implies also that all auxiliary building elements such as doors, windows and installations have to be firmly anchored in place. These were usually sourced from local manufacturers, sometimes even made on site. Protection in a cyclone is needed also in terms of security against flying objects – with winds reaching top speeds; loose objects are taken up and become sometimes lethal projectiles. In the rural school buildings, glass was avoided, and openings for light and ventilation were based on a robust shutter structure that could be bolted closed to batten down the building. In dormitories, auxiliary frames were provided for insect nets.

While floods and tsunamis often happen in the aftermath of either cyclones or earthquakes (the double whammy is to have an earthquake during a cyclone), they need to be taken into account in the initial planning stages. The project was well advised to seek the advice of the local communities in placing building and installations in areas that would not be affected when calamity strikes. It should be noted that natural disaster did also strike: over the four-year project period, several cyclones hit the islands, and a major earthquake effectively destroyed the old office building of the MoE. These real-life experiences validated the design and technology choices, as observed damage was minimal to project sites.

4.2 The impact of remoteness

As is the case with many countries in the South Pacific, Vanuatu is subject to the tyranny of distance, and internal and international physical isolation¹ translates into high, tariff-like transaction costs and difficult logistics. While distances are an important cost factor, the critical issue is related to access. Even places that are a short distance away can be of difficult access and thus remote. The impact of remoteness on design decisions

and the technology used was significant, as buildings had to be designed so that they could be built with minimal inputs from the outside during the course of the works. Even arranging for periodic supervision visits was quite difficult, especially during the rainy season, when small planes were unable to land on grass fields on the outer island.

One of the responses to counter the impact of remoteness was the standardisation of the designs. Overall, school buildings were designed to be replicated in many places. As the educational system on Vanuatu was in a constant development, and grappling with resource issues, it became apparent early on that generic designs had to be developed, which could be potentially used interchangeably (with minor modifications) for classrooms, dormitories, administration or other, possibly presently unknown functions. One of the design innovations was to develop a standardised shell, which could be used for a classroom or a dormitory by fitting out the room with the needed furniture and equipment. It was thought at the time that boarding institutions (the bulk of the schools) could potentially be transformed into schools with day streams, to stem the impact of increasing unit costs to parents and the MoE.

The advantages of the standardised technology became apparent also in the weekly and bi-weekly supervision of the works, done by local technicians. The first building was placed in an accessible region, and technicians involved were trained in the supervision tasks at hand. The implications of bad building practices became clear also during this pilot, as the halfway-ready shell of the building was taken down because of inferior blockwork quality and the omission of the concrete fills. In the small local construction industry, the word spread out quite quickly and probably contributed significantly to the ease of subsequent quality control. The contractors also benefited from the standardised designs, as it turned out; most of the contractors ended up doing repeat work for the project, as the whole building programme was staggered in function of the ability of the local building industry to respond to the demand.

Remoteness had a direct impact on the overall project timing. In many cases, access to sites was by sea, often directly to the nearest cove or beach. Rough seas on occasion impeded works for undetermined periods, as material landing was not possible. Harbours were only available on some of the major islands, and they were not always accessible through a road that would enable heavy loads. On many of the outer island, mechanised transport of any form was extremely limited, and in many cases the contractors had to bring their own pickups or small trucks for the purpose, making the transport of materials not only onerous, but also time-consuming and expensive. The effective contract time was also limited by the cyclone season – for a period of several months, excavation and external finishing work was not possible because of constant rain.

4.3 Local resources

The project approach was to call for some form of local participation in each and every school site. This included free land use, resources such as sand, water, aggregate for concrete, and in some cases, transport and supporting labour. Land allocation for sites was negotiated early on, and the communities' expertise in placing buildings was used extensively, to ensure a culturally correct placing and avoiding problems from natural causes. The three key resources that enabled the solid concrete building programme were linked to aggregate, sand and water, all of which, at some stage or the other were problematic. As stone aggregate would have needed to be imported from abroad, the local coral washed ashore was used as aggregate, following standard local practice.

Similarly, sand was almost invariable from the beach, and in one special case had to be obtained from underwater sandbanks by diving. Using aggregate and sand with relatively high salinity levels (although reduced through extensive washing) is not recommendable, and implied a need to use more cement to guarantee structural longevity (also needed owing to the soft aggregate). Water in some cases was transported from far away, as the volcanic-origin islands did not necessarily have ready groundwater deposits close by. It is also important to note that the cash-strapped local communities found it possible to contribute in kind if not in cash. The reliance on local resources made the project possible (MoE, 2002).

5 Socioeconomic factors

5.1 Financial resources

Out of the total 48-month project period, the initial 18 months of the project were spent on setting up the PMO and the project structures, surveying the sites, revising the programme, tendering and re-tendering for works, contracting and negotiating with communities for their inputs. The initial indicative plan was translated into a project funding agreement that acted as the basis of the PMO operational strategies. An indicative scoping exercise was also made to procure the project management services needed to run the PMO.

The initial scope, time and budgets began to unravel soon after the setting up of the PMO, possibly owing to the fact that a full feasibility study was not done previous to entering into funding and contractual commitments. More than anything else, the scarcity of the resources impacted on the project: It caused an immediate scope change, impacted on the project timing, and a partial rolling of future development costs onto the communities, through deferring additional needed investments into the future. The planning exercise of the project became highly iterative, and involved several, progressively elaborated cycles. This scarcity became apparent very early on (after the preliminary costing and feasibility studies had been made – six months from project start), and a political choice had to be made to either reduce the number of school sites, or revise the investment programme site by site, to achieve an equitable balance across the board. This implied a negotiated process, not only with the central authorities, but also with the individual communities, and the role of the PMO changed from detached external planner into a participatory enabler that legitimised the proposals through an equity agenda.

The choice of not reducing the number of sites² led to a rebalancing of the budget between the sites. To achieve this, a minimum school concept was developed (MoE, 2002; 2003), where only real essential elements were to be provided by the project, and the communities were expected to provide the rest. These essential elements included classrooms, ablutions, kitchens and dormitories (as all schools were boarding schools because of distance and remoteness), and simple robust structures were created that could be transferred from one use to another (*e.g.*, design of dormitory enabled it to be made into a classroom). Rebalancing the contributions between the project and the communities was an extended process, and required extensive time and presence on the field, which caused a need to extend the project.

5.2 Management capacity

From the start, the project philosophy was to integrate itself fully into an existing technical unit of the MoE, in charge of maintenance and facilities. The national team of four field technicians, and senior foreman and the chief architect was strengthened by the project team, which included a senior expatriate project manager and a small team of local technicians, supported by three international technical volunteers, to form the PMO. The integration was made explicit by incorporating the approach into the annual work plans and other project documentation (MoE, 2002; 2003), while practical integration was achieved through physically locating all staff, regardless of origin and funding, into the same office space, networking all ITC and establishing a management system that did not separate one project or funding from another.

The nature of the work to be executed by the PMO was not fully appreciated in the initial project documents, and one of the initial key tasks was to develop an appropriate strategy and approach to take the project forward. The work planning was done on an iterative basis, starting with an inception workplan, during which the groundwork and fact finding was done for the subsequent master and annual plans.

For the institution that acts as the host, establishing the project objectives and aims, monitoring progress over time, and managing changes and the progressive elaboration of the project content form the key challenges of being a sophisticated client. This implies constantly dealing with new ideas, new information, changing procedures, updated policies, and new individuals; adding this to aid proliferation creates an incredible demand to manage complexity in the local civil service. In terms of Vanuatu, the compact size of the market for professional services, together with a physical remoteness, non-availability of local specialist education, constrained compensation schemes in the public service, and a limited population base acted as a constraining factor in the supply of competent professionals to the project. Staff training in technical and management skills was required and undertaken as an ongoing activity, and, over the four-year project, the technical office went from 'no IT' to all staff running basic project management, text and spreadsheet applications in a networked environment. CAD programs were used occasionally, mainly to illustrate design solutions in 3D; most of the design work was done manually in-house. The basic tools of the knowledge management system used were paper and personal contacts.

The project was able to benefit from the activities of previous projects in three distinct ways. In the first place, the project was able to recruit staff for the PMO that had participated in a previous donor-funded project working on the outer islands. Secondly, learning was transferred to the case project through standard designs that had been commissioned by another international donor. This transfer was greatly aided by the fact that the two projects ran concurrently for an overlapping period of time. The third source of learning for the PMO was through documentary evidence from previous projects. The main source of learning was the tacit knowledge that individual technicians brought to the project. The least useful were the archived documents from closed projects. One of the key concerns of the project was to pass on the learning to subsequent projects, both through the structural and organisational set-up and codified knowledge in the form of operational manuals (*e.g.*, school maintenance) and other similar documents. The key method of transfer at the end of the project was still through the trained staff.

In many ways, the PMO was instrumental in the technical planning and coordination of aid in the education sector as a whole, while also coordinating to localise procurement as much as possible, creating opportunities for indigenous operators. Without an integrated approach, this would not have been possible (MoE, 2002). The Vanuatu context offers an excellent platform for this, as the compact size and the limited number of actors enables real-time coordination without sophisticated enterprise systems.

5.3 Stakeholder involvement

As Douglas (2006) observes, SIDS populations and cultures are not necessarily homogeneous; this is the case also on Vanuatu, where over a hundred languages³ are spoken on over 65 inhabited islands of varying ethnic origin. The integration of the public service dual language legacy of the joint English–French colonial history (1906–1980) is still under way, three decades after independence. In the Vanuatu society, customary land tenure, a collectivist culture and traditional leadership override individualism. A large power distance exists, and the society is marked by a strong uncertainty-avoidance, an accentuated collectivism, and a past–present timeframe. Tacit responsibilities and commitments play an extremely strong role in fashioning the way in which the society runs (ADB, 2000; Huffer and Molisa, 1999; Hofstede, 2001). Christianity and the third national language, Bislama, create cohesiveness in an otherwise heterogeneous society.

Evidence from the project (MoE, 2002; 2003) seems to suggest that conventional project management thinking of systematic progressive elaboration in planning may not hold true under circumstances where all three constraints of scope, time and cost are fluid, as was the case initially with the project. Planning under these circumstances becomes a political process, and success was pivotally linked to the ability of the PMO to negotiate an outcome with the key stakeholders. This implied managing the balance between the triple constraints of scope, cost and time throughout the project cycle. The narrow markets made it imperative that the PMO acted both widely, in terms of providing a wide variety of services, and deeply, meaning close involvement with stakeholders in all stages of the project.

In dealing with structural heterogeneity, the project supported the dual educational languages, and both French and English schools were upgraded. As a working language, Bislama was extensively used in the community work, and for documents intended for community-based activity (such as school maintenance manuals). The importance of a common operational language to all cannot be overstated.

Early on, it was recognised that a project on the ground needs to establish a strong and continuous dialogue with the communities, and to keep promises that are made. This translated into the early involvement of the community advisors in the project, whose initial contacts were critical for the correct set-up of the local interface. The feedback of the varying ability of the community to support the progress influenced the activities significantly. The island communities are represented in the central governance of the microstate, and the local and central institutions are often entwined in many ways and on multiple levels, adding tremendous complexity to an otherwise small society. These particularities were identified early on, and a community participation programme was managed by a senior Ni-Vanuatu⁴ official from the project team, with the age, recognition and the social skills to achieve a working relationship with the community elders. It has been argued that without significant input into the management of the

relationships, both with communities and the central level, the project would not have achieved its aims (MoE, 2002). The relationships in turn enabled a two-way learning: to the project and from the project.

5.4 Logistics, procurement and local markets

The Vanuatu context of narrow markets for both supply and demand are challenging for projects, especially if the principle of untied aid is taken onboard. In the case project, importation of materials was not problematic (as much of everything is imported, the commercial and administrative structures are well in place), but enabling as much opportunity for the local suppliers and especially manufacturers turned out to be more of an issue. Owing to the small markets and high cost of living, manufacturers of, say, school furniture found it to be quite difficult to compete against global imports (MoE, 2003). At the same time, local economic structures in Vanuatu do not favour indigenous operators, as most of the major wholesale and retail businesses are in the hands of a small Asian immigrant community, while financial services and banking are linked to ownership of Western origin (ADB, 2000).

The project strongly recommended the use of local labour and suppliers as much as possible, and in many cases the contractors employed daily labourers from the local communities. In some cases local timbers were used for construction purpose, and the presence of contractors' crews evidently stimulated the local island economies somewhat. While the project actively promoted local procurement, it also ended up having a significant and active direct role in facilitating the processes. This was necessary as many of the local contractors and operators simply did not have a solid enough financial base to, say, hire a whole ship to transport material at a single go, to a remote site (MoE, 2002; 2003).

The key issue with the use of local resources was linked to their availability. In most remote communities, small-scale retail services were available, but all hardware, building materials and related goods required in any quantity need to be brought in especially for the purpose. Skilled labour and site supervisors are scarce on most of the islands, and in almost all cases contractors brought in their specialist staff on need. Electrical supply for the sites was almost invariably done through dedicated generators brought in for the purpose, as national power supply does not exist outside of the few urban areas.

The difficult logistics in the widespread project also required extensive and constant attention. Managing for a constant flow of material for educational and construction purposes is both expensive and riddled with uncertainties because of irregular shipping schedules. Sourcing for service providers and materials was challenging, and the time required to do this was originally underestimated, as was the effort needed for the high level of involvement.

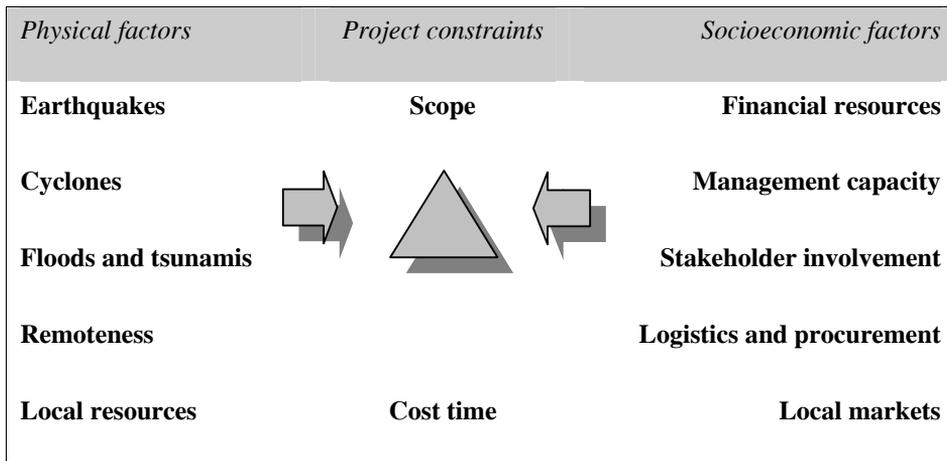
6 Specific and exceptional?

6.1 Factors in the operational environment

As expected, the specific operational environment influenced the project scope, cost and time constraints significantly. At the risk of being simplistic, one could say that physical factors were instrumental in determining the basic building technology to be used, while

the socioeconomic factors determined the approach and extent of the project. Evidently any design situation includes an iteration process, where a balance between the project scope, cost and time is established. The factors influencing the constraints in Figure 1 are set in a tentative order of importance, *i.e.*, the degree in which they influenced project delivery.

Figure 1 Key factors of the operational environment



Out of the physical and socioeconomic factors that influence the project scope, cost and time, a single element rises above all. In the case project, financial resources was clearly the driver that set the overall tone of the initiative. While there is a perception that the allocated resources and the original programme did not match, there is still something to be said in development terms in defence of a situation of slight scarcity. The time and scope of the project were (re)defined in the function of resources. Communities were involved in order to obtain their inputs, and designs and building technology was carefully studied for maximum impact and durability. The project focused on the essentials, and many frills were probably left out. Inventive solutions were developed by all involved stakeholders to counter the impact of the lack of investment funds. That noted, the project was clearly also close to the level of scarcity that affects task achievement negatively.

While the financial resource factor has actually very little to do with the Vanuatu or SIDS context, all of the other factors are very much linked to the operational environment. As noted earlier, each one of them presents attributes that are linked to the specific and exceptional circumstances of the SIDS. In a further analysis of the case, three key issues emerge from the factor map.

In the first place, the building technology that has been applied is essentially driven by the need to create secure, safe environments. The technology in itself is not new, nor is it particularly innovative in itself, and it is argued that there is nothing about the buildings that would qualify them as being specific of the SIDS (except perhaps the fact that not many places in the world suffer from both major earthquakes and cyclones). Secondly, while the management of the PMO has a clear Vanuatu context within the MoE, similar exercises has been undertaken in non-SIDS contexts. The integrated management ideology is recognised as bringing about the benefits of ownership to the

host organisation, and the mixed teams are commonplace in many development projects (Wilson and Whitmore, 1995; Eade, 2000). Thirdly, while the concept of participation (by communities, authorities and other stakeholders) is widely recognised as a key enabler of success in development initiatives, it is by no means limited to the SIDS context (Sen, 2000; Ostrom *et al.*, 2002; Hickey and Mohan, 2004).

6.1.1 A unique set of factors

That being said, while none of the three elements alone would appear specific and exceptional, it is argued that, taken together with the other contributing factors, they qualify for the category of a unique set of circumstances, just like the argued case for the SIDS overall. Out of the three main issues of technology, management, and participation, one emerged as the key driver in the project. Without management inputs, the technology would not have taken the shape it did, the communities would not have been consulted, and the project would not have been defined through the scope, cost and time as it was.

6.2 Developing a view on management

The following section of the paper examines the project management aspects in more detail, in an effort to achieve an understanding of the specific theoretical issues underpinning management in the SIDS context. While the field of project management theory is becoming more pluralistic, with various established and emerging views (*e.g.*, Hodgson and Cicmil, 2006; The Scandinavian School), this paper adopts the Koskela and Howell model from 2002b as a basis for reflection.

In their theory of planning the project activities, Johnston and Brennan (1996) and Koskela and Howell (2002a; 2002b) argue for management-as-organising as a response for a specific situation. This approach involves managerial inputs into the physical, political and cultural structure of the setting of the project – all elements that are linked closely with the actual practice of planning for the project in the Vanuatu context. The case confirms that planning is neither a straightforward, assignable process, nor easily transferable to practice. The evidence from the case study supports an additional clear emphasis related to the role of stakeholder participation in planning – it is evident that participation is a key enabler of delivering technically oriented projects in the Vanuatu (and perhaps in the wider SIDS) context (Cooke and Kothari, 2001; Hickey and Mohan, 2004). The updated model allows for the project management structure to be decentralised and managed as a network of actors, with importance given to lateral communication. It should be noted that the role of the effector (*i.e.*, the party responsible for acting on the planning) fell partly on the PMO. This is not a surprising development as such, as managerial experience in running projects in developing countries suggests that role delineation is not as clear as it might be in more developed economies.⁵ It is recognised (MoE, 2002) that an integrated approach to the host organisations enabled the project to learn from previous projects and to pass knowledge on to third parties.

The case study furthermore supports the view put forward by Koskela and Howell (2002b) of execution being a negotiated process of making and keeping commitments (Winograd and Flores, 1986). This is very much in line with the Vanuatu experience, as the commitment with a stakeholder community is arrived at through a process of engagement and the social construction of a joint agreement – a promise to be made and

kept in a participatory manner. Shifting costs to communities and negotiating for local resources is a process that requires a two-way process with the key stakeholders (Ostrom *et al.*, 2002; Hickey and Mohan, 2004).

The conventional conceptualisation of project management control rests on the idea that a process exists, standardised performance exists and the deviation from standard can be measured and adjustment orders given (the cybernetic model for management control or the thermostat model) (Hofstede, 1978; Ogunnaike and Ray, 1994; Koskela and Howell, 2002b). The assumption in this case is that the process is continuous, can be measured on aggregate terms, and that the process can actually be corrected (Johnson and Brennan, 1996; Koskela and Howell, 2002a–b). The case study again supports the view of Koskela and Howell that the cybernetic control does not cover the progressive learning aspects, especially in the circumstances where the host institution is not fully developed as a sophisticated client. The importance of the learning is linked to its key role of enabling sustainability, transferability and the incorporation of novelty into the institutional context.

6.3 An updated model

This paper departs from the original proposal of Koskela and Howell (2002b) that explains the expanded project management control through scientific experimentation. It is argued that, in the context of development projects (Sen, 2000; Ostrom *et al.*, 2002; Hickey and Mohan, 2004), the concept of absorptive capacity (Cohen and Levinthal, 1990; Zahra and George, 2002) is potentially better suited as an additional element in the thinking behind an updated control system theory. This is in contrast with conventional views of control as being derived from bureaucratic systems (Cicmil and Hodgson, 2006), or the cybernetic model derived from management literature (see above), and entering into the realm of organisational control (Ouchi, 1979; Kirsch, 2004). Table 1 illustrates the updated model.

Table 1 Updated theoretical foundation of projects in development

<i>Theory of management</i>	<i>Relevant theories</i>
Planning	Management-as-organising (for participation)
Execution	Language/Action perspective (in participation)
Control	Thermostat model and absorptive capacity (through participation)

Source: Adapted from Koskela and Howell (2002b)

While not created originally for management control purposes, the absorptive capacity concept is seen as an approach to developing an effective control mechanism through participatory action. It allows for a tiered knowledge build-up process that acts as a self-control mechanism through an enhanced capability of the host organisation. Through a knowledge acquisition and assimilation process (linked to the participation in the planning phase of the project), the project management and host organisations builds up a knowledge transformation and exploitation capability that can be applied through participatory approaches in the conceptualisation, planning and implementation of projects.

The evidence from the case anecdotally supports this knowledge view on project control. Over the four-year project period, the PMO evolved from a collection of individuals to an organisation that was active in supporting and developing the strategic direction of the MoE through its technical expertise, acquired status as a knowledge-intensive internal service provider, and through acting as a legitimate partner to represent the MoE in the key area of facility maintenance and development. The organisation continued this role with subsequent projects, integrated into the evolved structure, a sign of organisational maturity and of overcoming the temporal nature usually linked to project management.

7 The PMO as a potential source of innovation

The updated model of the theory of management in the Vanuatu/SIDS context is linked to the knowledge perspective of innovation (Argyris and Schön, 1978; Cohen and Levinthal, 1990; Nonaka and Takeuchi, 1995; Zahra and George, 2002; Lam, 2004; UN, 2005). The tacit and codified knowledge that has been accumulated during the project period and from previous projects is only valuable if it is captured, retained, and reused one way or the other. Not doing so results in cumulative inefficiencies. As projects do not in themselves have organisational memory, it is necessary to create proactively the conditions for the management of knowledge (Love *et al.*, 2005).

It is argued that projects can have a wider developmental significance in the SIDS context than in larger societies, owing to the very characteristics of the small states. The smallness and openness makes it possible for the PMO to assist the host organisation to deal with aid proliferation, harmonisation, coordination, alignment, and untying aid-related procurement from donor countries, potentially much more effectively than in large societies. This is enabled by integration, institutional connectedness and longevity through serial and/or long-term projects. With integrated project teams, new external knowledge is introduced, retained and made available, leading to enhanced capability and potentially administrative innovation (Blindenbach-Driessen and van den Ende, 2006; Bourgeon, 2007). Recent research suggests that PMOs and their host organisations co-evolve, and significant political systems are created with PMOs inside organisations (Hobbs *et al.*, 2007). The implications of these observations are clear in the development context: they enable an influence within the organisation that can effect changes in the very organisation itself.

Co-evolution implies integration and participation, and a wider and deeper role for the PMO itself. It is evident that the new depth and breadth will require multidisciplinary professionals that can take on this challenge (Eade, 2000; Ostrom *et al.*, 2002; Hickey and Mohan, 2004). The skills required to address complexity in development do not usually all reside concurrently in a single individual, and conscientious team-building is required to achieve the desired benefits. At the same time, the development of the capability of the PMO to have a wider impact is necessarily history- and path-dependent. This is where the absorptive capacity approach, as a control mechanism based on evolving self-control can be instrumental in developing in the internalised competence of the PMO to act as a knowledge-intensive service provider.

8 Conclusions

This paper initially asked whether the specific and exceptional circumstances of SIDS would drive technological choices, management, and innovation in projects also towards the specific and exceptional. Through a case study of an educational infrastructure project on Vanuatu, the key factors that influenced the scope, cost and time constraints of the project were reviewed. While external financial resources underpin the whole project and were not found to be context-specific as such, key elements linked to technological and design solutions, project management and stakeholder participation, taken together, emerged as a specific and exceptional set of elements that mirrored the specificity of the characteristics of the SIDS. Management capacity and specifically the PMO were perceived to strongly underpin the success of projects and create the platform through which technology was applied and through which participatory approaches are undertaken.

The case study supported the Koskela and Howell (2002b) model of the theory of (project) management, with the exception that the scientific experimentation component in management control should be reconsidered and potentially substituted by a knowledge perspective of capability and control, which would allow for continuous learning leading to self-control in a knowledge-intensive organisational setting, potentially enabling administrative innovation.

The role of the PMO, as a co-evolving, embedded organisation in relation to the host institution, is seen to be central in enabling technical and administrative innovations to emerge and develop in a development project environment. It is argued that this requires deep integration, seriality of projects and initiatives and a conscientious effort towards knowledge management. While projects have been widely researched, there is room for further research into the management of projects in the development and not-for-profit contexts. These are exciting and wide avenues for further research and it may emerge that current thinking need to be clarified and then revised to suit this context.

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Notes

- 1 Over 80 islands, 65 of which are inhabited, are spread out in a Y-shaped form over a distance of 900 km in the South Pacific, between New Caledonia and the Fiji islands. The 12 200 km² of land mass (in a total mostly maritime exclusive economic zone of 680.000 km²) is composed mostly of volcanic mountainous islands with narrow coastal plains, and a fairly low population density of 16 inhabitants/km².
- 2 This was driven by political imperatives: the MoE had made the list of sites public, and could not back down.
- 3 Vernacular languages are spoken as a mother tongue by 72,6% of the population, the other important languages being Bislama (23,1%), English (1,9%) and French (1,4%).
- 4 Ni-Vanuatu = from or of Vanuatu.
- 5 That being said, a practice where project managers take on the role of an effector (say, a main contractor) is also widely developed in industrialised economies, implying that theoretical shortcomings are also evident in these contexts.



Managing for innovation in large and complex recovery programmes: Tsunami lessons from Sri Lanka

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Abstract

The 2004 Indian Ocean tsunami reconstruction has been one of the best-funded recovery operations ever. However, wavering public policy, weak coordination, management and competence of actors, perturbed markets, a civil war and the sheer size of the operation have led to less than desirable outcomes in the Sri Lankan context. Within a major international non-governmental organisation, this paper finds that recovery programmes and projects require distinct approaches, resources and competence. Programmes are seen to be critical in nature and should enable knowledge transfer, while projects need to strive for output efficiency.
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Keywords: Knowledge management; Innovation management

1. Introduction

Large natural disasters, like the Indian Ocean tsunami and hurricane Katrina, cause extensive human suffering and physical damage. Recovery is usually, slow, expensive and complex in terms of coordination and management. The 2004 Indian Ocean tsunami caused an estimated USD 9.9bn worth of damages, and while Indonesia was hardest hit, significant and extensive destruction of lives, houses, public infrastructure and services was felt right across the region, also including Sri Lanka. The international response was also extensive, with an estimated USD 13.5bn of funds pledged or donated in the initial aftermath of the disaster, seemingly driven by the proximity of Christmas and the loss of tourist lives. Out of this 41% is from private sources, while the remainder came from international financial institutions [1].

The initial relief operation was seen to be successful in its aims. However, despite the extensive resources, in the subsequent recovery phase the international aid agencies were observed to be lacking in an understanding of local

conditions, were not able to field adequate field capability and capacity, entered into projects and programmes with weak planning and an insufficient coordination of resources, and were not fully able to contribute to a sense of ownership and beneficiary participation in the programmes and projects [1,2]. Significant volatility in scope, cost and time has been observed across the board.

This paper examines the post-disaster recovery process of the 2004 Indian Ocean tsunami in Sri Lanka from the perspective of project and programme management (PPM) of a major international non-governmental organisation (INGO) involved in the recovery operation. This case study is based on documentary evidence, longitudinal participatory observation over a 24-months period, and a series of semi-structured interviews and more informal contacts with key managers and stakeholders in the case organisation and its partners.

2. Literature review

A continuum exists between emergency relief operations (as the first post-occurrence step), recovery initiatives, and development activities. Relief humanitarian organisations are set up for rapid entry and response, while development

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organisations are built on long-term response driven by locals need. Recovery initiatives are situated in the middle ground, looking at supporting local stakeholders to recover long-term capability, while often operating from a relief platform. There is a well-recognized paradigm gap between relief and development activities [3,4]. Short-term oriented organisations are often ill-equipped to consider longer-term effectiveness, ownership, participation, sustainability and gender issues, in addition to the more immediate efficiency concerns.

Long-term recovery initiatives are often organised into projects and programmes. In looking at the projects, it is recognized [5–9] that the present theoretical base may not fully applicable to post-disaster recovery or development cooperation. Cicmil and Hodgson [10] argue that the present approach to the knowledge of projects needs to be critically reviewed due to epistemological incompatibilities with non-positivist paradigms – a familiar issue in development cooperation and recovery. That being said, Morris [11] argues that the present paradigm of project management is flexible and can accommodate incremental development. Recovery initiatives incorporate both hard and soft PM approaches, and as Pollack [12] aptly demonstrates, there is a need to balance between these two. Some research has been done on unexpected events [13] and the strategies to manage them, and Denning [14] notes the complexity of “unknown unknowns” in unexpected events like large terrorist attacks – applicable also to large and complex natural disasters.

The wide literature on crises management is partially applicable to recovery. As an example, Bertrand and Lajtha [15] argue for the needs for flexible learning processes instead of tight and detailed procedures as a key to manage complex crises, while Sellnow et al. [16] note the inbuilt inefficiencies of predetermined courses of action. Lalonde [17] explores the links between crises management and organisational development as a way of developing lasting competence. Kruke and Olsen [18] note the challenges of having the authority to coordinate in large and complex emergencies, and the problematic proliferation of actors, phenomena present also in the tsunami context. Gundel's [19] highly relevant crises matrix relates predictability to ability to influence – a tsunami is both unpredictable and hard to influence, locating it in the most disfavoured quadrant of “fundamental crises”, where responses are unknown and thus large-scale destruction is not only possible but probable.

A parallel also exists between the extreme situation of a post-disaster recovery and the mega-projects literature [20,21]. Inbuilt agendas effectively by-pass public benefit, resulting in poor socio-economic and environmental performance. There have been attempts to manage complexity in large projects through decomposition; one such attempt is the framework by Shenhar and Dvir [22], which, however, tends to have a technological perspective, without a wider socio-economic context. Large and complex recovery operations can also be seen as temporary organisations [23,24] and thus a whole range of literature becomes available from the organisational studies.

Projects and programmes are problematic within the context of (international) development cooperation, much akin to large-scale recovery operations in terms of approaches and methodological concerns. The advantages of project approaches are evident for donors, as contributions are finite and involve set objectives, aims and performance measurement. Unexpected benefits are usually not either recognized or encouraged [25]. The beneficiaries are in many cases not in the “driver's seat” of project identification, planning and monitoring. Clearly asymmetric capabilities contribute to this state of affairs, and initiatives do not always address local issues and ownership [26].

Projects and programmes also present challenges to innovation management. As Bessant and Caffyn [27] and Boer and Gertsen [28] argue, innovation is a continuous process, but projects and programmes in the recovery context tend to be discontinuous by definition. It is noted that organisational learning and knowledge creation [27–30] is critical to the continuous improvement of the best practice also in the recovery operations. Underpinning this is the ability to sense, assimilate and apply new knowledge [31,32], observing that interaction in the process is essential [33] and knowledge has a key role in enabling administrative innovation, which is often linked to new technology [34,35].

What emerges from the literature is an observation that response strategies in recovery initiatives could also significantly benefit from flexibility, learning processes, and continuous improvement, leading to administrative innovation, taken here to mean “the creation or adoption of an idea or behaviour new to the organisation” [36, p. 115]. From Schumpeter onwards, most many definitions of innovation include the idea of novelty linked to utility and diffusion [37–39]. As Afuah [35] has noted, administrative innovation is distinct from technical innovation, being concerned with organisational structure of management and administrative processes.

3. The case

The Asian tsunami of December 2004 resulted in the loss of over 35,000 lives in Sri Lanka, as well as the total or partial destruction of nearly 100,000 homes, displacing over half a million people. While the fielded resources were extensive, the long-term recovery has not progressed in line with the expectations [1,40,41].

3.1. A complex operational environment

The highest political leadership indicated that recovery would be extremely swift and completed in a year at the very most, contrary to the expert view of three to five years. This led to false expectations and a hostile media environment looking for scapegoats for the delay among international organisations. As INGOs were also concerned with equity of aid support to minority groups, public opinion became a major consideration between the implementation

partners, leading to delayed decisions out of fear of a media backlash. This is also related to a general rise in authoritarian rule and the negative impact of the armed conflict between the Tamil minority and the Sinhala majority, ongoing since the 1980s, essentially stopping all recovery work in the north of the country due to lack of access [41].

At the same time, the extensive resources meant that there were a significant number of organisational actors competing for (good) projects. This proliferation of donors and actors made coordination efforts evidently more difficult, and much of the aid effort was initially driven by a need to spend, replacing other needs based approaches. There have been also problems with implementation performance, linked to the government's inability to fully deliver the technical and coordination support (mainly land and services), which has had significant knock-on effects in the programming of the hundreds of participating national and international organisations. Beneficiary identification processes have not been robust in all cases, and some vulnerable groups like squatters have been entirely excluded. In many ways, enabling the voice of the beneficiary has not been high on the agenda, perhaps something to be expected in a society that does not embrace stakeholder participation in governance [1,40,41].

On another level, the public policy on relocation and reconstruction has been inconsistent. A 200 m coastal buffer zone was created early on, without geomorphologic consideration or wide consultation, ignoring a previous approved Coastal Conservation Plan of 1997, thus in practice eliminating the possibility of rebuilding houses in their original location. This was later revised to a significantly less wide zone, enabling again (in mid-flight of the operation) extensive reconstruction on original sites. This created a double knee jerk action: first came an expensive and cumbersome top-down relocation policy, which means extremely heavy infrastructure investment and an overt reliance on the client–consultant–contractor approach (under the circumstances highly prone to cost escalation and susceptible to graft and unwanted collusion between parties), which was later replaced by a support programme for self-help construction. The sudden increase in demand on consulting and construction services in a fairly small, closed and protected construction sector market created a series of scarcities, which translated into increased cost and decreased attendance. It is interesting to note in the interviews how oblivious organisations were to these to be expected market disturbances.

Lastly, there has been a lack of appropriate technical and managerial expertise and knowledge within the participating organisations that have undertaken to implement reconstruction projects. In many cases organisations did not have inbuilt competence to manage extensive portfolios of reconstruction programmes and projects, but attempted to build up this competence from scratch while running with the activities. Some organisation have been successful in this, others less so [1,2,40,41].

3.2. A complex INGO

The case organisation, an International Non-Governmental Organisation (INGO) operating globally has been able to support to the tune of USD 300 m the rebuilding of homes, hospitals, schools and water and sanitation infrastructure in Sri Lanka. Over 200 projects have been or are being undertaken, with individual project values ranging from a few hundred thousand to close to 10 million dollars. Shelter (taken here to mean homes) programmes use half of the available financial resources while representing less than a fifth of the total number of projects, and the organisation aimed at contributing to the housing of over 30,000 families affected by the calamity. At the other end of the spectrum, the livelihood development projects, intended to enable affected populations to return to active and sustainable economic activity, utilize <5% of the total available funding, but constitute, in numbers, nonetheless, a fifth of the total project portfolio. The INGO is one of the largest donors in the Sri Lankan context, representing to the tune of a seventh of all of funds in the post-tsunami recovery (based on Government indicated total commitments of USD 2.1bn).

The INGO is structured as an umbrella membership organisation, a form of a matrix, in which locally managed, funded, and governed national organisations form the backbone of the system. For international humanitarian aid assistance after natural disasters, the umbrella INGO acts in a central coordination role, while mostly the national member organisations implement projects.

The core organisational structures are based on functional line management practices and long-term, repetitive, constant involvement between the national and international actors. Each one of the national member organisation is somewhat different in terms of its management practices, decision-making processes, and the “style” of management. At the same time, the INGO, together with the national membership organisations has a very strong brand and an organisational ethos that, according to a senior manager, is the glue that keeps the thing “ticking against all odds” (interview 6/2007). A common code of ethics and conduct, together with an extensive volunteer base make the organisation robust and able to deliver in very demanding conditions. The INGO has been involved in many post-disaster recovery operations in a lead role, and acts as a knowledge intensive service provider for the membership organisations worldwide. Projects are used on many levels of the organisation to deliver support to members in organisational development and humanitarian aid delivery capability development and readiness. The overall organisation has extensive knowledge of delivering relief aid in many parts of the world. There appears to be a variance in the ability to perform, however, and as one country representative put it, the organisation is at its best when there is an emergency, noting that “we are not good in recoveries, as we always forget how we did it the last time around” (interview with an European country representative, 4/2007).

In order to achieve the common aims in the tsunami operation, a joint management platform structure was developed, based on decision-making by consensus, to attend to the overall strategic level management of the commitments made early on. The structure proved to be difficult to manage, as conflicting agendas, differing competencies and variance in inter-organisational trust made decision-making processes extremely complex and time-consuming. One informant from the INGO has noted “if there are no complexities, the organisation is good at creating them on its own” (interview 4/2007).

3.3. *Projects and programmes*

The recovery operation in the case is a one-off, temporal set-up that has the main aim of delivering rebuilt shelter and services to the affected population. Reconstruction projects are located inside programme frameworks, in line with functional line management systems and areas of expertise. Altogether seven programme areas were set up, out of which three deal with construction (shelter, health, and water and sanitation systems), using in total well over eighty percent of the total available funding.

In the case of the Sri Lanka there is not a single programme/project management office (PMO), but effectively a series of offices – practically each national membership organisation that participated in construction activity had their own project management staff. There are clear advantages to be obtained from sharing resources across all of the projects within the scope of the PMO(s) – the synergies that can be obtained are significant, and there are various degrees in the centralization. In the case of the tsunami recovery, however, the various parties have been unable or unwilling to pool construction project management resources to common advantage. Essentially the structure has been splintered and divided. Lack of trust between the partners has been identified (by several informants) as a key driver in the splintered project management structure. The coordination between the projects is in the mandate of the INGO, and is centralised in a programme management office. This programme management also incorporates a support centre for technical matters, the overall contract management, and the relationship management between the central authorities and the overall operation of the INGO.

4. Findings

With apparently sound experience, ample funding and a clear mandate, the recovery operation of the INGO started off and ran into great difficulties from the beginning. Extensive delays have been observed in getting projects (and consequently whole programmes) off the ground, in executing them and in closure. Programmes have not enabled clear definitions for project scope, cost and time, and in many cases the political agendas have detrimental on the project level.

4.1. *Re-inventing the wheel*

At the inset, planning and coordination tasks were underestimated and overshadowed by the imperative of setting up the system itself, as effectively the operation was re-inventing the wheel in many ways. The stakeholder map was volatile, and conflicting internal and external political agendas contributed to additional delays. As one informant noted, the internal political agenda superseded the technical one, and on one key occasion, the principal technical officer was given only five minutes to elaborate on the strategies of dealing with multimillion dollar construction programming. Many interviewees noted that the organisation has not been able to capture, retain and/or re-use the learning from previous similar operations (except through the tacit knowledge of individuals that have worked in various operations), and the various parties have essentially had to re-invent the wheel in this operation, in terms of the setting up and managing the construction programmes and projects within the tsunami operation. This is no mean feat, and there is currently a functional system in place. The downside of re-inventing everything again is that it requires a great amount of work to set things up, and makes strategic drift not only possible but probable. That being said, the lack of incremental learning resulted in a lack of wide knowledge of available choices, leading to strategic indecision. The interviews showed there has been an observable lack of foresight in the organisation, which is risky in finance and time dimensions.

4.2. *Programmes vs. projects*

In terms of programme and project management issues, informants noted that management roles have been unclear, as when generalist line managers have managed construction programmes and projects, or as when insufficient or not fully competent resources are put in play. Common protocols and basic industry standard project management and planning tools have not been widely used. In some cases programmes and/or projects have been “done on the side”, leading to lack of needed inputs and failure, and weak planning competence and practice has been widely observed. In many cases, parties have not subscribed to common guidelines, and in others, the guidelines themselves have not been to best benefit. Time has not been considered as a cost, and shifting objectives have made objectives unattainable. Monitoring at all levels has not been systematic and attached to clear and concise goals, and a shifting resource base has made goal setting difficult. Foresight, financial follow-up and projections have been lacking or not of useful quality. The expertise of project staff has not necessarily corresponded to the needs at hand, and according to a senior project manager, attempts to verify the competence of incoming candidates was seen as meddling in the affairs of the membership organisations and was soon dropped. It should be noted that the whole USD 300m initiative did not have a single formally autho-

ried/certified project manager at inset. In some cases task definitions have not been seen to match with the reality at hand. In addition to all of these, mostly internal management issues, shifting external conditions have played havoc with best plans and shaky government policymaking has held the operation at ransom.

It is also evident from the interviews that there is not a very clear understanding of the differences between programme and project management. The projects were seen as visible efforts to do something, while programme management was “invisible” as it was not seen to be achieving anything except perhaps attempting to control and limit the activity of the membership organisations. That being said, all informants stressed the importance of coordination.

Yet, despite all the challenges, the various parties have managed to configure the programmes and projects into a manageable system, and have addressed, among other issues, risk management (albeit in a passive way, lacking proactive risk projection skills and methods that could inform the development of the projects). In the shelter context, extensive development of standard operational level processes and protocols has taken place during the tsunami operation. Contract management documents are embedded in local technical guidelines for construction activities.

4.3. *Living (with) delays*

The combination of fielding inadequate or inexperienced staff to manage very demanding and difficult projects in a shifting policy and resource environment has led to significant failure in term of delivery timing, in addition to significant scope and cost drift. The evident lack of foresight to counter market disturbances (scarcity of service providers and escalating costs) caused by the tsunami reconstruction is also somewhat incredible – experienced managers should have perceived that this was bound to happen. Many reasons have been given for the delays (observed in the internal reports and noted in the interviews), among them the credible and real public policy environment changes and the daunting size of the operation that has added onto the level of complexity. The less credible explanations include the voiced needs for extensive mobilization time requirements and the difficulty of recruiting and managing competent service providers. In terms of responsible programme and project management the least comfortable explanations are linked to the difficulty of the various implementers to field competent construction project management staff.

4.4. *And drifting costs*

Cost overruns have been reported due to late starts, extended performance periods, and getting caught up in knock-on effects of inflationary markets, where the cost of materials, labour and services has escalated over and above normal limits. Delays have caused cost overruns and in some cases cost overruns have caused delays and

abortive projects, when the funds have not been sufficient. As one finance officer noted, over the operation’s life the extensive financial resources have been whittled down to a situation of scarcity, where overtly ambitious programmes have had to be cut to make ends meet. Recovery operations have pre-determined funding ceilings due to one-off funding (i.e. funding tends to be collected in the immediate aftermath of the disaster, and the window is not open for extended periods of time) and delivery scope is stripped when funding problems emerge e.g. [20]. Typically, internal management costs have escalated, and the expense of extensive (but not always relevant) human resources brought in from the outside has further had a negative impact on the available budget.

4.5. *The major issues*

In distilling the findings from the case, it is noted that there are major issues with: (i) the structure or set-up that used to manage programmes and projects; (ii) the managerial practices linked to the management of programmes and projects; and (iii) the competence and ability that is fielded to manage the programmes and projects.

It would appear the matrix organisation is somewhat dysfunctional due to the fact that the members do not share a vision of how the matrix should operate – there are n views with n members. The matrix is also an ad hoc construct and one that has not evolved through incremental growth and development. This implies that there is an inbuilt asymmetry of expertise, knowledge, and experience between the parties (as one informant noted, “there are some parts of the organisation that have seen it all before, some which have done it once, some that never have, and then some which will never understand what they are doing, making coordination and harmonisation onerous and difficult”). When the political externalities are added to the mix, the organisation becomes unwieldy, and fraught with internal tensions. The programmes and projects both had significant political dimensions, and project managers reported that they had to deal not only with internal but also external politically oriented issues (with authorities, partner organisations, headquarters, and others), using a significant amount of time and effort to keep projects operational. At the same time they noted the weak coordination and the unclear role of programme management in the operation.

Another key issue was the structure of the project and programme management offices. The splintered structure created overlap, duplication, and made communication difficult between the parties. It also effectively disabled the transfer of tacit knowledge between the parties, as the various PMOs were located in different parts of the capital city of Colombo. The significance of the opportunity lost is exacerbated by the fact that knowledge in projects tends towards the practice-based paradigm, where explicit knowledge is not seen to exist without the tacit. It was noted by many of the informants that in the Sri Lankan

context, information and knowledge needed to be transmitted orally and personally for action to result.

4.5. Management

With as many approaches to planning, executing and controlling projects and programmes, as there are membership organisations in the operation, the issue of assuming a common management protocol becomes quite significant. In the area of construction management, a decision was made early on to use the Sri Lanka construction industry standard for conventional client-consultant-contractor works. While this is a logical move, it excluded effectively the whole set of procedures and protocols needed for self-help housing programmes. Also, as one project manager noted, these procedures were only written up after a significant number of projects had already been put into the pipeline. In other words, the opted standard was both incomplete in coverage and late in timing. Another issue was that internal processes and protocols were not addressed holistically, and as one informant noted, “one never knew how things were going to be done before doing it”.

One of the key lessons from Sri Lanka has been that a complex and splintered operational environment needs to be negotiated into a common agenda, before hitting the ground with projects. The fuzzy front end of programmes (which are composed of individual projects) tends to be ambiguous and riddled with uncertainty of objectives and methods. In development, which recovery and reconstruction is arguably a part of, the role of the dialogue emerges as a key issue to address, and the process is inherently political and complex due to international actors. In the aftermath of natural disasters, the circumstances almost invariably have an effect of changing existing social arrangements, redistributing wealth and opportunities within the social fabric. The markets and normal procurement systems tend also to be disrupted, and the assumption that services and goods can be procured as usual may not be valid. This makes planning very difficult, as the aims may be socially constructed over time, and again the political nature of the solutions is evident.

4.6. Competence issues

In the Sri Lanka operation, the various partnering organisations have on occasion (more in the beginning and fortunately less later on) fielded staff that have not had the relevant experience or training to manage large and complex projects. Even less expertise has been available on the programme management level. Also, great variation in the expertise has been observed in the professional staff, leading to a culture of “doubling up just to be on the sure side”, which effectively means that work has been done twice over. Still yet, the senior management of the partnering organisations have not often had experience in large-scale programme and project management. The combined

negative impact has led to a culture of managing by the least common denominator.

5. Discussion

Cicmil and Hodgson [10] argue that failure in projects is less due to technical issues than political processes that are not considered deeply enough in the conceptualization, planning, implementation, and closure of projects. Furthermore, stakeholder participation, ownership of projects are important, and as Flyvbjerg et al. [20] note, there is a need to consider the social construction of projects. In the context of large and complex operations, like the Indian Ocean tsunami, it would appear that this essentially holds true for both projects and programmes.

5.1. Towards critical programmes

The Sri Lanka experience shows that having overlapping staff, responsibilities and tasks between programme and project management creates easily a vacuum in the programme management side. The project management side is a concrete activity that produces visible evidence, while programme management is invisible and linked to abstract outputs. The case organisation understood the need to staff project sections, while understaffing programme management. In order to achieve a balance it is suggested that programme and project management need to exist side by side, but with very clear boundaries and dedicated staffing. The management structure must be able to create a division of labour between exploration (seen mostly as programme level activity) and execution (as in projects) oriented parts of the management structure. The clear boundaries translate into clear roles that enable efficiency in project delivery on one hand, and reflection and significance creation on the other. To use project staff to manage programme tasks effectively constrains innovation by limiting unanticipated benefits, programmatic changes and dynamic adaptation to novel circumstance.

In this case, the INGO programmes form the essential link between organisational strategy and project implementation, and the interface between the levels has an important role in ensuring that projects are aligned with the overall aims of the organisation. Individual projects only look at a specific area of a whole programme – having a portfolio of projects drifting in varying directions will undermine the organisational strategy as a whole. It is argued that in the context of large and complex operations, and adopting the vocabulary of Cicmil and Hodgson [10], *programmes need to be critical, while projects need to be task oriented and efficient*. This joins the perspectives of hard and soft PPM [12] into one framework.

5.2. Transferring knowledge

The programmes also have a second, important function. They must be able to capture, retain, and diffuse the

learning from the operation to be used in the next one, implying a drive towards continuous improvement [27,31]. This demands that some of the competence must reside in-house, to be (re)applied as needed in a timely fashion; starting programmes from scratch every time a disaster hits is simply inefficient. While programme know-how is argued to be a key competence, projects are more flexible, and can be set up with a varying set of circumstances, premises, models and protocols. It is argued that it would be tremendously useful to have a single organisation-wide project management protocol, but it is also recognized that this may be a long-term goal.

5.3. Competence issues

It is suggested that the key factor in terms of effectiveness in recovery and reconstruction operations is linked to field adequate human resource. To make sure that competent staffs are fielded, it is possible to develop an authorization/certification scheme that parallels the programme and project management structure. While no certification scheme is watertight, the fact that professionals are registered and have gone through certified training is normally an acceptable indication of expertise (this is not a new observation and e.g. Telford et al. [1] propose accreditation schemes). It should be noted that the accreditation scheme and the training must be developed for the context on the recovery work; it is evident that any accreditation scheme must accommodate for the particularities at hand, and it may be that various different types of certifications are needed to cater for varying needs, noting especially the requirements for self-help or self-build schemes. As professional programme and project managers are not usually readily available at short notice, it is suggested that partnering arrangements should be built up with professional programme and project management practices, to enable getting best practice out to identify issues very early on in a post-disaster situation. There is also an observed need to train existing staffmembers in contextually relevant programme management practice.

In large and complex recovery operations, the availability of planning skills is bound to be limited, most probably severely so. This implies that planning exercises must be prioritized and that over-extensive and complex planning should be avoided, supporting the view of progressive elaboration in manageable steps. Clarity, flexibility and operational simplicity need to be developed for the programmes; complex, inflexible gate-keeping through “must do before proceeding” is often counterproductive and leads to grid-locked situations. The successful management of large and complex operations requires innovative HR policies and incentives to attract qualified professionals.

6. Conclusions

This paper has examined the lessons from the tsunami recovery operation in Sri Lanka.

It notes the differences in the roles and competencies needed to manage programmes and projects in large and complex operations. The inherent political nature of programmes makes them critical in nature, and it is suggested that a clear structural and managerial divide be set to distinguish programmes from projects. This is done with a view of enabling efficiency in the implementation of projects, as the programme level is seen to absorb the ambiguities, clearing them before project execution commences. Programmes also a key role in transferring the learning from one operation to another one and it is thus argued that competence in programme level management must reside with the organisation. The knowledge intensive activities of the organisation in question require high calibre human resources, both to explore new possibilities and to execute efficiently defined solutions. It is suggested that networking with international partners is a way to achieve the necessary competence, in addition to implementing professional authorization schemes. Scarcity seems especially acute in programme management competence.

Finally, it is suggested that significant administrative innovations are available in the recovery context from making programmes critical, transferring learning through organisational embeddedness, and through enhanced human resource management.

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On Innovation and Capability: A Holistic View

Mikko Koria

While innovation is recognised as a key driver of economic growth and competitiveness, less attention has been given to the study of the underpinning capability to be innovative, which is here taken to be the ability to successfully exploit new external knowledge. This conceptual paper examines the parallels between innovation theory in the administrative context and Amartya Sen's capability approach, a wide vision of human potential and development. It is argued that applying Sen's approach in this fashion enables a novel perspective on the link between the innovation potential that the individual may have and the constraints that social arrangements impose. This new insight can assist the formulation, management and acceptance of organisational change processes that aim to enhance the ability to see, assimilate and apply new knowledge. These processes are especially challenging in non-western contexts. This paper begins by introducing Sen's approach, proceeds to establish a link with concepts of public sector administrative innovation, then examines some particular aspects of the relationship between the two, and concludes with some suggestions for further research.

The Capability Approach and Innovation: An Introduction

This conceptual paper examines some key characteristics of the capability approach developed by Amartya Sen and other scholars and links them with key ideas of administrative innovation. World-wide, innovation is recognised as a key driver of economic growth and competitiveness, enabling the socio-economic development that underpins human well-being.¹ In this context, there is a central role for institutions to play as innovation enablers. It is thus of interest to study the specific issues that deal with public sector administrative innovation in this context.

While adopting the perspective of administrative innovation in the developing country context, this paper focuses specifically on individual enablers and social constraints that exist in the exploitation of new knowledge, taken to form the basis of innovation capability. The process of globalisation forces socio-economic change on all societies,² and it would appear that access and participation in the world economy and trading systems is closely linked to the ability to see, assimilate and apply new knowledge in a positive way. This is especially an issue in developing countries, due to a weak indigenous capability base.

It is argued in this paper that the capability approach has significant potential as a framework for understanding innovation in organisations. While operationalising the capability approach is not a straightforward exercise in this context, it is still suggested that it presents tremendous potential as a platform for policymaking, programme design, monitoring and evaluation.

¹ Soete, L 'The European Information Society and Regional Cohesion', in Anderson, Robert; Cohn, Theodore; Day, Chad; Howlett, Michael and Murray, Catherine (eds), 1998 *Innovation Systems in a Global Context, The North American Experience*, Montreal and Kingston, McGill-Queen's University Press; Cantwell, J 'Innovation as the principal source of growth in the global economy', in Archibugi, Daniel; Howells, Jeremy and Michie, Jonathan (eds) 1999 *Innovation Policy in a Global Economy*, Cambridge University Press; Lundvall, B-A (ed) *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*, London, Pinter 1992

² See, for example Scholte, J *Globalization, a critical introduction*, New York, Macmillan 2000; Waters, M *Globalization*, London, Routledge 1995; Giddens, Anthony and Hutton, Will (eds) *On the Edge- Living with Global Capitalism*, London, Vintage 2000

The Capability Approach: Origins

The conceptual basis of the capability approach was introduced by Amartya Sen, the Nobel Laureate, in the Tanner Lecture on Human Values in 1979, at Stanford. In the lecture, published in 1980 under the title of “Equality of What?”,³ Sen outlined an alternative approach to Utilitarianism and to the Rawlsian theory of justice, based on a broad ethical vision of a space of capabilities as instruments for achieving human participation, well-being, and freedom. The approach was further developed by Sen in later publications,⁴ and has since been adopted and developed by a number of scholars.

The Capability Approach as a Framework of Thought

According to Robeyns,⁵ the capability approach has three distinct levels. Firstly, it is a framework of thought for evaluating individual advantage and related social arrangements. On a secondary level, the approach can be understood as a critique of other approaches to the evaluation of human well-being and justice.⁶ And thirdly, the approach can be seen as a practical method or an algorithm for interpersonal comparisons of welfare and well-being.

This paper explores the first level. As a framework for thinking, the capability approach considers that human beings form the ‘end’ of economic activity, rather than its means, arguing that economic growth, income metrics, utility, happiness or primary goods are not, by themselves, sufficient objectives for development. The ultimate objective should be human well-being,⁷ achieved through the development of agency means, the human capabilities, which Sen argues, constitute valuable freedoms. Socio-economic and politico-legal arrangements should be evaluated in this context according to how they expand the human capabilities. In this context, human capabilities are considered to be those which enable people ‘to do’ or ‘to be’ - their freedom to benefit from valuable doings and beings - while social constraints act as inhibitors in the process.

On Liberalism, Utilitarianism, Justice

Sen’s approach builds on three main historical lines of thinking: liberalism, utilitarianism and social justice. In parallel with administrative innovation theory, it incorporates the search for equitable opportunity and the call for individual freedom of action in a socially responsible environment.

³ Sen, AK ‘Equality of What?’ in S McMurrin (ed) *Tanner Lectures on Human Values*, Cambridge: Cambridge University Press 1980 and reprinted in Sen, AK *Choice Welfare and Measurement*, pp 353-369, Cambridge, Massachusetts and London: Harvard University Press 1982

⁴ Sen, AK *Commodities and Capabilities*, Amsterdam: Elsevier 1985 and reprinted New Delhi: Oxford University Press 1999; Sen, AK ‘The Concept of Development’ in H Chenery and TN Srinivasan (eds), *Handbook of Development Economics*, Volume 1, pp9-26, Amsterdam: Elsevier Publishers 1988; Sen, A K *Inequality Reexamined*, Cambridge Massachusetts: Harvard University Press 1992; Sen, A K ‘Capability and Well-Being’ in M C Nussbaum and A K Sen (eds), *The Quality of Life*, pp 30-53 Oxford: Clarendon Press 1993 and reprinted New Delhi: Oxford University Press 1999; Sen, AK *Development as Freedom*, Oxford: Oxford University Press 2000, among others. The publication, ‘*Development as Freedom*’ quickly became a landmark within the international development community.

⁵ Robeyns, I ‘The Capability approach: An Interdisciplinary Introduction’, proceedings from the 3rd International Conference on the Capability approach, Pavia, Italy 2003

⁶ It should be noted that we are not dealing with a full theory of justice, even though the approach strongly advocates the equality or sufficiency in the capability space; considerations would need to be made also in the areas of, inter alia, human rights, processes, corollary effects and processes. That being said, through the history of its development the capability approach has made significant considerations for issues related to gender, class, ethnicity and capability disparities that are origin-dependent.

⁷ In this context, well-being could be interpreted as either implying good life – in terms of present good living, or alternatively flourishing, implying a degree of positive development over time.

Liberal ideas were instrumental in the process of separating the church from the state, and later the liberals extended this principle to cover the areas of economic activity, culture and social arrangements, all ideas closely linked to the thinking of the utilitarians.⁸ Committed to allowing pluralism to flourish, liberalism has, however, also been perceived as the preferred vehicle for the propagation of capitalism, leading potentially to the dissolution of the social web of mutual ethnic and social obligations, and to the atomisation of society at large.⁹ Liberals have responded to this critique by arguing for the intrinsic value of the selection process that individual choice represents: if organisations are not subscribed to, they are not viable and deserve to perish. Sen adheres very firmly to the idea of allowing individual initiative to flourish, but not at an unbearable cost to other parties.

Utilitarianism is an approach to morality that views human good solely as a function of happiness (desire-satisfaction or pleasure); it is a form of consequentialism, evaluating actions in relation to their consequences.¹⁰ The modern day economist's version of utilitarianism has a focus on the satisfaction of preference, based on desire. According to Sen, however, there is a need to consider the inclusion of moral goods (such as justice and equality) and the equity of their distribution. Rawls¹¹ strongly opposed utilitarianism on the grounds that the total maximum goods may not be obtained by means which are unfair to minorities, and that the right is prior to the good, implying that consequentiality is not an acceptable option.

The idea of 'primary social goods' is central to the thinking of Rawls, who maintained that every rational person is presumed to be wanting rights, liberties, opportunities, wealth, and income, and a basis for social (self) respect. Paramount is the idea that liberty has priority over primary goods.¹² Sen, in a critique of Rawls, emphasises the idea that the possession of goods and their equal distribution says little about the well-being that they produce, and that an increase in commodities may not automatically imply an increase in well-being.¹³ The focus on goods ignores the relationship between the goods and humans involved. On another level, Sen finds the Rawlsian approach problematic, as it fails to take into account the tremendous variation in personal characteristics or socio-economic situations that affect the translation of commodities into well-being. Further, he is concerned that the use of market-based commodity purchase data fails to take into account non-tradable commodities, such as air and the absence of crime. On still yet another level, overall household income levels say little about the internal distribution of resources, and the propagation of discriminatory structures, through embedded cultural roles and positions.

⁸ Mainly through the work of Jeremy Bentham and John Stuart Mill, who based themselves on the ideas of Locke, Kant, and Constant and von Humboldt, in the classical phase, with continued later development by Green, Hobhouse, and still later (in the postwar era) Berlin, Hart, Rawls and Dworkin.

⁹ Some present day liberals, such as Rawls or Dworkin appear to favor some degree of institutional intervention, in contrast to the classical libertarians, such as Frances Hayek or Robert Nozick, who have continued to defend free markets *per se*.

¹⁰ This is diametrically opposed to non-consequentialism, which stipulates that actions should be valued irrespective of their consequences (as in absolutely condemning, say, murder, without considering the consequences *per se*).

¹¹ Rawls, *A Theory of Justice*, Cambridge, Massachusetts 1971

¹² Rawls proposed two principles: in the first place, each individual should possess inalienable rights to the fundamental liberties of freedom of thought, association, movement, and political participation, to the degree that these do not interfere with similar rights of other people. Secondly, Rawls proposed his difference principle, through which any and all social inequity should be acceptable only if it delivers the greatest possible benefit to the least advantaged group, in a situation of equity in terms of accessibility.

¹³ According to Saith, R ('Capabilities: the Concept and its Operationalisation' Queen Elizabeth House, Working Paper Series, QEHWPS58, Oxford 2001, many of the issues that Sen takes up in regard to the Rawlsian theory of justice are also pertinent as critiques to the Basic Needs approach to human development, as proposed by Streeten *et al* (Streetan, P *First Things First: Meeting Basic Human Needs in The Developing Countries*, World Bank Publication: Oxford University Press 1981, and Stewart (Stewart, F 'Basic Needs, Capabilities and Human Development', *Greek Economic Review*, 17(2) 1995 pp 83-96), in which the aim is to achieve a decent life, defined through levels of health, nutrition and education.

Underpinning the discussion of human well-being is the discourse of distributive, retributive and corrective justice.¹⁴ Many varied criteria have been proposed¹⁵ as the basis of distributive justice, ranging from contributive shares, effort, social position, need, and desire. And yet whether by accident of history and path-dependent, or by chance, there appears not to exist any uniform and universally acceptable principle of distribution. Today, the concept of distributive justice involves the basic assumption of egalitarian treatment, unless some reason can be given for a differentiated treatment.

Administrative Innovation

In attempting to establish the parallel between the capability approach and innovation in the administrative domain, several key issues emerge. In the first place there is a double foci on the dyadic relationship of individuals and their social environments, and on the search for the optimal balance between organisational freedom and control. Secondly, the idea of freedom as the key enabler of human development – no capability leads to results unless there is room for the initiative to happen – is linked to the idea of success and utility that is incorporated in any definition of innovation. In the third place, research on administrative innovation is concerned with social capital and the ways and means in which human potential can be unleashed and enhanced, a clear concern also of the capability approach. Furthermore, there is a similarity between the holistic approaches to well-being in Sen's capability approach and the idea of innovation as the result of a successful, complex configuration of multiple elements, all of which need to co-exist. Lastly, both capability approach and innovation incorporate the idea that well-being is a direct function of an equitable return of benefits from individual toils.

Novelty, Utility, Success

The original definition of innovation by Joseph Schumpeter¹⁶ incorporated the commercialisation of new elements or a combination of old elements in industrial organisations, in terms of new materials, processes, markets, or organisational forms, driven mostly by the entrepreneur. By definition, inventions become innovations after a process of collective acceptance, through successful commercialisation or social rearrangement.

The idea of innovation incorporates novelty (implying change), utility and success, in products or processes, often in the context of technological application that enables new opportunities. According to Sundbo,¹⁷ need and co-evolution, together with flexible organisations make innovation possible. In the field of administrative innovation, technology is often embedded in services or service-like products (the distinction between the two is becoming increasingly obscure). Innovation in the administrative context has been defined variously as 'the combination of ideas in encouraging organisational settings',¹⁸ 'responses to environmental change',¹⁹ 'the development and implementation of new ideas in institutional transaction contexts',²⁰ or 'processes of learning and discovery about new products, processes and organisations'.²¹

¹⁴ Respectively dealing with the ethical appropriateness of the distribution of benefits and burdens, the penalisation of wrongdoing, or the compensatory process of adjusting loss or gain.

¹⁵ Since the days of Aristotle, philosophers and thinkers have been concerned with the idea of justice. The political connotations of distribution have been of interest to thinkers with egalitarian worldviews.

¹⁶ Schumpeter, J *The Theory of Economic Development*, Harvard, Cambridge 1934

¹⁷ Sundbo, J 'Organization and Innovation Strategy in Services' in Miles, I and Boden, M (eds) *Services and the Knowledge-Based Economy*, Continuum, London 2000

¹⁸ Sundbo, J *The Theory of Innovation, Entrepreneurs, Technology and Strategy*, Edward Elgar 1998

¹⁹ Damanpour, F, and Evan, W 'Organizational Innovation and performance: The Problem of 'Organisational Lag', *Administrative Science Quarterly*, 29, 3, 1994 pp 392-409

²⁰ Van de Ven, A 'Central Problems in the Management of Innovation', *Management Science*, 32, 5, 1986 pp 590-607

²¹ Dosi, G 'Sources, Procedures, and Microeconomic Effects of Innovation', in Dosi, G, Freeman, C, Nelson, R, Silverberg, G and Soete, L (eds) *Technical Change and Economic Theory*, London, Pinter 1988

Innovation can also be described as an interactive process²² that joins the individual and collective perspectives within organisations, involving the exploitation of new knowledge. This absorption capacity (the ability to see, assimilate and absorb new, often external knowledge) was developed by Cohen and Levinthal,²³ who also stipulated that the development of the capacity is history- and path-dependent, tied to prior knowledge that exists in the organisation. In many cases it is a challenge to sense, assimilate and apply new external knowledge, but it is even more difficult to do in a consistent and coherent manner.²⁴

The Capability Approach: A Tool for Understanding Innovation Capability

From the viewpoint of the capability approach, it is not the possession of a commodity that produces well-being, but what a person succeeds in doing with the commodity, in the personal and external circumstances of that time and place.²⁵ This achievement Sen²⁶ terms the 'functionings'; these are the 'beings and doings' of an individual. 'Capabilities' of an individual are, on the other hand, the real opportunities that exist for an individual to make life choices. In this sense functionings are the achievements and capabilities are the abilities to achieve. These abilities to achieve signify freedom of choice, and link the approach to the larger liberal tradition.

The Levels of Achievement

The approach is concerned with three main levels of human achievement: the means to achieve, the freedom to achieve and the completed achievement itself. These are seen as sequential steps in the process of achieving well-being, and they are interspaced and separated by conversion factors (between the means to achieve and the freedom to achieve), and constraints (between the freedom to achieve and the completed achievement). Figure 1 below outlines the relationships of the elements of the approach.

In relating the approach to innovation, three main points are of interest, each one needing some form of consideration in terms of embedded novelty, utility, and success. In the first instance, the means to achieve are critical, as they form the group of commodities that are available for use. Secondly, the personal conversion factors form the platform of individual creativity and inventiveness, which is either enabled or inhibited by the third point, the social constraints. These constraints effectively establish the cultural ground rules within which people act in organisations and societies.

²² As put forward by Pierce and Delbecq (Pierce, J and Delbecq, A 'Organization structure, individual attitudes and innovation' *Academy of Management Review* 2 (1), 1977 pp 27-37); and Van de Ven 1986, joining the individualist (individuals cause innovation, as framed by, say, Rogers (Rogers, E Diffusion of Innovations, The Free Press, New York (3rd Edition 1983, 1st edition 1962)) and structuralist perspectives (innovation is determined by structural characteristics, as developed by March and Simon (March, J and Simon, H *Organizations*, Wiley, New York 1958) and Zaltman et al (Zaltman, G, Duncan, R and Holbek, J *Innovations and Organizations*, Wiley, New York 1973), where innovation is produced by the interaction of structural influences and the actions of individuals, through a complex process, subject to reinvention and reconfiguration (Pierce and Delbecq 1977, Slappendal (Slappendal, C 1996 'Perspectives in Innovation in Organisations' *Organization Studies*, 17/1).

²³ Cohen, W, and Levinthal, D ('Absorptive Capacity: A New Perspective on Learning and Innovation', *Administrative Science Quarterly*, 35 (1) 1990 pp 128-152

²⁴ Systematic, continuous innovation appears to be very much a management issue (eg Van de Ven 1986). On the level of individual organisations Bessant and Caffyn, among others, make the case for continuous innovation as the only means of realising sustainable competitive advantage. See Bessant, J and Caffyn, S High-involvement innovation through continuous improvement, *International Journal of Technology Management* 14 (1) 1997 pp 7-28.

²⁵ This idea is paralleled by the consideration that innovation theory has for the utility of inventions. Inventions become innovations only through utility.

²⁶ Sen *op cit* 1980

Achievement	Achieved functionings
Social Constraints	Constraints (Choices limited by different ideas of well-being)
Freedom to achieve	Capabilities (Capability Set = Potential functionings, abilities)
Personal enablers, inhibitors	Conversion factors (Personal, Social, Environmental)
Means to achieve	Vector of Commodities (characteristics) Non-market production / Market production / Net income / Transfers-in kind

Figure 1 Three Levels of Human Achievement (after Robeyns²⁷)

The Means to Achieve

Commodities and their respective characteristics form the means to achieve, consisting of goods and services, often (but not necessarily) with monetary and exchange value. Focus on purely market defined values leaves a whole set of commodities outside of a system of value-giving. Commodities are conceptualised in terms of their characteristics, and in this sense a sack of rice could be considered a commodity which would be characterised by 'nutrition'.²⁸

In terms of innovation, the key issue lies with the availability of novel commodities, and the embedded new knowledge that is transmitted with and through them. Human beings are familiar with the things they use, and this familiarity is passed on through their use. New commodities in traditional societies are viewed with suspicion (often rightly so), and the uptake and adoption process can be a lengthy one.²⁹ In the case of commodities, a wide acceptance can be understood as a proxy for both utility and success. The sudden availability of new commodities can change social arrangements to great degree, producing an effect akin to radical innovation, where previously upheld ways are creatively destroyed and replaced by alternative arrangements.³⁰ The sources of these commodities are just as diverse as the sources of innovation. New sources also imply new opportunities, and as Drucker³¹ points out, these can be found in the unexpected, the incongruity, process needs, industry and market changes, demographics, changes in perceptions, moods and meanings, and finally, new knowledge.

If one accepts that the sudden availability of previously unknown goods can provoke innovation, through enabling people to see, assimilate and apply new knowledge, then the role of international trade in the diffusion of innovation even at the village level in developing countries should not be underestimated. Similarly, the unavailability of common developed country goods in developing countries automatically creates relative knowledge deprivation,

²⁷ Robeyns *loc cit* 2003

²⁸ Example from Saith, *op cit* 2001

²⁹ The diffusion of new technologies and products can be a lengthy one: in some cases decades pass before products are widely accepted and diffused.

³⁰ As an example, in the South Pacific, large, ocean going canoes were replaced by motorised shipping in a short period of time.

³¹ Drucker, P *Innovation and Entrepreneurship*, Heinemann, London 1985

which perpetuates the negative aspects of history and path-dependency.³² In this context, the speed with which the commodity is assimilated could possibly indicate the openness or otherwise of a collective to new ideas and knowledge.

It would appear that policymaking in public administration needs to consider strategies for improving access to commodities. In the public sector in developing countries, supplementary incomes are critical to the survival of civil servants; and often small scale business or farming, for instance, form the basis of economic welfare. This evidently requires substantial effort, often at the cost of the civil service, which is often seen as a prize job, requiring no inputs. It does not seem possible to enhance the innovation capability in the public sector unless the civil servants have the necessary interest, commitment, and morale to be involved in change processes. At the core of this is a decent standard of living that does not require extensive moonlighting.

Conversion Factors

Personal characteristics, such as sex, age, skills and intelligence, influence how a person can convert the characteristics of commodities into a functioning. Additionally, social characteristics, such as non-formal social practices, hierarchies, norms, together with more formal public policies, influence the conversion. And, thirdly, environmental characteristics, like physical location, space and infrastructure have an impact on the process.

It is this set of conversion factors that presents the second set of multiple opportunities for the development of innovation capability. Even though many personal conversion factors (such as sex) are locked in at birth, the social and environmental aspects that determine upbringing, education, social class and other similar factors do change, and can be altered over time.³³ This appears to be a slow process, though, requiring sometimes several generations. Again, historical paths seem to influence this development to a great degree; the progress towards an egalitarian society in the developed countries has taken several centuries. The literature suggests that innovation benefits from equity in society;³⁴ it is perhaps not by chance that the countries that are considered to be the most economically competitive are also the ones which have social structures that offer a great degree of equity in education, health care and social arrangements.

Perhaps the clearest opportunity for developing the ability to see, assimilate and apply new knowledge in this context lies in skills development. The access to education, in multiple, flexible delivery systems and formats, enables the contact with new knowledge. It would appear that the degree of familiarity and the frequency of the contact would greatly influence the transfer process. Also, there appears to be a need for direct contact with the source, implying that electronic media are not as effective as hands-on experience. To develop the ability to see new knowledge, the public sector administrative staff of a developing country must have multiple external contacts. This is often problematic due to affordability issues. Perhaps exchange programmes could offer novel opportunities through secondments outside of one's own jurisdiction. Again an area for novel policies and programmes.

³² In this context it is enough to reflect on the changes brought about by the introduction of the bicycle. While it has evident utility as a vehicle of transport, it is also the source of new business, new services and new products, not to mention the symbolic value that the ownership of such machinery ascribes to its possessor. The knowledge embedded in the bicycle also helps to pave the way for the understanding of related technologies, as the motorcycle conceptually is not alien to someone who has used a bicycle. One of the interesting issues in this regard is related to the stepwise path that technology assimilation takes: is it absolutely necessary that one understands the bicycle before one can comprehend the motorcycle? The diffusion of mobile telephones in developing countries a perhaps an interesting parallel: often they exist where no cable connection telephones ever did, and while people may have never used a normal phone, they are perfectly familiar with the use of a mobile one.

³³ This is closely related to the balance between the genetic and environmental conditioners in terms of human abilities.

³⁴ Lundvall *op cit* 1992 makes the point that innovation requires equity and returns for all members of the society.

Freedom to Achieve

As mentioned above, capabilities and functionings are intimately related. Capabilities are the abilities that exist and functionings are the successes in achievement. In Sen's original terminology, a capability was defined as the combination of possible (or achievable) functionings. Other scholars use capabilities in the plural, to denote the various possible functionings, while still others³⁵ equate capabilities to functionings. The plural is used in this context, and a separation between capabilities and functionings is maintained.

Capabilities are at the core of the approach. They are closely related to the idea of opportunity but, as Sen has remarked, the traditional limited sense of opportunity (as a given possibility) should be enlarged to a more positive notion of overall freedom (to achieve). Capabilities are concerned with the real freedoms to function, not only the achieved functionings. Thus, all functionings are capabilities - not the other way around. As Robeyns³⁶ so aptly points out, the focus on capabilities does not imply that attention is not also given to resources, growth in the economic sense, or technical development, among other such issues. However, these elements have to be evaluated in the light of their effectiveness in contributing to human well-being; they are not ends in themselves.

While it is possible to evaluate functionings (as they can be identified and isolated) this is not often the case with capabilities, which are like preferences in conventional microeconomics; it is not possible to fathom the real intent of people at any given time, nor is it possible to measure directly what a person could 'potentially do'. This is a major difficulty with the approach. Just as action in the marketplace is taken as a proxy for preferences, functionings act as signals for capabilities.

A group of capabilities that determines all possible abilities is called a capability set. As human beings have very different and distinct ideas of what constitutes a good life (that leads to well-being), it should be noted that the variance in these ideas can lead to a great diversity in terms of achieved functionings, even if the capabilities could be considered to be equal or similar. Also, similar achieved functionings can be achieved from diverse capability sets. It is the latter that enables organisations to function and humans to align their efforts behind a common goal.

A major issue in the discussion of the capability approach has been the search for a definite list of capabilities that could be used as an empirical base for assessment and evaluation of well-being, presenting problems related to the operationalisation of the approach.³⁷ Sen himself has not put forward any such proposal, while other researchers (with perhaps Nussbaum in the lead) have attempted to take the lead on the matter. Nussbaum³⁸ has elaborated a list of capabilities that she feels need to be defined in order to make operationalisation possible:

³⁵ For example, Nussbaum, M 'In Defence of Universal Values' in *Women and Human Development: The Capabilities Approach*, John Seeley Lectures, pp 34-110 Cambridge University Press, Cambridge 2000

³⁶ Robeyns *op cit* 2003

³⁷ Perhaps the most advanced operationalisation to date, in practical terms and in practical worldwide coverage, is the measurement developed by the Human Development Report of UNDP for the Human Development Index (HDI) is an example of a second and third level operationalisation of the CA, as it presents a practical method for evaluating well-being in a form that makes international comparisons of welfare and well-being. The HDI combines the purchase power parity (PPP which measures access to weighed financial resources for a decent living), with indicators of life expectancy at birth (measuring health through longevity), literacy, and school enrolments (measuring the educational opportunities for self-improvement) to achieve a more complete picture of human well-being that would be available from the PPP indicators. The UNDP approach is pragmatic, and does not attempt to encompass the whole of human diversity into a single set of indicators and or measurement. More conceptual operationalisation have been proposed by Balestrino and Petretto³⁷, who incorporate non-welfare concerns of basic functionings within a welfarist framework, through developing pricing strategies (evaluating taxes, subsidies, free issues) for key commodities that act as inputs for health and education functionings. See (Balestrino, A and Petretto, A 'Optimal Taxation Rules for 'Functioning'-Inputs' *Economic-Notes* 23(2), 1994 pp 216-32) Sen has suggested that adjusted incomes may be needed for individuals in different socio-economics situations (say, income capability achievement adjusted for literacy). Sen *op cit* 1993.

³⁸ Nussbaum, M *op cit* 2000

- Life
- Bodily health
- Bodily integrity
- Senses, Imagination and Thought
- Emotions
- Practical Reason
- Affiliation
- Other species
- Play
- Control over one's Environment

Nussbaum emphasises that the capabilities listed above are central in their importance and cannot be traded off or eliminated; the list is also a general one, as each case may require further definitions. This paper has adopted Nussbaum's list for the purposes of illustrating the links between the capabilities and the conversion factors.

If one wishes to examine the capabilities specifically from the viewpoint of innovation, it would appear that some sort of a 'composite capability' would have to be developed, as innovation would clearly join the elements of (at least) senses, imagination and thought, emotions, practical reason and control, that would correspond with the achievements of inventive action, linked to a managed process with social relations.

Constraints

The conversions of capability sets into achieved functionings are delimited by constraints, which effectively limit the choices that can be made from available capability sets. These constraints are socially constructed and relate to issues like religion, family and social class, that shape the idea of a 'good life'. As an example, religious upbringing often creates lock-ins in terms of diet choices. It is the socially constructed constraints that act as inhibitors in many personal development issues. It is also the focal point of social control and assimilatory pressure. This is not to say that constraints are only negative (or positive). But they do set the boundaries of acceptable action within a social sphere, and thus effectively limit the application of a capability set. It is unclear whether strict constraints actually limit capability sets any more than less strict ones, but there may be an impact on the typologies of functionings that are achieved. It is through the constraints that Sen examines the forces at play in the society at large. There is apparently no value judgment made as to positive or negative effects of these constraints; it could be presumed that both would present in any given time and place. While certain personal characteristics such as a person's sex cannot be altered, it is possible to alter the constraints that these attributes impose.

It is in this context that one enters the realm of organisational development³⁹ in administrative innovation. While it is not possible, within the scope of this paper, to examine profoundly the inhibitors and enablers that are structured around the constraints, it should be noted that this is the area that requires the most attention of all the three core elements⁴⁰ of the capability approach. At the end of the day, the application of the capability set occurs within the parameters imposed by the constraints. Suffice to say, organisational lock-ins are tremendously difficult to change, and vested interests tend to maintain inertia within organisational settings. As DiMaggio and Powell⁴¹ note, crisis is often the only recourse to change organisations.

³⁹ See, for example, Scott, RW *Organizations: Rational, natural and open systems* (3rd ed) Eaglewood Cliffs, NJ: Prentice Hall 1992; DiMaggio, PJ, and Powell, WW The iron cage revisited. Institutional isomorphism and collective rationality in organisational fields *American Sociological Review*, 48 (2) 1983 pp 147-160; North, DC *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge 1990

⁴⁰ Commodities, conversion factors and constraints

⁴¹ DiMaggio and Powell *op cit* 1983

It would appear that most initiatives that aim to change public sector organisations in developing countries do not achieve the set objectives, but get bogged down through a scarcity of resources, time and effort. In terms of policy issues, newly formed organisations clearly present an opportunity to reorganise existing functions and facilities. In most cases, however, this is not an option, but new solutions must be found within existing structures, a daunting task.

Conclusions

The role of innovation as the key driver of economic growth and competitiveness appears to be clearly established in the knowledge economy, and the human abilities that underpin innovation processes are crucial to the successful socio-economic development of societies. In terms of the developing countries, the critical issue is the capability gap that exists between them and the developed countries; in this paper, it is assumed that this gap originates to great degree from the difference in the ability to exploit new knowledge. Bridging the gap is not made any easier by the constant one-way brain drain away from the developing nations.

Many Opportunities

In this process of helping improve livelihoods, by reducing the knowledge gap, the research into innovation and capabilities in the public sector has an important role to play. It enables coherent and effective policymaking, leading to improved design and implementation of specific projects and interventions, and allows for the monitoring of progress and a comparison of the results of these initiatives.

Here we also find the key value of the capability approach in the context of administrative innovation in developing countries. It serves as a platform for understanding three linked elements: the means to achieve; the individual factors; and the collective constraints that impact on the exploitation of new, external knowledge. Without a holistic framework, single initiatives that would focus on just one of the issues would be prone to suffer from myopia, be contextually lost, and potentially fail. Very many international aid projects, for example, focus on a very limited scope of aims or jurisdictions, leaving the vital role of overall coordination to the indigenous administration, which desperately needs to have a view of the whole. In the area of policymaking, the approach framework is useful when situating initiatives in their contexts, and drawing a picture of the whole.⁴²

In designing interventions, the approach framework also appears as a valuable checklist tool. It allows for any single project (its intervention logic, aims, objectives, activities and methods) to be clearly located in its field and linked to a larger whole. The third clear advantage of the approach lies in its potential as a tool for evaluating and monitoring initiatives, again basically locating single initiatives in their holistic contexts.⁴³

⁴² As an example, in one African country an information management system was put in place in a province to provide the knowledge of the facilities related to the health delivery service. While much effort was made to link the initiative to individual ability (by training staff) and national policy (by developing a national maintenance policy), less consideration was made to the constraints that were imposed on the system by working culture of the line ministry in question. As a result the system never became sustainable and failed in due course.

⁴³ In the case of an educational project in the South Pacific, the original focus was on improving the across-the-board access to school through improved facilities; later it was realised that in some schools empty study places existed, while other schools were overloaded. This was traced to major problems in staff turnover, which was addressed through additional training. While this was partly successful, it became clear that it was the lack of commodities on the outer islands, together with the nepotism originating from organisational constraints of the central authority which effectively inhibited effective staff deployment. As the students tended to enroll in schools on the basis of the individual teaching staff, rather than the location, stabilising staff turnover would have resulted in stable student populations. A case for a holistic approach from the start.

Some Problems

The capability approach of Sen operates on the outskirts of the modern conventional macroeconomic thinking that is based on simplified individual preference. While Sen's thinking appears ethically sound, there are major operational difficulties in the proposal to expand a singular economic utilitarian perspective or income valuation into a more complex evaluation of political freedoms, economic facilities, social opportunities, guarantees of transparency and protective security. There are problems in operationalising the approach, as value judgments are inherent when contemplating social arrangements.⁴⁴ These evaluations need to be made explicit in the process of analysis, which does appear to be a daunting task. The multidimensionality of human well-being is embedded in the approach, implying that multiple simultaneous capabilities need to be considered at any one point in time, and no single capability can be deemed inherently superior to another, as individuals and groups have different values. Additionally, non-capability information is of importance in policy formulation of justice and development, and accountability of governance.

As a final observation, the capability approach is also linked to the western ideas of liberalism, utilitarianism, and social justice, which may sometimes place it in a cultural vacuum in non-western countries. The cultural fit of any intervention is, of course, at the very heart of sustainable development, and great sensitivity must be exercised in this regard.⁴⁵

In terms of future research, the twin themes of innovation and the capability approach present interesting perspectives. There are certainly opportunities to delve into the usefulness of the approach as a framework of thought, but the larger challenges would appear to lie in the area of operationalising the thinking so that it can be used in a more normative and prescriptive way as a practical tool in the management and administration in the public sector. Holistic policymaking requires holistic tools.

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⁴⁴ See, for example, Alkire, S *Operationalizing Amartya Sen's Capability approach to Human Development: A Framework for Identifying 'Valuable' Capabilities* DPhil thesis, Oxford University 1998., Balestrino, A 'Poverty and Functionings: Issues in Measurement and Public Action', *Giornale-degli-Economisti-e-Annali-di-Economia*; 53(7-9), 1994 pp 389-406.

⁴⁵ Mendonca, M and Kanungo, R 'Impact of culture on performance management in developing countries', *International Journal of Manpower*, Vol 17 (4/5) 1996 pp 65-75; Zeffane, R and Rugimbana, R 'Management in the less-developed countries: a review of pertinent issues, challenges and responses', *Leadership & Organisational Development Journal*, Vol 16 (8) 1995 pp 26-36; Hofstede, G *Culture's Consequences*, London, Sage 1980; Trompenaars, Fons and Hampden-Turner, Charles *Riding the Waves of Culture, Understanding Cultural Diversity in Business*, Second Edition, London, Nicholas Brealey Publishing 1997

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