

Different stakeholder groups and their perceptions of project success



Kate Davis *

Kingston University London, Kh-Bs207, Kingston Hill, Kingston upon Thames, Surrey KT2 7LB, UK

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Abstract

This is a theoretical paper using the Web of Science search engine and Bibexcel analysis functions to determine key literature related to ‘project success’. The paper firstly provides background to the development of project success since the 1970s. Then, an inductive thematic analysis investigates which factors stakeholders, involved in projects, perceived as key to project success.

It provides a better understanding of project success and identifies perceptions by senior management, project core team and project recipient stakeholder groups. The main issue highlighted by the research was that, for some groups, there were no common success factors. This suggests a lack of agreement in perceptions of project success factors between these three groups, highlighting discontinuity between them and provides a case for empirical research into multiple stakeholder groups’ perceptions of project success. The approach selected employed a combination of a systematic integrative literature review, coding framework and thematic analysis.

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Keywords: Project success and strategy; Managing stakeholders; Project success factors; Perception of project success factors; Multiple stakeholders

1. Introduction

1.1. Purpose of the research

The literature recognises that there is insufficient coverage of project management as a research field, both in business schools and top management journals. Kloppenborg and Opfer’s (2002) survey noted that only 3% of 3000 project management studies were published in top management journals. Shenhar and Dvir (2007) recognise the need to provide case studies for projects as “only 2% of the 7000 Harvard Business School case study collection mention projects and only a few dozen are actually dealing with project management issues” (p. 96). The debate whether ‘project management’ research fits into practice or academia is long standing. Kwak and Anbari (2009) suggest that the project management industry finds it difficult to convey their message outside the field, as business does not regard it as a ‘real’

discipline (“when it comes to the business and management field, scholars often appear puzzled and unconvinced of the notion project management”, p. 435). Blomquist et al. (2010) add that project management is ‘immature’ as a research field.

Literature reviews have been shown comprehensively to define project success (Jugdev and Müller, 2005; Turner and Zolin, 2012). However, evidence of perceived project failures in industry suggests a need to investigate the subject further to inform practice. There is literature suggesting that stakeholders can have different perceptions of what constitutes project success, both in terms of the importance of criteria and project performance, against the criteria (Dalcher and Drevin, 2003; Turner et al., 2009). This paper determines that the perception of project success by different stakeholders is poor, suggesting that current theories are not translating into practice.

It was concluded that perceptions of success by stakeholders are significant, as are the perceptions of important criteria and actual performance. This paper interprets this to include the perception of important success factors, as these make up the criteria. An example is that participants are asked which factors they perceive constitute the criteria of finishing the project on

* Tel.: +44 208 547 2000x65022 (work).

E-mail address: kate.davis@kingston.ac.uk.

time. Factors could include having a capable project manager to create a time schedule and having a detailed plan with milestones. The scope of this paper focuses mainly on project success factors; however, the author considers criteria, factors and performance equally important. Further research will be suggested to examine how different stakeholders judge success (the different criteria), the different factors they think are important for achieving success and the different perceptions they have of how the project is performing.

This research stems from a lack of coverage within the project management field. This paper discusses project success, but the author notes that project management processes must be in place for a project to be successful. The purpose of this paper, therefore, is to investigate success factors which stakeholders, involved in projects, perceive as important in regard to the concept of 'project success'. The resulting research questions follow:

Research Question 1: What is the nature of project success as it is described in the literature?

Research Question 2: Which stakeholder groups have been identified by the literature as having an interest in project success, taking a view on how to judge project success (criteria) and which factors will contribute to project success?

Research Question 3: What are the different perceptions of project success factors between different stakeholders which have been identified in the literature?

1.2. Methodology

1.2.1. Systematic integrative literature review

The literature review for this paper used a combination of an integrative literature review (Levy and Ellis, 2006), a coding framework (Bryman and Bell, 2007) and thematic analysis (Ritchie and Lewis, 2010) to ensure a rigorous search process. These are valid methods, according to the literature, to perform a systematic integrative literature review (Levy and Ellis, 2006).

Webster and Watson (2002, p. 16) highlighted that "a systematic search should ensure that you accumulate a relatively complete census of relevant literature". The literature notes three types of systematic literature review; traditional, extended and integrative. Hemingway and Brereton (2009) note that a systematic review differs from a traditional review in that it is peer-reviewed and the findings explicitly documented to permit replication. They note the potential disadvantage of the reviewer being too focussed in the search, leading to selection bias to fit research questions. Victor (2008, p. 1) states that a systematic review is used within social sciences as a method to "identify and synthesise all the available research evidence of sufficient quality concerning a specific subject". She states that this must be accompanied by a transparent method to increase validity and reliability of the study. Hemingway and Brereton (2009) note that a systematic review aids in formulation of the research design when an identified problem has not been addressed "when a map of evidence in a topic area is required to determine whether there is any existing evidence and to direct future research" (p. 5).

Whittemore and Knafl (2005, p. 546) define an integrative review as "a specific review method that summarizes past empirical or theoretical literature to provide a more comprehensive understanding of a particular phenomenon".

A system will be applied to the integrative review to provide evidence of key identified literature selected for review. According to Levy and Ellis (2006, p. 181), applying the stages of a data processing model to conduct a systematic literature review results in a more "effective literature review". They identified stages in the systematic approach as inputs (literature collection), processing (analysing the literature) and outputs (writing the literature review). This process was crucial to identify key themes in the literature for the author, as it provides a theoretical foundation to inform future empirical work.

1.2.2. Web of Science

Web of Science was used to search for appropriate literature, as it allows for bibliographic data results to be output and analysed using Bibexcel (Gourlay, 2010). It was noted that the use of online databases confines searches to sources linked to Web of Science, which could introduce bias. However, this database has "index and abstract in total over 9500 of the leading journals" (Web of Science, 2011). Also, in the search conducted, it was noted that 708 results were in 368 sources. These included "scholarly literature in the sciences, social sciences, arts, and humanities and examine proceedings of international conferences, symposia, seminars, colloquia, workshops, and conventions" (Web of Science, 2011). This minimises the issue of access to limited resources.

Herther (2008) adds that Web of Science is seen as a "worthwhile, fast, and reliable" database and is used to rank researchers' work using citation data. This has increased the value of citation analysis, as in-depth analysis can be performed using database search results. Cobo et al. (2011, p. 1382) add that "undoubtedly, the most important bibliographic databases are ISI Web of Science, Scopus, Google Scholar and NLM's MEDLINE". However, they further note that each database will return different results and Google Scholar has difficulties when exporting complete dataset results.

Web of Science measures impact factors, calculating the "average number of times articles from the journal have been cited in the past" two or five years (Web of Science, 2011). However, this is mainly used to compare journals from multiple disciplines and is inappropriate, as the focus of this research is to compare authors in the project management discipline. When the initial search was run, the citation report was not available as a Web of Science feature. The search results were exported into Notepad and the citation analysis was run using Bibexcel. It is proposed that future research is undertaken to repeat the search using the Web of Science built in feature to compare the results against Bibexcel results.

1.2.3. Search criteria

A search containing the keyword 'project success' (25th October 2010) returned 708 results in 368 sources. Two additional searches were performed on 6th June 2011 using the keywords

“project success factor*” and “project success criteri*”, which revealed 28 results already within the 708.

1.2.4. *Bibexcel*

A citation analysis was performed using Bibexcel to identify key authors from 708 articles. This minimised bias of selected articles by identifying key authors for review. This employed the built in analysis functions to answer the questions ‘who are the key authors?’ and ‘which authors are cited most frequently?’ on the data output from Web of Science.

Bibliometric analysis uses citation data along with quantitative analysis to determine patterns within data. Bibliometrics was presented by Pritchard (1969) as “the application of mathematical and statistical methods to books and other means of communication” (p. 349). The output of this analysis produces a quantified objective analysis of a body of literature (Narin and Olivastro, 1994). Cobo et al. (2011, p. 1387) note that Bibexcel reads data from Web of Science and retains the “strongest links” whilst deleting duplicate data. However, they note that the software is only compatible with Windows.

The Bibexcel results revealed that Pinto was the most cited author with 87 citations linked to the assessment of project success. This is supported by other literature, as Pinto and Slevin (1987) are recognised as the authors of the most widely used success factor list (Jugdev and Müller, 2005; Turner and Müller, 2005). Other highly cited authors included Shenhar (67), Kerzner (40), Dvir (33), Wateridge (29), Turner (28), Atkinson (23), Cooke-Davies (22), Cleland (21), Lim (20), Belassi (18), Munns (18), Jugdev (15), Freeman (14) and Belout (12). Other authors were used to provide evidence when key authors indicated their importance.

1.2.5. *Selected articles*

Time restrictions were placed on the article date range so that the majority of articles post-dated Pinto and Slevin (1987). However, the literature review maps the development of project success in the 1970s (Jugdev and Müller, 2005; Turner and Müller, 2005) and, therefore, the background section briefly describes this development for completeness.

The identified key authors’ articles were collected and an initial reading of abstracts and introductions led to the extraction of project success factors and stakeholders. This resulted in twenty nine articles being selected for review. The author believes the papers selected for review to be representative of the literature, owing to the rigorous analysis process employed. All twenty nine were considered to offer insights about stakeholders linked to project success, hence their selection. However, the author recommends future replication of the study to ensure that the papers selected are valid.

1.2.6. *Thematic analysis development*

Thematic analysis aids organisation and categorisation (Ghauri and Grønhaug, 2010) of qualitative data (Neuman, 2011), allows identification of themes for discussion and subsequent quantitative analysis (Caldicott et al., 2005; Frith and Gleeson, 2004). It is used to summarise data via content analysis or index data via coding. This resulted in the development of emergent themes which may

not have been considered (Ritchie and Lewis, 2010) and high reliability, as the documented method can be replicated (Blumberg et al., 2011).

Issues include reduced reliability (when not combined with quantitative methods) and interpretation bias of information. Ghauri and Grønhaug (2010) note how procedures for interpretation should be recorded to minimise bias. This stems from inappropriate research questions or analysis, not method. However, development of numerous themes increases difficulty when selecting themes for further analysis (Blumberg et al., 2011).

In order to conduct a thematic analysis, the literature was imported into a qualitative data analysis software package (NVivo), to identify themes to answer research questions. This study initially adopted Bryman and Bell’s (2007) coding framework technique to identify themes using initial codes from the ‘research process onion’ (Saunders et al., 2009). However, when coding commenced, it was discovered that further codes were identified inductively as the literature was analysed.

Literature was textually analysed and categorised to identify themes. This transforms collected literature into applicable knowledge, using thematic analysis to identify recurring themes, with specific reference to project success and the stakeholders involved. A codebook was created with relevant categories to answer the research questions. Codebook development took an inductive iterative approach following Ritchie and Lewis’ (2010) method. This included identification of themes through familiarisation with data, resulting in over 300 initial codes being created. After the initial codes/themes were created, flowcharts were produced to determine relationships between categories and codes for qualitative data analysis. The main themes and their subsequent categories were then put into Microsoft Excel and codes created in preparation for the charting stage.

After textual analysis, Ritchie and Lewis’ (2010) method moves on to consolidate the coded data using ‘thematic charts’. This uses a matrix/table method to pull data together into a chart to answer research questions. For example, research question one had a main thematic chart heading of ‘Project’ and sub headings of ‘Features’, ‘Objectives’, ‘Iron triangle’ and ‘Project team (Staff)’.

1.3. *Improving the perceptions of project success*

Project success is important as most work can be classified as project-based (Peters, 1999). However, with the popularity of project-based work, project failure has received considerable attention in the press, leading the management of public high profile projects to be perceived by the public as unsuccessful. Heathrow Terminal 5 was largely successful, but minor commissioning issues (flight cancellations resulting from a lack of sufficient testing of the baggage system, leaving passengers unable to check in oversized bags) were perceived by the public and, ultimately the customer, to constitute a failure and, therefore, stakeholder perception tainted the project outcome (Brady and Davies, 2009, 2010a, 2010b; Brady and Maylor, 2010; Savill and Millward, 2009).

Despite perceived failures, project management is a growing subject and is defined by an expanding body of professional associations, standards, methodologies and tools seeking to reduce failure. Currently, there is considerable investment in new strategies to increase project success (reflected in incremental upgrades of tools and methodologies; for example, PMBoK (Project Management Institute, 2008) and PRINCE2 (Office of Government and Commerce, 2009)), but this is not reflected in ongoing results with 24% of projects failing and 44% being challenged (CHAOS Report, The Standish Group, 2009). A recent survey reported that “this year’s results represent the highest failure rate in over a decade” (The Standish Group, 2009), raising the issue why projects are still failing.

The thematic analysis justifies the need to examine and improve the perceived importance of success factors and processes involved when examining perceptions of success. Evidence of this was found, where, in the twenty nine articles analysed, there were twenty two different definitions of ‘project success’; ten articles stated that there were issues with multiple perceived definitions of project success and seven noted ambiguity in defining success. This provides grounds for the examination of, and need to improve, perceptions of success factors and processes involved when defining factors.

2. Research question one—evolution of project success

Before the thematic analysis findings can be presented, a brief overview of the study background needed to be established. Future work will examine success factors in-depth to develop an appropriate tool for measuring stakeholder perceptions of project success.

A longitudinal literature review explored and assimilated the development of project success at different time periods (from 1970s to present). Jugdev and Müller (2005) produced an historical review which influenced the decision to classify success factors into decades. However, their review concentrated more on graphically representing the stages and time frame of the project life cycle whereas, in terms of examining the perceptions of success, this review will add to theirs as it concentrates more on stakeholders involved and success factors.

2.1. 1970s

The early 1970s success literature focussed on the operational side, tools and techniques (‘iron triangle’ of time, cost and quality, Atkinson, 1999; Cooke-Davies, 1990; also called requirements or performance, Pinto and Slevin, 1988b) of a project at implementation stage (Lim and Mohamed, 1999) and omitted focus on communication with customers (Jugdev and Müller, 2005). This created lists of uncategoryed success factors (Turner and Müller, 2005) which lacked behavioural ‘soft skills’ (Munns and Bjeirmi, 1996).

Success was assessed at the implementation stage (Lim and Mohamed, 1999) and was determined to be dependent on the individual (the project manager or project team member—Andersen et al., 2004), being assessed subjectively and objectively (Freeman and Beale, 1992) using surveys or feedback

via complaints (Pinto and Slevin, 1988b). However, this meant that project managers often focussed on technical aspects of a project and lacked emphasis on examining communication with customers (Jugdev and Müller, 2005). It was noted that this period was largely theoretically based and that more empirical work was required (Belassi and Tukel, 1996).

2.2. 1980s–1990s

The 1980s to 1990s moved from the viewpoint of examining technical aspects of a project to how it related to the client organisation (Pinto and Slevin, 1988a), looking at the project manager or project team (Andersen et al., 2004). The literature usually omitted the planning phase and linking a project to strategic management and the organisation (Jugdev and Müller, 2005). This did not account for other stakeholders indirectly involved in the project process, e.g. external stakeholders or clients/end users.

This period produced critical success factor (CSF) lists (Kerzner, 1987), but these were not organised or grouped to identify common themes. CSFs were often devised intuitively (Pinto and Prescott, 1990 used anecdotal studies to collect data from one case) as opposed to being grounded in previous literature. Success studies were cross sectional and assessed once in the project (Jugdev and Müller, 2005). Turner et al. (2009) argue that this is insufficient and that success should be assessed longitudinally at multiple points in the project life cycle.

Literature started to recognise the importance of success as viewed by various stakeholders (Munns and Bjeirmi, 1996), but definitions of stakeholders are vague. The unclear definition of stakeholder groups in this period created a gap to examine stakeholder groups (as defined by Turner and Müller, 2006 and built on by Turner et al., 2009 and Turner and Zolin, 2012; investor or owner, consumers, operators or users, project sponsor or project executive, senior supplier, project manager and project team, other suppliers and the public) to determine whether there was a collective understanding of success within groups.

Kerzner (1987) widened the perspective of CSFs, relating them to the environment, senior management and projects. The CSFs stressed the importance of all involved stakeholders understanding project processes. This also included the need for executive commitment and the importance of selecting a project manager with appropriate experience and leadership skills for the role. This is later echoed by industry surveys (The Standish Group, 1995, 2009). A weakness with Kerzner’s work is that CSFs were only listed, with no suggestions for application offered.

Pinto and Slevin (1987, 1988a, 1989) are the most widely recognised authors (Jugdev and Müller, 2005; Turner and Müller, 2005) for producing the ten success factors list shown in Table 1.

Jugdev and Müller (2005) critiqued these, highlighting how the focus was on the operational level rather than strategic management and the linking of a project to overall organisational objectives. This highlighted a need to assess a project from multiple perspectives (those involved in the operational and

strategic levels). Furthermore, it is noted that the project manager was asked how success for their projects was defined, but the project manager's role was not explicitly mentioned as a success factor.

Morris and Hough (1987) concluded that success is dependent upon multiple stakeholders' (involved in a project) perceptions and the time during the project when success is measured. Their framework is still largely based on the 'iron triangle', but encompasses a contractor perspective. This does not, however, indicate who made the decisions and whose perspective was sought. Turner (1999) noted how Morris and Hough's framework is based on objective and subjective criteria leading to some measures being incompatible.

2.3. 1990s–2000s

The 1990s to 2000s saw the development of CSF frameworks and the importance of success being dependent on internal and external stakeholders (Lester, 1998). Belassi and Tukul (1996) created a framework through reviewing literature on CSFs, which is similar to Morris and Hough (1987), but they claim it to be a new framework. Turner (1999) later produced another similar framework, raising the issue whether success factors are static, as literature evidences, or whether they have changed over time.

Belassi and Tukul's conclusion was that authors listed factors without categorising them, echoing the 1980s trend. Their framework categorised CSFs, allowing others to examine relationships between factors. Categories include factors associated with the project manager and project team, organisation and external environment. Their study illustrates how CSFs differ between industries (Müller and Turner, 2007a, further confirmed this), but again stressed how support from top management is crucial.

It was noted that authors were building on previous work (Belassi and Tukul, 1996 and Turner, 1999 being similar to Morris and Hough's, 1987 list). This implies that success factors were being reproduced and that there was a lack of new factors being created, suggesting a gap to create a more up to date list of success factors, instead of merely testing current success factors.

Table 1
Pinto and Slevin's (1987) success factor list.

Success factor	Description
1. Project mission	Clearly defined goals and direction
2. Top management support	Resources, authority and power for implementation
3. Schedule and plans	Detailed specification of implementation process
4. Client consultation	Communication with and consultation of all stakeholders
5. Personnel	Recruitment, selection and training of competent personnel
6. Technical tasks	Ability of the required technology and expertise
7. Client acceptance	Selling of the final product to the end users
8. Monitoring and feedback	Timely and comprehensive control
9. Communication	Provision of timely data to key players
10. Trouble-shooting	Ability to handle unexpected problems

2.4. 21st Century

The 21st Century is developing to be more stakeholder focussed with project success being dependent on the project life cycle (short term goals) and not on the wider organisation (long term goals) (Turner, 2004; Turner et al., 2009; Turner and Zolin, 2012). This suggests a gap to examine how the organisation views a project, thus combining short and long term goal angles.

There is growing recognition of the importance of owner and sponsor involvement in this period. Whilst the majority of studies consider the terms interchangeable (Jugdev and Müller, 2005; Wateridge, 1998), Turner et al (2009) and Turner and Zolin (2012) define the owner and sponsor as separate roles. The owner is the investor whereby the main contact is at the start of the project, whereas the sponsor is a pre, during and post project role. Müller (2003, cited in Turner et al., 2009) claimed that successful projects had an owner who actively communicated with the project manager throughout the project. They also alleged that unsuccessful projects had owners with less involvement. Jugdev and Müller (2005) claimed that this opens up a need for investigation into owners' attitudes towards project success. The importance is that the owner is responsible for the project delivering the organisation's strategy. Therefore, the owner affects the view of a project within an organisation, which can affect project success. However, they fail to note that this indicates that attitudes of those in the wider organisation (e.g. business departments such as finance, marketing) could also be examined to highlight how projects are perceived and implemented within the organisation.

Turner (2004, p. 350) encompassed the importance of owner involvement by adapting Wateridge (1998) and Müller's (2003, cited in Turner et al., 2009) work to create four success conditions:

1. "Success criteria should be agreed on with the stakeholders before the start of the project, and repeatedly at configuration review points throughout the project.
2. A collaborative working relationship should be maintained between the project owner (or sponsor) and project manager, with both viewing the project as a partnership.
3. The project manager should be empowered with flexibility to deal with unforeseen circumstances as they see best, and with the owner giving guidance as to how they think the project should be best achieved.
4. The owner should take an interest in the performance of the project".

Turner notes how these conditions must all be achieved to gain success, but it still does not guarantee success. His approach moves project success away from the project manager to the project owner having responsibility. Again, this reinforces that the project manager should not be the only viewpoint sought, but also those of other stakeholders involved in a project, including the project owner.

Turner et al. (2009) claim that evaluation of success across multiple stakeholder groups is rarely conducted (Turner and Zolin, 2012). They assert that project success and its criteria

must encompass “the perceptions of multiple stakeholders” as “inappropriate evaluation of the success criteria of an existing project could misdirect the project’s decision making, demotivate employees and establish an unproductive organizational culture” (p. 13). Literature has suggested that those involved in the project and business must be questioned independently about different areas within an organisation (Chen, 2010) (i.e. business people are asked questions only about the business and IT people are questioned only about IT). However, Turner et al. (2009) suggest that “all the stakeholders may judge all the levels of results” (p. 10). They provide detailed descriptions of how each stakeholder can be defined, identified as, “the investor or owner, the consumers, the operators or users, the project sponsor or project executive, the senior supplier, the project manager and project team, other suppliers and the public” (p. 10–13). They cite empirical work from Xue (2009, cited in Turner et al., 2009) confirming the importance of gaining differing perspectives from multiple stakeholder groups longitudinally across the project life cycle (outputs, outcomes and impact). Turner and Zolin (2012) take it outside the typical project life cycle by examining success months and years after the end of the project, to gain an insight into how success can be viewed after project completion.

A gap in Turner’s earlier work is that the identified stakeholder groups fail explicitly to mention the board, leading to the assumption that this is absorbed into the investor or owner groups. Also, the programme director and portfolio director are not differentiated and these could be within either the project executive or project team groups. Furthermore, other stakeholders within an organisation involved in the project (e.g. business departments such as finance and marketing) have not been mentioned. Therefore, these four groups (board, programme director, portfolio director and other organisational involvement) need to be defined as being included in another group or additional groups created as they are involved in the project process.

Turner and Zolin (2012) published work which interviewed project managers and programme directors and mentions the board as being involved after project completion. However, the work does not refer to portfolio directors, nor does it collect empirical data from those at board level. Therefore, this research is still regarded as original. Their work further strengthens this study to examine multiple stakeholders as they cite “one needs to consider the views of multiple stakeholders over multiple time frames” (p. 10). They further note that “evaluations of project success by stakeholders are inherently subjective and cannot be summarized naively into the iron triangle without under or overestimating project success at critical points in the project life cycle” (p. 12). This again supports this study in investigating stakeholder perceptions of success in additional areas other than the iron triangle. However, they still only consider success factors from the project manager and programme director’s perspective. Further empirical work will challenge theirs, as it questions whether the factors they create such as ‘impact on team’ and ‘impact on customer’ can be judged from only asking these two stakeholder groups as opposed to directly asking the team and customers.

This century sees projects being defined by more than just the project manager as stakeholder expectations need to be

managed. There is a focus towards stakeholder satisfaction and a move towards examining the project owner’s perception of success. The importance of senior management commitment throughout the project was reiterated as being crucial to provide the link between the organisational mission and project objectives. However, the majority of studies concentrated on the project manager’s view of success and not other internal/external stakeholders of an organisation (e.g. senior management or the external environment).

3. Research question two—identified stakeholders in the literature when defining project success

This section will present findings from the thematically analysed twenty nine articles. In addressing research question two, it was necessary to identify stakeholders recognised as having an interest in project success. Table 2 identifies authors along with the themed categories created. An analysis of stakeholders evidences the project manager as being the most highly referenced stakeholder. The literature discussed the perception of project success of certain stakeholder groups, but in the majority this was not tested empirically, which will be discussed in the next section answering question research three.

It was identified that there was a theme to empirically study the project manager, the client and the user/end user/consumer. There were also more references for stakeholders involved directly in a project (project manager, project team, client, contractor, users, customer, project sponsor or owner) and fewer references for those considered indirectly involved in a project (director, engineer, executive, external environment, external influences, internal and external management, investor, line manager, organisation, other interested parties, suppliers, owner, project executive, project leader, public, senior management, supporters and top management).

There were also limited studies examining the impact/perception of success from a senior management point of view, including top management, owners and company director, yet the majority of studies stated that top management support is essential to project success. This indicated that the more senior the role in an organisation, the less research has been undertaken, thus identifying a gap in the literature. For example, the project owner had eight references, senior management and executive management three references, other suppliers, project executive and senior supplier one reference. In order to clarify terms when describing project success, it was suggested that additional stakeholder groups could be defined; these included the board, programme director, portfolio director and other organisational involvement (e.g. business departments). Other gaps found were a need for empirical studies into the organisation and external stakeholders’ views of project success factors.

There was a recurring theme where those who make use of a system (users, clients, customers) are considered as having impact on the perceived success of a project (Jugdev and Müller, 2005; Pinto and Prescott, 1990; Pinto and Slevin, 1988b; Wateridge, 1998). This is in line with empirical studies which

Table 2
Frequency stakeholder mentioned in the literature as having an interest in project success.

Stakeholder	Number of references	Literature
Project manager	31	Andersen et al. (1987), Atkinson (1999), Barclay and Osei-Bryson (2009), Belassi and Tukul (1996), Belout and Gauvreau (2004), Cooke-Davies (1990), Smith-Doerr et al. (2004), Freeman and Beale (1992), Jugdev and Müller (2005), Kendra and Taplin (2004), Kerzner (1987), Lim and Mohamed (1999), Müller (2003), Müller and Turner (2007a, 2007b), Munns and Bjeirmi (1996), Pinto and Slevin (1987, 1988a, 1988b, 1989), Shenhar et al. (1997), Tishler et al. (1996), Toor and Ogunlana (2010), Tukul and Rom (2001), Turner (2004), Turner et al. (2009), Turner and Müller (2005, 2006), Wang and Huang (2006), Wateridge (1998), and Wenell (2000)
Project team	24	Barclay and Osei-Bryson (2009), Belassi and Tukul (1996), Bounds (1998), Cooke-Davies (1990, 2002), Smith-Doerr et al. (2004), Jugdev and Müller (2005), Kerzner (1987), Munns and Bjeirmi (1996), Pinto and Prescott (1990), Pinto and Slevin (1987, 1988a, 1988b, 1989), Shenhar and Dvir (2007), Slevin and Pinto (1986), Toor and Ogunlana (2010), Turner (1999, 2004), Turner (2009), Turner et al. (2009), Turner and Müller (2006), Wang and Huang (2006), and Wateridge (1995, 1998)
Client	18	Atkinson (1999), Barclay and Osei-Bryson (2009), Belassi and Tukul (1996), Bryde and Robinson (2005), Jugdev and Müller (2005), Kerzner (1987), Müller and Turner (2007a), Munns and Bjeirmi (1996), Pinto and Prescott (1990), Pinto and Slevin (1987, 1988b, 1989), Shenhar et al. (1997), Slevin and Pinto (1986), Toor and Ogunlana (2010), Turner et al. (2009), Turner and Müller (2006), and Wateridge (1998)
Contractor	15	Contractor—Barclay and Osei-Bryson (2009), Bryde and Robinson (2005), Jugdev and Müller (2005), Kerzner (1987), Lim and Mohamed (1999), Morris and Hough (1987), Müller and Turner (2007a), Pinto et al. (2009), Tishler et al. (1996), Toor and Ogunlana (2010), Turner (2004), Turner et al. (2009), Turner and Müller (2006), Wang and Huang (2006), and Wateridge (1998)
Users/end user/consumer		Users/end user/consumer—Atkinson (1999), Jugdev and Müller (2005), Kerzner (1987), Lim and Mohamed (1999), Müller and Turner (2007a), Munns and Bjeirmi (1996), Pinto and Prescott (1990), The Standish Group (1995), Tishler et al. (1996), Toor and Ogunlana (2010), Turner (1999, 2009), Turner et al. (2009), Turner and Müller (2006), and Wateridge (1998)
Customer	14	Customer—Atkinson (1999), Barclay and Osei-Bryson (2009), Cooke-Davies (1990, 2002), Freeman and Beale (1992), Jugdev and Müller (2005), Kerzner (1987), Lim and Mohamed (1999), Shenhar et al. (1997), Shenhar and Dvir (2007), Tishler et al. (1996), Tukul and Rom (2001), Turner et al. (2009), and Wateridge (1998)
Project sponsor		Project sponsor—Barclay and Osei-Bryson (2009), Cooke-Davies (1990, 2002), Freeman and Beale (1992), Jugdev and Müller (2005), Kerzner (1987), Morris and Hough (1987), Müller (2003), Müller and Turner (2007a, 2007b), Turner (1999, 2004), Turner et al. (2009), and Wateridge (1998)
Top management	9	Top management—Atkinson (1999), Belassi and Tukul (1996), Cooke-Davies (1990), Jugdev and Müller (2005), Kerzner (1987), Pinto and Prescott (1990), Pinto and Slevin (1987, 1989), and Slevin and Pinto (1986)
Organisation	8	Organisation—Belassi and Tukul (1996), Bounds (1998), Cleland and Ireland (2002), Jugdev and Müller (2005), Morris and Hough (1987), Pinto and Slevin (1988b), Shenhar et al. (1997), and Wang and Huang (2006)
Owner		Owner—Jugdev and Müller (2005), Lim and Mohamed (1999), Pinto and Slevin (1988b), Pinto and Slevin (1988b), Pinto et al. (2009), Turner (2004), Turner et al. (2009), Wang and Huang (2006), and Wateridge (1998)
Line manager	7	Cooke-Davies (1990), Jugdev and Müller (2005), Kerzner (1987), Müller and Turner (2007b), Toor and Ogunlana (2010), Turner and Müller (2005), and Wenell (2000)
Project leader	4	Project leader—Pinto and Slevin (1988b), Slevin and Pinto (1986), Smith-Doerr et al. (2004), and Wateridge (1998)
Project personnel		Project personnel—Kerzner (1987), Müller and Turner (2007a), Slevin and Pinto (1986), and Tishler et al. (1996)
Team members		Team members—Atkinson (1999), Belassi and Tukul (1996), Tishler et al. (1996), and Turner and Müller (2005)
Executive	3	Executive—Jugdev and Müller (2005), Kerzner (1987), and Toor and Ogunlana (2010)
Executive management		Executive management—Barclay and Osei-Bryson (2009), Kerzner (1987), and The Standish Group (1995)
Internal and external		Internal and external—Lester (1998), Morris (1997), and Pinto and Slevin (1988b)
Management		Management—Bounds (1998), Freeman and Beale (1992), and Morris and Hough (1987)
Public		Public—Lim and Mohamed (1999), Munns and Bjeirmi (1996), and Turner et al. (2009)
Senior management		Senior management—Jugdev and Müller (2005), Kerzner (1987), and Wateridge (1998)
Supporters		Supporters—Toor and Ogunlana (2010), Turner (1999), and Wateridge (1998)
Director	2	Director—Cooke-Davies (1990) and Smith-Doerr et al. (2004)
Engineer		Engineer—Smith-Doerr et al. (2004) and Wang and Huang (2006)
External environment		External environment—Belassi and Tukul (1996) and Jugdev and Müller (2005)
Investor		Investor—Barclay and Osei-Bryson (2009) and Turner et al. (2009)
Management		Management—Cooke-Davies (1990) and Toor and Ogunlana (2010)
Other interested parties		Other interested parties—Turner et al. (2009) and Turner and Müller (2006)
Project team leader		Project team leader—Pinto and Slevin (1988a, 1989)
Supplier		Supplier—Müller and Turner (2007a, 2007b)
Environment	1	Environment—Kerzner (1987)
External influences		External influences—Morris and Hough (1987)
Other suppliers/Project executive/Senior supplier		Other suppliers/Project executive/Senior supplier—Turner et al. (2009)

took place, measuring the perception of project success factors from the user, client and customer viewpoint. The only other recurring themes were impact on the parent organisation (Müller and Turner, 2007a; Turner et al., 2009) and project manager (Müller and Turner, 2007b; Turner and Müller, 2005). However, the literature did not make clear which stakeholders are involved to assess the impact on the organisation. There was limited evidence of the impact on external organisational factors, market impact, owner, contractor and supervisors.

4. Research question three—stakeholder groups perceptions of project success

The findings revealed a theme to empirically study the project manager (twelve articles—Barclay and Osei-Bryson, 2009; Belassi and Tukel, 1996; Cooke-Davies, 2002; Freeman and Beale, 1992; Jugdev and Müller, 2005; Müller and Turner, 2007a, 2007b; Tukel and Rom, 2001; Turner, 2004; Turner and Müller, 2005; Wang and Huang, 2006; Wateridge, 1998), the client (sixteen articles—Atkinson, 1999; Barclay and Osei-Bryson, 2009; Belassi and Tukel, 1996; Bryde and Robinson, 2005; Jugdev and Müller, 2005; Kerzner, 1987; Müller and Turner, 2007a; Munns and Bjeirmi, 1996; Pinto and Prescott, 1990; Pinto and Slevin, 1987, 1988b, 1989; Slevin and Pinto, 1986; Toor and Ogunlana, 2010; Turner et al., 2009; Wateridge, 1998) and the user/end user/consumer (eleven articles—Atkinson, 1999; Jugdev and Müller, 2005; Kerzner, 1987; Lim and Mohamed, 1999; Müller and Turner, 2007a; Munns and Bjeirmi, 1996; Pinto and Prescott, 1990; Tishler et al., 1996; Toor and Ogunlana, 2010; Turner et al., 2009; Wateridge, 1998). There were fewer articles referring to organisation and external stakeholder perceptions of success. It was noted that not all these studies published the results of stakeholder perceptions of success. This section will present emergent themes in stakeholder groups.

4.1. The project manager perception of success

Project manager perception was grouped into a recurring theme whereby they considered budget/cost (Barclay and Osei-Bryson, 2009; Freeman and Beale, 1992; Wateridge, 1998), schedule/time (Barclay and Osei-Bryson, 2009; Jugdev and Müller, 2005; Wateridge, 1998) and quality (Tukel and Rom, 2001; Wateridge, 1998) to be factors in measuring project success. This reiterates the studies which used the iron triangle (time, cost quality) to assess success. Stakeholder satisfaction (customer, team and end user, Müller and Turner, 2007a; Tukel and Rom, 2001; Wateridge, 1998) and being ‘people focussed’ (Turner and Müller, 2005; Wang and Huang, 2006) occurred as a theme; this, again, reiterates the previous sections findings. Whether the technology works, implementation of the software (Barclay and Osei-Bryson, 2009; Belassi and Tukel, 1996) was the last recurrent theme. Areas for research which appeared once included cooperation between the project team (Cooke-Davies, 2002), agreeing objectives (Turner, 2004), are products suitable, market feasibility (Barclay and Osei-Bryson, 2009), emotional and managerial competencies (Müller and Turner,

2007b), commercial success of a project (Wateridge, 1998), top management support, client consultation, availability of resources (Belassi and Tukel, 1996), agreement on success criteria between project manager and end users, impact on customer, business and direct success and strategic potential (Jugdev and Müller, 2005).

4.2. The client and user/end user/consumer/customer perception of success

The client perceived stakeholder satisfaction (including acceptance and meeting needs) (Müller and Turner, 2007a; Pinto and Prescott, 1990; Pinto and Slevin, 1988b; Slevin and Pinto, 1986; Turner et al., 2009; Wateridge, 1998) and communication (Belassi and Tukel, 1996; Pinto and Slevin, 1987; Slevin and Pinto, 1986) as the two main themes. The client making use of the finished product (Munns and Bjeirmi, 1996; Pinto and Slevin, 1988b) was the only other recurrent theme. Repeat business with the client (Turner et al., 2009) and time and cost were also considered in one article (Bryde and Robinson, 2005).

Quality (defined as the satisfaction of meeting user’s needs) was the most recurrent theme by the user (including end user, consumer and customer) (Jugdev and Müller, 2005; Lim and Mohamed, 1999; Munns and Bjeirmi, 1996; Tishler et al., 1996; Tukel and Rom, 2001; Turner et al., 2009; Wateridge, 1998). Close co-operation/involvement was the only other recurrent theme (Cooke-Davies, 2002; Tukel and Rom, 2001). Themes with only one article referring to them included perceived values (Jugdev and Müller, 2005), project is well accepted by users (Lim and Mohamed, 1999), users make use of the completed project or product (Munns and Bjeirmi, 1996), how the final project is sold to intended users (Pinto and Prescott, 1990), meeting the functional and technical specifications (Tishler et al., 1996), the benefit provided by the asset, obtaining benefit from project outcome, availability, reliability, maintainability, cost and time (Turner et al., 2009).

4.3. The project team perception of success

The project team was found to assess success by the level of collaboration within a project (Barclay and Osei-Bryson, 2009; Cooke-Davies, 2002). This was echoed in the user/end user/client/consumer/customer stakeholder theme; however, the owner only recognised the need for communication and not collaboration. This highlights the lack of collaboration between stakeholder groups when defining project success and could account for different perceptions of what constitutes success between groups. Other themes which were found in this group were the importance of the project mission (Pinto and Slevin, 1988a) and successfully reaching the end of the project (Munns and Bjeirmi, 1996).

4.4. Senior management—sponsor, owner and executive perception of success

Within the senior management stakeholder groups (sponsor, owner and executive), there was only one recurring theme in the

Table 3
Analysis of success factors across stakeholder groups.

Success factor theme	Project manager	Client	Sponsor	Owner	Executive	User etc.	Project team
1. Cooperation/collaboration/consultation/communication	1	1		1		1	1
2. Time	1	1	1			1	
3. Identifying/agreeing objectives/mission	1				1		1
4. Stakeholder satisfaction (quality)	1	1				1	
5. Makes use of finished product/acceptance		1				1	1
6. Cost/budget	1	1				1	
7. A project manager competencies and focus	1		1				
8. The project delivering the strategic benefits	1		1				
9. Top management support/executive commitment	1				1		

executive group where ‘identification of objectives’ occurred in two articles (Barclay and Osei-Bryson, 2009; Jugdev and Müller, 2005). Executive commitment to and corporate understanding of the project were also noted by Kerzner (1987). There were no recurring themes in the sponsor or owner stakeholder groups. This highlights a gap in the literature to conduct an empirical study into assessing senior management perception of success. The sponsor category included maximising efficiency, developing a quality reputation (Barclay and Osei-Bryson, 2009), time (Freeman and Beale, 1992) and having a project manager with appropriate focus for their work (Müller and Turner, 2007a). The owner theme noted continuous communication (Jugdev and Müller, 2005), project performance reports (Turner, 2004) and determining project success (Wang and Huang, 2006).

4.5. Summary of stakeholders perception of success

Table 3 contains the summarised success factors with a theme only being mentioned when two or more stakeholder groups recognise it. The researcher notes that this summary combines both criteria (for example, time and budget) and factors (for example, makes use of finished product and the project delivering the strategic benefits) for ease of data presentation. However, as stated, this paper focuses on success factors and the criteria will be broken down into its factors for the proposed empirical stage, an example being that time will be met by having a detailed milestone plan. The success factor numbers will be referred to in the discussion; for example, success factor one is ‘cooperation/collaboration/consultation/communication’.

Table 3 identifies that the main theme found common to five stakeholder groups (project manager, client, owner, user and project team) is communication (success factor one), which echoes findings in the success factors, whereby communication was seen as significant. Four stakeholder groups (project manager, client, sponsor and user) considered setting and meeting a schedule (success factor two) as essential for measuring and understanding project success. Success factors three to six were the third most frequent in the articles and can be classified as satisfaction and cost. This reiterates themes relating to success factor measures which occurred most frequently in the literature. Finally, success factors seven to nine were recognised in two stakeholder groups, which are related to project manager, organisation and senior management.

This is consistent with there being less empirical research conducted into the organisation and senior management’s perception of success.

Table 4
Comparison of stakeholder groups success factors.

Stakeholder	Success factors in common (see Table 3 for success factor names)	Total number of success factors in common
Client and user etc.	One, two, four, five, six	Five
Project manager and client manager and user etc.	One, two, four, six	Four
Project manager and sponsor	One, two, four, six	Four
Project manager and executive	Two, seven, eight	Three
Project manager and project team	Three, nine	Two
Client and project team	One, three	Two
User and project team	One, five	Two
Project manager and owner	One, five	Two
Client and sponsor	One	One
Client and owner	Two	One
Sponsor and user etc.	One	One
Owner and user etc.	Two	One
Owner and Project team	One	One
Executive and project team	One	One
Client and executive	Three	One
Sponsor and owner	None	None
Sponsor and executive	None	None
Sponsor and project team	None	None
Owner and executive	None	None
Executive and user etc.	None	None

4.6. Comparison of stakeholder groups perception of success

To further answer research question three, the stakeholder groups were compared against the success factors with which they were themed. Table 4 contains a comparison of stakeholder groups. This revealed that the groups with most success factors in common were client and user (success factors—communication, time, stakeholder satisfaction, makes use of finished product/acceptance and cost/budget), which was predictable, as there is overlap in the literature when defining client and user. Encouragingly, there were four success factors in common between project manager and user/client (success factors—

communication, time, stakeholder satisfaction and cost/budget). This should reduce ambiguity when defining success factors. There were fewer success factors in common between project manager and sponsor/owner, which could explain the project manager needing ‘top management support’, as they perceive those in senior management not to have as many success factors in common.

Rather surprisingly, the results revealed that the project manager and project team (success factors—communication and identifying/agreeing objectives/mission), and project team and user/client (success factors—communication and makes use of finished product/acceptance) only had two success factors in common. It could be assumed that these would be the closest groups, as the project manager would inform the project team of the success factors and these would be filtered to the user/client. There was only one success factor in common between those in senior management (sponsor, owner) and those at the client/user level (sponsor and user success factor – time; owner and user success factor – communication), which could be owing to the project manager dealing with the client/user and not senior management. The main causes for concern were the groups where there were no success factors in common (client and executive, sponsor and owner, sponsor and executive, sponsor and project team, owner and executive, executive and user etc.), which were all linked to the senior management level (executive, sponsor, owner). This highlights the discontinuity between the three main levels of senior management, project manager and users. It reveals a gap in the literature to examine the three levels in detail, to evaluate why perceptions of success factors differ and whether any differences lead to perceived project failure statistics.

5. Conclusions

In conducting the systematic review for this paper, key literature was identified via a keyword search using Web of Science combined with data analysis using Bibexcel. A subsequent coding framework was developed and thematic charts created to construct themes for discussion. A background of the evolution of project success was presented and stakeholders were identified who were recognised as having an interest in project success. A lack of clarity when defining success and stakeholder impact (the perceived importance of project success factors by different stakeholder groups) was the motivation for this paper. This paper provides a case for empirical research into multiple stakeholder groups’ perceptions of project success.

5.1. Research question one

A background literature review examined how success has been described over time. It was noted that the 1970s examined the technical aspects of a project at implementation stage and omitted focus on communication with customers. The 1980s to 1990s saw a move away from this, to look at how the project related to the client organisation. This produced lists of uncategorised success factors which started to recognise the importance of how the project manager and project team

viewed success. The 1990s to 2000s started to develop CSF frameworks and the recognition of involvement from internal and external stakeholders. The 21st Century is developing to be more stakeholder focussed, examining success and shorter term project life cycle goals. There is also a move to recognise the involvement of the owner/sponsor and the need for senior management commitment when describing success. However, authors still recognise that success is rarely evaluated across multiple stakeholder groups, as the emphasis tends to be on the perception of project managers. It was identified that additional groups needed to be defined to encompass the board, programme director, portfolio director and other organisational involvement. [Turner and Zolin \(2012\)](#) published success factors but did not directly interview the board, portfolio director or customers to ascertain their perceptions.

It was observed that authors were building on [Pinto and Slevin’s \(1987\)](#) success factors as opposed to creating original factors, which implies that current literature views these factors as adequate without the need for further research.

Four main themes were identified regarding success; Project, Stakeholders, Organisation and External. It was decided not to examine the External theme in-depth as only two references were classified into this. It was assumed that this was covered in additional literature outside the scope of this paper.

The ‘Project features’ theme highlighted that planning was linked to success, whereas current literature omitted to examine project success linked to post project learning. This also revealed that the management and selection of resources was considered important when defining success.

The ‘Project objectives’ theme revealed two categories linked to setting objectives: planning and post project. This failed to examine objectives throughout the implementation stage. The need for clarity was illustrated through numerous terms used when defining a project before commencement (‘definition’, ‘mission’, ‘requirements’, ‘vision’, ‘objectives’, ‘scope’ and ‘expectations’). There was, however, consensus in the literature that time, cost and quality are important when defining success criteria.

The ‘Stakeholder’ theme illustrated the need to define roles and responsibilities and have continual communication between stakeholders. It also identified stakeholders linked to measuring project success. This emphasised the numerous ways of describing the same stakeholders; for example, senior management, executive management, top management, as well as a need for clarification of the stakeholder groups. There was also emphasis on examining success from the project manager’s viewpoint rather than that of other stakeholders. This, coupled with evidence that the board, programme director, portfolio director and business departments in an organisation were not defined as stakeholder groups, leads to further research being suggested to examine perceptions of project success by these neglected groups.

There was consensus that various stakeholder groups should be satisfied with the project, but the understanding of project success by different stakeholder groups other than customers and the project team was omitted. This identified a gap to examine the perceived importance of project success by additional stakeholder groups and led to the development of research question two.

It was noted that the organisation was expected to gain value from a project, but the term ‘organisation’ needed further clarification as it could be interpreted as ‘all encompassing’ whereby the whole organisation (all business departments) is considered when defining project success. The emphasis on stakeholders involved in the project led to the development of research questions two and three.

5.2. Research question two

In addressing research question two, it was necessary to identify the stakeholders which had an interest in project success to determine which factors contribute to project success. The thematic analysis of the literature evidenced the project manager as the most highly cited stakeholder when measuring project success. There was a theme to empirically study project manager, client and user/end user/consumer. It was noted that the more senior a role in an organisation, the less research has been undertaken, identifying a gap in the literature for empirical work. The author suggests further clarification of stakeholder groups and investigation into the understanding of project success by different stakeholder groups. This led to the development of research question three and aimed to uncover the differing views of success factors by stakeholders.

5.3. Research question three

In answering research question three, the thematic analysis revealed that client and user had the most in common in perceiving project success, recognising five success factors. These were: communication, time, stakeholder satisfaction, makes use of finished product/acceptance and cost/budget. There were four success factors in common between the project manager and user/client (communication, time, stakeholder satisfaction and cost/budget). It was found that there were fewer success factors in common between project manager and sponsor/owner and there was only one success factor in common between those in senior management (sponsor, owner) and those at the client/user level (project recipient). The main issue highlighted was that, for some groups, there were no success factors in common, which were all linked to the senior management level (executive, sponsor,

owner). This suggested that there was no agreement in perceptions of project success factors between these groups and highlighted the discontinuity between the three main levels of senior management, project core team and project recipient. This suggested a gap to examine the three levels (senior management, project core team and project recipient) in detail to evaluate why the perceptions of success factors differ.

6. Recommendations

It is proposed that future research be undertaken to replicate the study, to ensure that the papers selected and methods employed are valid. The researcher suggests further clarification of stakeholder groups and investigation into the perceived importance placed on project success factors by different stakeholder groups. It is proposed that stakeholders for empirical work will be categorised, to be analysed into three groups of senior management, project core team and project recipient as in Table 5. These groupings occurred inductively from the findings of research questions one and two.

This also encompasses omitted groups in the literature of board, programme director, portfolio director and other organisational involvement (e.g. business departments). Empirical research is suggested to examine the discontinuity of importance placed on success factors between the three stakeholder groups. This paper recommends future work to examine success factors in-depth to develop appropriate data collection and analysis methods for measuring stakeholder perceptions of project success for empirical research.

Finally, this paper provides a background to a proposed set of papers. It provides the ‘what’ (the success factors and stakeholders perceptions of these), the ‘who’ (the identified stakeholders) and the ‘when’ (reviewing the success factor literature over time). However, further work is suggested to provide a deeper insight into the differing perceptions of project success. These would answer the ‘how’ (through a review of the current methods used to measure project success factors), the ‘why’ (empirical research to create and validate a proposed method to establish why the selected factors are perceived as important by the different stakeholder groups), the ‘where’ (by empirically studying stakeholders in both public and private organisations) and the ‘so what’ (to create and test a framework which would aim to ensure alignment of stakeholder perceptions when evaluating project success using success factors throughout the project life cycle). The final ‘so what’ would aim to achieve a greater understanding of how project success factors can be measured, to facilitate a shared stakeholder view of project success, as a successful project inspires motivation, improves communication, better team working and an increase in productivity.

References

- Andersen, E.S., Grude, K.V., Haug, T., Turner, J.R., 1987. Goal Directed Project Management. Kogan Page, London.
- Andersen, E.S., Grude, K.V., Haug, T., 2004. Goal Directed Project Management. Kogan Page, London.

Table 5
Stakeholders classified into groups.

Stakeholder group	Categorised stakeholders into group
Senior management	Board, director, executive, executive management, investor, project executive, portfolio director, programme director, owner, senior management, sponsor, top management, project sponsor
Project core team	Engineer, other organisational involvement (e.g. business departments), project leader, project manager, project personnel, project team leader, project team, team members
Project recipient	Client, consumer, customer, end users, users

- Atkinson, R., 1999. Project management: cost, time and quality. Two best guesses and a phenomenon. It's time to accept other success criteria. *International Journal of Project Management* 17 (6), 337–342.
- Barclay, C., Osei-Bryson, K., 2009. Project performance development framework: an approach for developing performance criteria & measures for information systems (IS) project. *International Journal of Production Economics* 124, 272–292.
- Belassi, W., Tukel, O.I., 1996. A new framework for determining critical success/failure factors in projects. *International Journal of Project Management* 14 (3), 141–152.
- Belout, A., Gauvreau, C., 2004. Factors affecting project success: the impact of human resource management. *International Journal of Project Management* 22 (1), 1–12.
- Blomquist, T., Hällgren, M., Nilsson, A., Söderholm, A., 2010. Project-as-practice: in search of project management research that matters. *Project Management Journal* 41 (1), 5–16.
- Blumberg, B., Cooper, D.R., Schindler, P.S., 2011. *Business Research Methods*, third ed. McGraw-Hill Higher Education, Berkshire.
- Bounds, G., 1998. The last word on project management. *Institute of Industrial Engineers Solutions* 30 (11), 41–43.
- Brady, T., Davies, A., 2009. They think it's all over, it is now: Heathrow terminal 5. The Proceedings of EURAM 2009, The 9th Conference of The European Management Review, UK, May. University of Liverpool, Liverpool, UK.
- Brady, T., Davies, A., 2010a. From hero to hubris: reconsidering the project management of Heathrow's Terminal 5. *International Journal of Project Management* 28 (2), 151–157.
- Brady, T., Davies, A., 2010b. Learning to deliver a mega-project: the case of Heathrow Terminal 5. In: Caldwell, N., Howard, M. (Eds.), *Procuring Complex Performance: Studies of Innovation in Product-Service Management*. Routledge, New York.
- Brady, T., Maylor, H., 2010. The improvement paradox in project contexts: a clue to the way forward? *International Journal of Project Management* 28 (8), 787–795.
- Bryde, D.J., Robinson, L., 2005. Client versus contractor perspectives on project success criteria. *International Journal of Project Management* 23, 622–629.
- Bryman, A., Bell, E., 2007. *Business Research Methods*, second ed. Oxford University Press Inc., New York.
- Caldicott, C.V., Dunn, K.A., Frankel, R.M., 2005. Can patients tell when they are unwanted? "Turfin" in residential training. *Patient Education & Counselling* 56, 104–111.
- Chen, L., 2010. Business-IT alignment maturity of companies in China. *Information Management* 47, 9–16.
- Cleland, D.I., Ireland, L., 2002. *Project Management: Strategic Design and Implementation*, fourth ed. McGraw-Hill, New York.
- Cobo, M.J., López-Herrera, A.G., Herrera-Viedma, E., Herrera, F., 2011. Science mapping software tools: review, analysis, and cooperative study among tools. *Journal of the American Society for Information Science and Technology* 67 (7), 1382–1402.
- Cooke-Davies, T., 1990. Return of the project managers. *Management Today*, *Business Information Management*, May, 119–121.
- Cooke-Davies, T., 2002. The "real" success factors in projects. *International Journal of Project Management* 20 (3), 185–190.
- Dalcher, D., Drevin, L., 2003. Learning from information systems failures by using narrative and antenarrative methods. The Proceedings of the 2003 Annual Research Conference of the South African Institute of Computer Scientists and Information Technologists on Enablement Through Technology, Gauteng, South Africa.
- Freeman, M., Beale, P., 1992. Measuring project success. *Project Management Journal* 23 (1), 8–18.
- Frith, H., Gleeson, K., 2004. Clothing and embodiment: men managing body image and appearance. *Psychology of Men and Masculinity* 5, 40–48.
- Ghauri, P., Grønhaug, K., 2010. *Research Methods in Business Studies*, fourth ed. Pearson Education Limited, Harlow.
- Gourlay, S., 2010. Preparing to review the literature systematically. Working with bibliographic records to plan your literature review, May ed. Kingston Business School, UK.
- Hemingway, P., Brereton, N., 2009. 'What is a Systematic Review?', What is...? Series, second ed. The University of Nottingham, UK.
- Herther, N., 2008. Web-Based Tools for Citation Data Management. AllBusiness.com.
- Jugdev, K., Müller, R., 2005. A retrospective look at our evolving understanding of project success. *Project Management Journal* 36 (4), 19–31.
- Kendra, K., Taplin, L.J., 2004. Project success: a cultural framework. *Project Management Journal* 35 (1), 30–45.
- Kerzner, H., 1987. In search of excellence in project management. *Journal of Systems Management* 38 (2), 30–40.
- Kloppenborg, T., Opfer, W.A., 2002. The current state of project management research: trends, interpretations, and predictions. *Project Management Journal* 3 (2), 3–18.
- Kwak, Y., Anbari, F., 2009. Analyzing project management research: perspectives from top management journals. *International Journal of Project Management* 27, 435–446.
- Lester, D.H., 1998. Critical success factors for new product development. *Research Technology Management* 41 (1), 36–43.
- Levy, Y., Ellis, T.J., 2006. A systems approach to conduct an effective literature review in support of information systems research. *Informing Science: International Journal of an Emerging Transdiscipline* 9, 181–211.
- Lim, C.S., Mohamed, M.Z., 1999. Criteria of project success: an exploratory re-examination. *International Journal of Project Management* 17 (4), 243–248.
- Morris, P.W.G., 1997. *The Management of Projects*, second ed. Thomas Telford, London.
- Morris, P.W.G., Hough, G.H., 1987. *The Anatomy of Major Projects: A Study of the Reality of Project Management*. John Wiley & Sons Ltd., Chichester.
- Müller, R., 2003. Communication of IT project sponsors and managers in buyer-seller relationships. Unpublished DBA.
- Müller, R., Turner, J.R., 2007a. Matching the project manager's leadership style to project type. *International Journal of Project Management* 25, 21–32.
- Müller, R., Turner, R., 2007b. The influence of project managers on project success criteria and project success by type of project. *European Management Journal* 25 (4), 298–309.
- Munns, A.K., Bjeirmi, B.F., 1996. The role of project management in achieving project success. *International Journal of Project Management* 14 (2), 81–88.
- Narin, F., Olivastro, D., 1994. Bibliometrics/theory, practice, and problems. *Evaluation Review* 18, 65–76.
- Neuman, W.L., 2011. *Social Research Methods*, sixth ed. Pearson Education Limited, Boston.
- Office of Government and Commerce, 2009. PRINCE2. Office of Government and Commerce, UK.
- Peters, T. 1999. The WOW project: in the new economy, all work is project work. *Fast Company*, 24, 138–144.
- Pinto, J.K., Prescott, J.E., 1990. Planning and tactical factors in project implementation success. *Journal of Management Studies* 27 (3), 305–328.
- Pinto, J.K., Slevin, D.P., 1987. Critical factors in successful project implementation. *IEEE Transactions on Engineering Management* 34 (1), 22–28.
- Pinto, J.K., Slevin, D.P., 1988a. Project success: definitions and measurement techniques. *Project Management Journal* 19 (1), 67–73.
- Pinto, J.K., Slevin, D.P., 1988b. Critical success factors across the project life cycle. *Project Management Journal* 19 (3), 67–75.
- Pinto, J.K., Slevin, D.P., 1989. Critical success factors in R&D projects. *Research Technology Management* 32 (1), 31–36.
- Pinto, J.K., Slevin, D.P., English, B., 2009. Trust in projects: an empirical assessment of owner/contractor relationships. *International Journal of Project Management* 27, 638–648.
- Pritchard, A., 1969. Statistical bibliography or bibliometrics. *Journal of Documentation* 25 (4), 348–349.
- Project Management Institute, 2008. *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, fourth ed. Project Management Institute, Newtown Square, PA.
- Ritchie, J., Lewis, J., 2010. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, third ed. Sage, London.
- Saunders, M., Lewis, P., Thornhill, A., 2009. *Research Methods for Business Students*, fifth ed. Financial Times/Prentice Hall, Harlow.
- Savill, R., Millward, D., 2009. Thousands Stranded by Heathrow Terminal 5 Baggage Failure. *Telegraph*, UK.
- Shenhar, A.J., Dvir, D., 2007. Project management research: the challenge and opportunity. *Project Management Journal* 3 (2), 93–99.

- Shenhar, A.J., Levy, O., Dvir, D., 1997. Mapping the dimensions of project success. *Project Management Journal* 28 (2), 5–13.
- Slevin, D.P., Pinto, J.K., 1986. The project implementation profile: new tools for project managers. *Project Management Journal* XVII (4), 57–70.
- Smith-Doerr, L., Manev, I.M., Rizova, P., 2004. The meaning of success: network position and the social construction of project outcomes in an R&D lab. *Journal of Engineering and Technology Management* 21, 51–81.
- The Standish Group, 1995. *CHAOS Summary 1995*. The Standish Group International, Boston.
- The Standish Group, 2009. *CHAOS Summary 2009*. The Standish Group International, Boston.
- Tishler, A., Dvir, D., Shenhar, A., Lipovetsky, S., 1996. Identifying critical success factors in defense development projects: a multivariate analysis. *Technological Forecasting and Social Change* 51, 151–171.
- Toor, S., Ogunlana, S.O., 2010. Beyond the ‘iron triangle’: stakeholder perception of key performance indicators (KPIs) for large-scale public sector development projects. *International Journal of Project Management* 28, 228–236.
- Tukel, O.I., Rom, W.O., 2001. An empirical investigation of project evaluation criteria. *International Journal of Operations & Production Management* 21 (3), 400–416.
- Turner, J.R., 1999. *The Handbook of Project-Based Management: Improving the Processes for Achieving Strategic Objectives*, second ed. McGraw-Hill Publishing Co, London.
- Turner, J.R., 2004. Five conditions for project success. *International Journal of Project Management* 22 (5), 349–350.
- Turner, J.R., 2009. *The Handbook of Project-Based Management*, third edition. McGraw-Hill, New York.
- Turner, J.R., Müller, R., 2005. The project manager’s leadership style as a success factor on projects: a review. *Project Management Journal* 36 (2), 49–61.
- Turner, J.R., Müller, R., 2006. Choosing Appropriate Project Managers: Matching their Leadership Style to the Type of Project. Project Management Institute, Newtown Square.
- Turner, J.R., Zolin, R., 2012. Forecasting success on large projects: developing reliable scales to predict multiple perspectives by multiple stakeholders over multiple time frames. *Project Management Journal* 43 (5), 87–99.
- Turner, J.R., Zolin, R., Remington, K., 2009. Modelling success on complex projects: multiple perspectives over multiple time frames. In: Gemuenden, H.-G. (Ed.), *The Proceedings of IRNOP9, the 9th Conference of The International Research Network of Organizing by Projects*, Berlin, June. Technical University of Berlin, Berlin.
- Victor, L., 2008. Systematic reviewing. *Social Research Update*, p. 54.
- Wang, X., Huang, J., 2006. The relationships between key stakeholders project performance and project success: perceptions of Chinese construction supervising engineers. *International Journal of Project Management* 24, 253–260.
- Wateridge, J., 1995. IT projects: a basis for success. *International Journal of Project Management* 13 (3), 169–172.
- Wateridge, J., 1998. How can IS/IT projects be measured for success? *International Journal of Project Management* 16 (1), 59–63.
- Web of Science, 2011. Database Information. Web of Knowledge. Thomson Reuters, New York.
- Webster, J., Watson, R.T., 2002. Analyzing the past to prepare for the future: writing a literature review. *MIS Quarterly* 26 (2), 13–23.
- Wenell, T., 2000. *Wenell on Projects*. Uppsala Publishing House, Sweden.
- Whittemore, R., Knafl, K., 2005. The integrative review: updated methodology. *Journal of Advanced Nursing* 52 (5), 546–553.