

2017

# Relationship Between Project Managers' Age, Years of Project Experience, and Project Success

Luli Hoxha  
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# Walden University

College of Management and Technology

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Lulzim Hoxha

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2018

Abstract

Relationship Between Project Managers' Age, Years of Project Experience,  
and Project Success

by

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MBA, Aspen University, 2009

BEng, Polytechnic University of Tirana, 2001

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

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## Abstract

Project failures are costly to businesses and are increasingly present in the news. In many industries, projects have a 40% failure rate, and 90% of venture capital projects fail even to start. Project managers play a key role in delivering successful projects. The purpose of this correlational study was to examine the relationship between project manager's age and years of project experience and project success. The population of this study consisted of 108 active or former project managers working in Albania or Kosovo who were LinkedIn members. The study was not grounded in a named theory; rather, based on the conceptual framework that project managers' age and years of project experience may predict project success. The independent variables were project managers' age and years of project experience, and the dependent variable was project success. Data were collected using a questionnaire posted on the SurveyMonkey website and analyzed using multiple linear regression. The results revealed that age has a negative, though not statistically significant, effect on project success. Project managers' experience has a positive influence on project success; this effect is also not statistically significant. The coefficient of determination  $R^2$  was .02, which demonstrated that only 2% of project success relates to the independent variables. The study may contribute to positive social change by helping project managers and leaders of international development agencies, that conduct project to positively affect social change through improvements in areas such as agriculture, water, sewage, health, nutrition, education, environment, and social development. An increased rate of project success may translate into an improvement of livelihood for local communities in low-income countries.



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## Dedication

First and foremost, I dedicate this work to my kids: Loni, Lona, and Led (core part of 5L). Kids: keep growing, keep exploring, keep learning. I could not have done this work without full support from my loving and caring wife, Linda. She believed in me at times when I thought I could not continue further.

I dedicate this work to my parents, who from early stages of my life believed in education. Finally, I dedicate this work to my extended Hoxha family, whose work for education and freedom in Kosovo never ended. I hope I have continued the work on this journey.



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## Section 1: Foundation of the Study

Projects are instruments used by companies to conduct operations and increase their success rate in business (Kremljak, Palcic, & Kafol, 2014). In project-based businesses, an increase in the project success rate translates into an increase in business profits (Ekrot, Kock, & Gemünden, 2016). However, the Standish Group (2015) reported that only 29% of projects are considered successful; therefore, a high project failure rate negatively affects business profits. Koops, Bosch-Rekveldt, Coman, Hertogh, and Bakker (2016) recognized project managers' influence on project success. In this study, I investigated whether a correlation exists between project manager's age and years of project experience and project success.

### **Background of the Problem**

According to the Standish Group (2014), more than 30% of projects will get canceled before completion, and more than 50% of all projects started will cost almost twice the originally estimated cost. Blixt and Kirytopoulos (2017) reported that the project manager's lack of experience is a factor in failed project completion. Allen, Alleyne, Farmer, McRae, and Turner (2014) and Ekrot et al. (2016) noted that project management is a valuable investment for businesses because business owners use project management to help them save money by avoiding project failures.

Pinto and Slevin (1988) defined project success as dealing with internal issues and external client issues. According to Davis (2014), many factors help to make a project successful. However, different stakeholders, such as clients, end users, project managers, and sponsors, may define success factors differently (Davis, 2014). Besteiro, Pinto, and

Novaski (2015) identified the project manager's experience as one of the critical factors for project success.

According to Blaskovics (2016), project managers are instrumental in project success. Project management experience is a key criterion in the selection of project managers (Keren, Hadad, & Laslo, 2014). According to Chipulu, Neoh, Ojiako, and Williams (2013), employers view project manager's experience as an important factor when placing ads for hiring. Lindebaum and Jordan (2012) suggested that the project manager's age affects a project's outcome.

### **Problem Statement**

Project failures are costly to businesses and are increasingly present in the news (Sage, Dainty, & Brookes, 2014). Across different industries, as projects have a 40% failure rate, 90% of venture capital projects fail even to start (Shepherd, Haynie, & Patzelt, 2013). The general business problem was that project failure affects businesses' bottom line, including profitability and share price (Savolainen, Ahonen, & Richardson, 2015). The specific business problem was that business owners have limited information about the relationship among project managers' age and years of project experience and project success.

### **Purpose Statement**

The purpose of this quantitative, correlational study was to examine whether a relationship exists between project managers' age and years of project experience and project success. The independent variables were project managers' age and years of project experience; the dependent variable was project success. The target population



consisted of project managers working in Albania and Kosovo. According to Ika and Donnelly (2017), international development projects cover many areas, including areas involving social change, such as agriculture, transportation, water, electricity, energy, sewage, mines, health, nutrition, population and urban development, education, environment, social development, reform, and governance. An increased rate of project success might translate into improvement of livelihood for local communities in which project managers implement projects.

### **Nature of the Study**

According to Molina-Azorin, Bergh, Corley, and Ketchen (2017), three research methods exist: quantitative, qualitative, and mixed methods. McCusker and Gunaydin (2015) stated that quantitative methods are appropriate for measuring something, while qualitative methods deal more with participants' experiences. Molina-Azorin et al. (2017) concluded that mixed methods combine quantitative and qualitative methods to expand analyses of complex phenomena. Davis (2014) conducted a longitudinal review of the literature related to project success and demonstrated that project success had been researched thoroughly since the 1970s. In this study, I examined the relationship between project managers' age and years of project experience, and project success. My method of research was quantitative and dealt with statistics and numbers.

Park and Park (2016) noted that qualitative methods are suitable for discovery of a phenomenon, and Palinkas et al. (2015) suggested that qualitative methods are used for exploratory studies and to gain a deep understanding of a phenomenon. The variables of my study were easily measured, and established instruments used in project management

research existed. Therefore, I excluded qualitative methods, because, in this research, I wanted to measure the influence of two independent variables on the dependent variable. Long (2014) described mixed-methods research methodology as a combination of qualitative and quantitative methods. The mixed-methods research methodology was not suitable for this study because of time constraints and the intense data collection process.

According to Geuens and De Pelsmacker (2017), controls should be in place in experimental design so that the researcher can understand and explain certain changes. Because I could not have controls in my study, I did not use experimental design. In quasi-experimental design, some of the participants receive an intervention while another group of participants does not (Connelly, Sackett, & Waters, 2013). In my study, I did not have control over my participants for treatment. Therefore, I could not use quasi-experimental design. According to Curtis et al. (2016), correlation happens when one variable (X) increases and another variable (Y) increases or decreases. My research intent was to ascertain whether a relationship exists between the independent variables and the dependent variable. Therefore, correlational design was the most suitable design. The correlational design indicates whether a correlation exists between variables and the strength of that relationship. Therefore, I used correlational design for my study. However, correlation does not equal causation (Russo, 2011).

### **Research Question**

Does a relationship exist between project managers' age and years of project experience and project success?

## Hypotheses

Null hypothesis (H<sub>0</sub>): The linear combination of project managers' age and years of project experience will not significantly predict project success.

Alternative hypothesis (H<sub>1</sub>): The linear combination of project managers' age and years of project experience will significantly predict project success.

## Theoretical Framework

Slevin and Pinto (1987) developed the critical success factors (CSF) theory for project success. Slevin and Pinto listed 10 critical success factors through which project managers evaluate project success. CSF theory relates to project success, which was the dependent variable in my study. However, the independent variables of my study, project managers' age and years of project experience, are not part of CSF theory. Therefore, CSF theory was not suitable for my study.

Human capital theory, as developed by Becker (Teixeira, 2014), was also considered. As mentioned by Teixeira (2014), education plays a central role in human capital theory. However, age and experience are not part of human capital theory. Therefore, human capital theory was not suitable for my study.

Another source that I considered for the study's theoretical framework was Hofstede's (1980) work on culture and cultural dimensions. According to Ferreira, Serra, and Pinto (2014), Hofstede defined four cultural dimensions. However, Hofstede did not include age and experience in his four dimensions; therefore, I did not use Hofstede's theory as the theoretical framework for this study.

According to Nguyen (2015), no universal theory of project management exists. Therefore, this study was not grounded in a named theory; rather, I grounded it in the theoretical framework that project managers' age and experience predict project success. Project managers have an important role in achieving project success (Blaskovics, 2016). According to Dulaimi and Langford (1999), age affects project managers' productivity. Furthermore, project managers' experience has a significant role in project success (Burger, Verster, & Zulch, 2015). Therefore, I proposed that project managers' age and experience affect project success; this proposition constituted the study's theoretical framework.

### **Operational Definitions**

*Critical success factors:* Slevin and Pinto (1987) defined 10 critical success factors (CSF). Managing CSF properly will help project managers to achieve positive outcomes from projects (Slevin & Pinto, 1987). The CSFs are project mission, top management support, project schedule/plans, client consultation, personnel, technical tasks, client acceptance, monitoring and feedback, communications, and troubleshooting (Slevin & Pinto, 1987).

*Project Implementation Profile (PIP):* The PIP is an instrument designed to measure the status of CSFs throughout the project lifecycle. It consists of 50 items used to evaluate a project and 12 items to assess project success (Slevin & Pinto, 1987)

*Project managers' years of experience:* Project managers' years of experience in the field of project management leading or directing projects (Ceric, 2014; Remer & Ross, 2014).

*Project management success:* Project management success is a measurement of project efficiency (Blaskovics, 2016).

*Project success:* Project success is a measurement of project effectiveness (Blaskovics, 2016).

### **Assumptions, Limitations, and Delimitations**

In this section, I present assumptions, limitations, and delimitations related to my study. According to Francis (2014), researchers need to make assumptions so that they can function in a socially complex world. Connelly (2013) stressed the importance of understanding the assumptions in any research study.

#### **Assumptions**

Assumptions are critical elements in any research because, through assumptions, a researcher can accept certain beliefs that cannot be proven true. In any study, the assumptions section contains information that is important in understanding the study results (Kirkwood & Price, 2013; Rule & John, 2015). In this study, four assumptions existed. My first assumption was the participants would respond to the survey with accuracy and honesty. The second assumption was that I would be able to get a statistically significant number of participants in my target population to respond to the survey. The third assumption was that participants would have or could use a computer to access the survey. The fourth assumption was that the participants would have basic computer and Internet skills to navigate and answer the survey.

### **Limitations**

Limitations are the internal or external shortcomings that every study has. The researcher chooses the internal limitations or the scope of a study, whereas external limitations may affect the study result's potential for generalization (Connelly, 2013). Limitations are outside the researcher's control and can influence the results of the study (Connelly, 2013). This study had two limitations. The first limitation was the use of an online survey, in that I had no way of controlling whether the participants responded accurately. The second possible weakness was the response rate to the survey. If I received a low rate of response, then the findings might not be statistically significant for my target population.

### **Delimitations**

Delimitations are decisions that a researcher has made about the frame of a research study (Rule & John, 2015). For this study, I selected project managers working in Albania or Kosovo with membership in LinkedIn. Using the Likert scale was another delimitation because participants could select from a limited number of response options in the survey, which may have led to imprecise responses.

### **Significance of the Study**

According to Shenhar, Levy, and Dvir (1997), projects are important because they influence many aspects of business: sales, income, profits, and market share. Ika and Donnelly (2017) noted a high project failure rate in development projects as well. In this section, I present the significance of the study related to business practice and social change.

### **Contribution to Business Practice**

This study may aid business owners by determining if a correlation exists between project manager's age and work experience on project success. By using work experience as criteria, business owners can make better decisions in selecting and promoting project managers to increase the success rate of projects. Increasing the project success rate could cause businesses to become more profitable.

Successful projects have a positive influence on businesses (Ekrot et al., 2016). According to Pollack and Adler (2014), project management increases productivity in small and medium enterprises. Bhoola (2015) suggested that an increased interest in achieving success in projects exists in large corporations. Therefore, this study may have an influence on large corporations as well as small and medium-sized businesses. For small and medium-sized businesses, successful projects could mean increased productivity and, in the longer term, the difference between bankruptcy and survival, while for large public corporations, project success could translate into higher share price and more investment in innovation. Likewise, for nonprofit organizations, having more successful projects could mean an increased effect of projects for their target population.

### **Implications for Social Change**

Business owners undertake projects in different industries and in nonprofit organizations. Projects affect many social groups. Successful projects can improve positive economic effect on the local industries. By understanding if a correlation exists between project managers' age and experience, and project success, businesses and nonprofit organizations may have more information to make better decisions in selecting

project managers and possibly increase their chances for successful projects. One of the criteria for successful projects is delivery within the schedule (Lehtonen, 2014). Timely delivery of infrastructure projects can better the livelihood of communities where projects are implemented. Ika and Donnelly (2017) noted the importance and widespread influence of international development projects for social change through development. An increased rate of project success may translate into improvement of livelihood for local communities where projects are implemented.

### **A Review of the Professional and Academic Literature**

The majority of sources in my literature review were peer-reviewed journal articles. In addition to peer-reviewed journal articles, I included relevant published conference papers, published doctoral dissertations, textbooks, and content from professional organizations. I organized the literature review according to major topics related to my study. The topics were project managers' age and experience as independent variables, and project success as a dependent variable. I concluded the literature review by introducing the measurement of variables and presenting a literature review summary.

To develop a comprehensive professional and academic literature review, I concentrated my search for peer-reviewed articles within 5 years of my anticipated graduation year. I expanded the search to include other academic articles that represented seminal work, even though those articles did not fall within 5 years of my anticipated graduation date. To collect all the required sources, I searched the following libraries, databases, and websites: Business Source Complete, ABI/INFORM Complete, Emerald



Management, SAGE Premier, ScienceDirect, ProQuest Central, Academic Search Complete, ACM Digital Library, Computers and Applied Sciences Complete, Google Scholar, Research Gate, Web of Science, and dissertations and doctoral studies at Walden University. I used the following key terms in my queries: *project managers' age*, *managers' age*, *project manager's work experience*, *critical success factors*, *project implementation profile*, *project success*, *project failure*, *project management*, *project management success*, and *project manager*. I employed wildcards to capture a broad set of the aforementioned queries. In Table 1, I present an overview of all references used in this section. As shown in Table 1, 85% of the references were published within 5 years (2014-2018) of anticipated chief academic officer (CAO) approval, and 94% of the references are peer-reviewed journal articles.

Table 1

*Overview of Literature Review References*

Source	References			
	Within 5 years (2014-2018)	Older than 5 years	Total	%
Peer-reviewed articles	103	20	123	94%
Dissertations	7	0	7	5%
Books	1	0	1	1%
Total	111	20	131	100%

### Application to the Applied Business Problem

The purpose of this quantitative, correlational study was to examine the relationship between project managers' age and years of project experience and project success. The hypotheses of this study were the following:

Null hypothesis ( $H_0$ ): The linear combination of project managers' age and years of project experience will not significantly predict project success.

Alternative hypothesis ( $H_1$ ): The linear combination of project managers' age and years of project experience will significantly predict project success.

This study was not grounded in a named theory. Rather, the study was grounded in the theoretical proposition that age and experience are useful predictors of project manager success (see Figure 1). In the following sections of the literature review, I provide references related to my theoretical proposition.

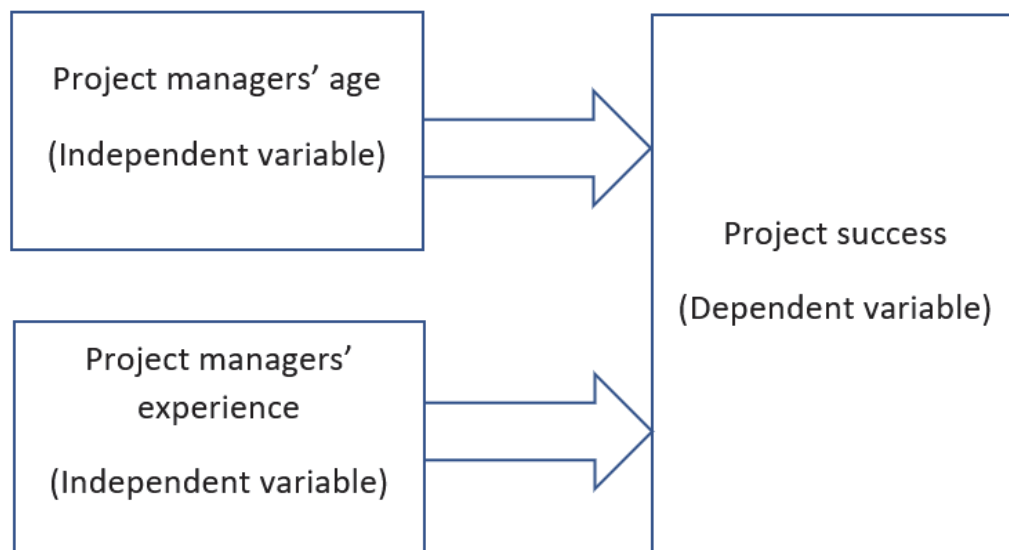


Figure 1. Theoretical framework model.

### **Project Managers' Age and Experience (Independent Variables)**

In this section, I briefly discuss the role of a project manager and the influence of two independent variables of this study: project managers' age and experience. I cover the influence of project managers' age and experience on different aspects of success, including project success. I demonstrate that the literature review is thorough by comparing and contrasting studies related to project managers' age and years of project experience and project success.

According to the literature, no consensus exists about the role of a project manager. According to the PMI-published book *A Guide to the Project Management Body of Knowledge* (PMBOK), a project manager is in charge of a team with a goal to get project results (PMI, 2017). A project manager's role is different from a functional manager's role in an organization (PMI, 2017). In contrast, Bezak and Nahod (2011) listed six activities for project managers: managing, organizing, recruiting, planning, controlling, and coordinating. Although these roles are similar to general management functions, Bezak and Nahod added *skills* to the project manager competencies to differentiate project management from general management. Medina and Medina (2014), similar to Bezak and Nahod (2011), further elaborated the role of project manager by adding the team selection activity. However, according to Medina and Medina, the selection activity is about negotiating between project managers and functional managers in selecting team members. Moreover, Medina and Medina added activities such as training, development, and performance evaluation of team members, bringing the project manager's role closer to that of human resource management (HRM). Therefore,

Medina and Medina advocated for a more active role for project managers in the HRM aspect of selecting, training, and developing project members. Thus, the project manager's role is ever changing and expanding.

### **Project Managers' Age**

Thanks to improved health and wellness in Western Europe, the United States, and Canada, people are more active and continue working at older ages. Western countries have updated legislation to eliminate mandatory retirement (Hofstetter & Cohen, 2014; Lain & Loretto, 2016; Zaniboni, 2015). The trend of people being active at older ages represents a new challenge for managing a workforce that is more diverse in terms of age (Lain & Loretto, 2016). Age discrimination is the most prevalent form of discrimination in workplaces (Zaniboni, 2015). In this section, I present analysis and synthesis of relevant literature related to project managers' age. As I demonstrate in the sections below, a lack of research exists related to the influence of project managers' age on project success.

Kulik, Ryan, Harper, and George (2014) noted that, given an older and more diverse workforce, it is necessary to revisit the tendency to regard experience and age as interchangeable attributes. Kulik et al. argued that researchers need to distinguish between age and experience. However, hesitation exists about factoring in age for hiring or selecting employees for projects (Seboni & Tutesigensi, 2015). For example, age is a factor in selecting project managers but is not mentioned specifically, due to concern for breach of labor laws and the potential for lawsuits (Seboni & Tutesigensi, 2015). Seboni

and Tutesigensi (2015) conducted a study in Botswana and interviewed 15 participants from top management regarding the selection of project managers.

Age influences the performance of individuals (Dulaimi & Langford, 1999).

Younger project managers concentrate more on technical skills compared to older project managers (Dulaimi & Langford, 1999). Dulaimi and Langford (1999) surveyed 62 project managers in the United Kingdom. Chipulu et al. (2014) listed 10 project success/failure indicators (PSFIs) critical to minimizing the following project success/failure factors (PSFFs): project control and extraorganizational goals. Older project managers were found to place higher importance on project control and extraorganizational goals compared to younger project managers (Chipulu et al., 2014). Chipulu et al. and Ojiako et al. (2015) reported that age also influenced agreements between stakeholders and project managers. Older project managers were more likely to review and possibly reverse their decisions during project implementation and handover stages (Ojiako et al., 2015). Chipulu et al. conducted interviews with 40 project practitioners in Brazil, China, Greece, Nigeria, Thailand, the United Arab Emirates, the United Kingdom, and the United States. After conducting the interviews, Chipulu et al. also surveyed 1,313 project practitioners. Ojiako et al. delivered questionnaires to 1,413 participants in 29 countries. Of the 1,413 participants approached, only 1,255 responded (Ojiako et al., 2015). According to Ojiako et al., 84% of responses were from Brazil (219), China (211), Nigeria (224), Thailand (135), the United Arab Emirates (141), the United Kingdom (144), and the United States (125). In contrast with Chipulu et al., Larsson, Eriksson, Olofsson, and Simonsson (2015) argued that age does not influence

project success. Larsson et al. surveyed 162 project managers working for the largest public infrastructure client in Sweden.

**Career.** Age has an important role in the careers of project managers, managers, professionals, and employees. As project managers, managers, professionals, and employees get older, their perception of career progression changes (Bown-Wilson & Parry, 2013; Visagie & Koekemoer, 2014). Bown-Wilson and Parry (2013) interviewed 27 male and 13 female managers, aged 50 and over, from two large financial services organizations in the United Kingdom. Visagie and Koekemoer (2014) interviewed 24 senior managers located in Johannesburg, South Africa. Hennekam (2015) found that as the workers aged, they had higher career satisfaction. Therefore, a positive correlation between age and career satisfaction exists (Visagie & Koekemoer, 2014). Hennekam surveyed 920 participants and interviewed 11 working individuals in the Netherlands. However, Fernando, Amaratunga, and Haigh (2014) conducted a study to investigate career success and found that age is the least important career success factor. Fernando et al. surveyed 99 professional women in the construction industry in the United Kingdom.

Differing views exist on when age starts to influence career success. In their study, Baruch, Grimland, and Vigoda-Gadot (2014) concluded that age and career progression form an “inverse U-shaped curve.” Baruch et al. found that career progression reaches its highest point at age 50, after which it starts to decline. Baruch et al. surveyed 545 managers and professionals working in the private sector in Israel. Similarly, Bown-Wilson and Parry (2013) found that as managers get older, they tend to be more conservative about the prospect of moving to newer jobs, which affects their

career growth. However, Bown-Wilson and Parry did not provide any specific age at which managers start to become more conservative. Henderson, Stackman, and Koh (2013) reported similar findings and stated that female project managers younger than 49 are still growing or in career-building mode, whereas female project managers older than 50 have completed this phase. Henderson et al. surveyed 211 project managers working in North America.

Managers describe career success in subjective terms, such as intrinsic or extrinsic satisfaction. Intrinsic career satisfaction is related to the perceived appreciation and career progression in the workplace, while extrinsic job satisfaction is related to the level of payments, administrative policies, job security, and overall conditions at the workplace (Rasheed & Wilson, 2014). Rasheed and Wilson (2014) surveyed 194 participants in Kerala state, India. Santos (2016) and Visagie and Koekemoer (2014) indicated that managers' views of their career fulfillment depended on their age. Santos interviewed 87 academics in Portugal.

Researchers have reported varying results as to how age influences career satisfaction and whether managers view career fulfillment as extrinsic or intrinsic. Bal, Kleef, and Jansen (2015) showed in their research that having a personalized career plan affects employees' intrinsic and extrinsic career fulfillment. These results are more pronounced with older employees than with younger ones (Bal et al., 2015). Bal et al. invited 5,605 employees from a professional service firm in the Netherlands to take part in a survey. However, only 553 completed the final survey (Bal et al., 2015).

As employees get older, they progress in their careers and increase their skills. The resulting career progression and increased skills lead to higher salaries and, consequently, extrinsic career satisfaction (Hennekam, 2016). Hennekam (2016) noted this pattern in reporting the results of a survey of 1,112 individuals registered at a specialized job agency in the Netherlands. However, Tlaiss and Mendelson (2014) obtained different results in their research on 346 female Lebanese managers, showing that older participants indicated less extrinsic satisfaction compared to younger participants. Tlaiss and Mendelson's research results accord with Sturges's (1999) research results. Tlaiss and Mendelson and Sturges indicated that older managers tend to evaluate their career success more in terms of personal achievement, than in terms of external assessments such as salary or position in a company. Sturges stated that as managers get older, they reach their peak career progression in a company and therefore begin to rely more on personal achievements for career fulfillment. Sturges surveyed 36 managers—18 men and 18 women—employed by a telecommunications company based in the United Kingdom.

**Learning.** Learning is a critical aspect of project managers' development. In interviews that Ramazani and Jergeas (2015) conducted with 29 project managers working in the oil and gas industry in Calgary, Alberta, participants mentioned the need for learning from previous experiences. The project managers also mentioned the importance of younger project managers learning from their older and more senior colleagues in the workplace (Ramazani & Jergeas, 2015). Neverauskas, Bakinaite, and Meiliene (2014) noted that employers need to develop younger project managers through



learning. Neverauskas et al. conducted a literature review related to project success factors. However, Bausch, Michel, and Sonntag (2014) found that previous research was inconclusive as to the influence that age has on the results of learning. Bausch et al. surveyed trainees in online learning. Bausch et al. invited 1,101 trainees to take part in the survey. However, only 45 answered all three surveys.

Society generally perceives older people as less able to learn than younger people. Froehlich (2016) indicated that an indirect relationship exists between age and learning. Furthermore, Bausch et al. (2014) mentioned that older trainees are not seen as positively as younger trainees when it comes to learning. Froehlich surveyed 139 managers in the banking sector in Austria. Bausch et al. found in their research that older women tend to be more successful in learning than younger women are. The opposite was found for men, where older men have less success in learning compared to younger men (Bausch et al., 2014).

Learning affects the careers of managers and project managers and ultimately may have an influence on project success and company productivity. Hennekam (2015) noted that learning is a skill that distinguishes younger employees from older ones, putting older employees at a disadvantage. Froehlich, Beausaert, Segers, and Gerken (2014) disagreed with this notion, arguing that it is not age but active learning that affects employability and career. Further, Froehlich et al. advocated for better organizational and national policies related to learning, so that equal opportunity exists regardless of age. Improved organizational and national policies would mean better chances for employability (Froehlich et al., 2014). Froehlich et al. based these arguments on a survey

of 780 employees in three organizations in Austria and the Netherlands. Pejrova (2014), based on a survey of 35 workers under 50 years of age who were working in the Pardubice Region of the Czech Republic, reported that older employees are interested in learning. Therefore, Pejrova contended, it is in the best interest of companies to train them so that they become more productive.

Researchers have also observed differences in training content and methods for younger and older employees. Marneros and Gibbs (2015) reported that younger managers were more interested in general training topics, such as communication and foreign languages, than older managers were. Managers over 50 years old preferred business training topics (Marneros & Gibbs, 2015). Marneros and Gibbs invited 474 managers in Cyprus to participate in a survey. Only 190 filled in the questionnaire (Marneros & Gibbs, 2015). Crawford, French, and Lloyd-Walker (2013) reported a generational difference for project managers in relation to learning. Project managers in the younger generation placed more emphasis on project management training than those of the older generation (Crawford et al., 2013). Crawford et al. interviewed 33 project managers working in Australia. Project managers were in three categories: Baby Boomers (born 1946–1964), Gen Xers (born 1965 to 1979), and GenY (born 1980 to late 1990s; Crawford et al., 2013). Lloyd-Walker, French, and Crawford (2016) conducted 75 interviews across three industry sector groups in Australia: engineering/construction, information technology/business, and the public sector.

**Leadership.** According to DuBois, Hanlon, Koch, Nyatuga, and Kerr's (2015) review of literature on the leadership style of project managers, leadership qualities are

essential for project managers, and these skills may improve the project success rate. Age influences leadership effectiveness (Buengeler, Homan, & Voelpel, 2016). Buengeler et al. surveyed in two separate studies 113 and 121 leaders in a large customer sales and service organization located in Germany. According to Spisak, Grabo, Arvey, and van Vugt (2014), candidates' age affects the selection of leaders. Spisak et al. conducted two experiments. Sixty participants were in the first experiment, and 38 participants were in the second experiment (Spisak et al., 2014). Participants were students from VU University Amsterdam (Spisak et al., 2014). Amin and Kamal (2016) conducted a study to analyze the influence of leadership qualities on project team performance. Amin and Kamal concluded that older team members had more influence on leadership direction due to their longer work experience. Amin and Kamal distributed 450 questionnaires to project team members located in Pakistan. Participants returned only 379 completed questionnaires (Amin & Kamal, 2016). Schreiber (2015) reported that younger leaders received less acceptance as leaders, which had an impact on team effectiveness. Schreiber interviewed 35 leaders in a large private utility company in Germany.

Understanding team preferences for leadership style might increase the chances for better results (Oshagbemi, 2008). According to Oshagbemi (2008), age has a positive influence in consultative, participative, and delegative leadership styles. Older managers tend to get buy-in from employees, while younger managers tend to direct orders at employees without employee consultation (Oshagbemi, 2008). However, considering older managers have more experience, Oshagbemi concluded managers of an older age might favor greater application of a directive leadership style. Oshagbemi surveyed more

than 400 managers in different industries in the United Kingdom. Tavitiyaman, Weerakit, and Ryan (2014) reported younger and older general managers place a different degree of importance on leadership. Younger general managers placed more importance on leadership factors than older general managers (Tavitiyaman et al., 2014). Tavitiyaman et al. delivered questionnaires to 2,230 general managers working in hotels in Thailand. From 2,230 questionnaires sent, only 530 questionnaires were completed (Tavitiyaman et al., 2014).

**Performance.** Age influences the performance of managers and professionals alike. Santoso and Kulathunga (2016) noted younger engineers have a higher work performance compared to older engineers. Santoso and Kulathunga surveyed 114 engineers and 21 project managers working on 21 construction sites in Sri Lanka. Similarly, as Verheyen, Deschacht, and Guerry (2016) suggest in their literature review, people attribute lower performance to older employees. Verheyen et al. used data from Belgian Statistics on Income and Living Conditions (SILC) from 2007-2011. However, Fuertes, Egdell, and McQuaid (2013) have found different results in studying the effect of older employee management on small and medium enterprizes. Fuertes et al. suggested managers did not complain about the age but about the performance of employees. Since managers did not complain about age but about performance, therefore Fuertes et al. concluded age is not a detrimental factor; rather it is the performance of employees that is crucial. Fuertes et al. interviewed 6 representatives from small and medium-sized enterprizes (SMEs) in the United Kingdom. If older employees have input about the pace of work and more job control, no difference would exist in performance between older

and younger employees (Kulik et al., 2014). Another factor that positively influenced the performance of the employees was the age of managers, whereby a combination of an older manager with older employees delivered an improved performance (Verheyen et al., 2016).

**Risk.** Managing risk is an important activity in project management. De Carvalho and Junior (2014) referred to the extensive research conducted in the field of risk management and project success. De Carvalho and Junior performed a literature review relating to the impact of risk management on project performance in Brazil. De Carvalho and Junior analyzed 263 projects across different industries. However, few researchers discuss how project managers' age influences project risk. Rolison, Hanoch, Wood, and Liu (2014) researched risk-taking in adults. According to Rolison et al. financial risk-taking lowered with age. Rolison et al. surveyed 528 participants, aged 18 to 93 years in California, the United States.

In contrast to the study by Rolison et al. (2014), the results provided by Fabricius and Büttgen (2015) noted older project managers' overconfidence led them to evaluate projects more optimistically. Older project managers took more risks compared to younger project managers, and this could be a reason for higher project failure rate (Fabricius & Büttgen, 2015). Fabricius and Büttgen surveyed 204 project managers. Soltani, Azadi, Hosseini, Witlox, and Passel (2015) conducted a research in marketing, and demonstrated older managers took a more radical approach to marketing than younger managers, demonstrating they were more open to taking risks. Soltani et al. surveyed 111 managers in 60 active companies in Iran. In contrast, when it comes to

female project managers, younger women were found to be more risk-averse than older women (Henderson et al., 2013). Ding, Jia, Qu, and Wu (2015) reported similar results to Fabricius and Büttgen. Ding et al. studied corporate board chairpersons' risk-taking. The results show younger and older board chairpersons took more risks than middle-aged board chairpersons (Ding et al., 2015). The explanation could be that younger board chairpersons try to impress with a good start in their new role, while older board chairpersons try to get as wealthy as they can in their last years of service (Ding et al., 2015). Ding et al. surveyed 1,131 board chairpersons in China. From the above studies, I concluded that the influences age has on risk tolerance for project managers are unclear.

### **Project Managers' Experience**

Experience plays a critical role in project managers' success (Ceric, 2014). Ceric surveyed 20 project managers that delivered projects in Turkey, Russia, the United States, Egypt, Spain, the United Kingdom, Croatia, Hong Kong, Poland, Romania, Saudi Arabia, the United Arab Emirates, Azerbaijan, Bosnia and Herzegovina, Canada, China, Eritrea, Hungary, India, Italy, Iraq, Jordan, Kazakhstan, Libya, Oman, Pakistan, Qatar, Serbia, Singapore, Sudan, Switzerland, and Tajikistan. According to Keren et al. (2014), Armstrong (2015), Bredin and Söderlund (2013), and González, Coronado, and Casas (2016), experience has a fundamental influence on project managers' hiring, certification, career, and selection for projects. Keren et al. conducted a case study on 11 project practitioners that had delivered 52 projects. Armstrong interviewed 20 project managers. Bredin and Söderlund analyzed career models for project managers in 10 project intensive companies in Sweden. González et al. interviewed 15 experts and used

SurveyMonkey to survey 359 project managers in Colombia. Additionally, Paton and Hodgson (2016), Jeong and Bozkurt (2014), and Vicente-Oliva, Martinez-Sanchez, and Berges-Muro (2015) noted project managers' experience influences their knowledge, training, and performance, and, overall project success. Paton and Hodgson interviewed 39 project managers working across a range of organizations in the defense industry in the United Kingdom. Jeong and Bozkurt collected data from 47 students in the Engineering Management Program at The University of Houston-Clear Lake (UHCL), located in the United States. Vicente-Oliva et al. surveyed 71 project managers in research and development (R&D) companies in Spain. I conducted a literature review of project managers' experience and managers' work experience. In the following sections, I discussed the influence of experience on project managers' hiring, certification, career, and selection for projects.

During the economic crises in Latvia 2008 – 2010, demand for employees went down, but not for experienced employees (Jekabsone & Purmalis, 2016). Jekabsone and Purmalis (2016) analyzed data available in the databases of the Central Statistical Bureau (CSB) and Eurostat, as well as studies and publications by the Ministries of Economics and National Employment Agency of the Republic of Latvia. However, as noted by Bhoola and Mallik (2014), a difference exists between years of experience in project implementation versus the number of projects successfully implemented. Bhoola and Mallik surveyed participants from 81 companies working in IT industry in India.

**Project managers' experience: Influence on success.** Rubin and Seelig (1967) were among the first researchers to conduct a study related to the influence of project

managers' experience on project success. Rubin and Seelig concluded project managers' experience does not necessarily have a positive effect on project success. Experienced project managers are able to successfully complete more projects than inexperienced project managers (Rubin & Seelig, 1967). However, more projects were completed successfully due to the company offering more support and placing a higher priority on critical projects, and not because experienced project managers led the projects (Rubin & Seelig, 1967). Therefore, project manager's experience itself was not a factor in project success (Rubin & Seelig, 1967). Rubin and Seelig surveyed 40 managers of large projects in the United States. The projects ranged in size from \$1 million to \$60 million, had an average project duration of 3.4 years, and none of the projects lasted longer than 6 years or less than 1 (Rubin & Seelig, 1967). Bond (2015) reported similar results. Bond (2015) found project managers' years of experience did not predict project success. In contrast to the studies by Rubin and Seelig and Bond, in the following sections, I demonstrated the majority of literature reports project managers' experience has a positive effect on project success. Bond surveyed 145 project managers based in the United States.

Blixt and Kirytopoulos (2017) researched the competencies of project managers in the Australian public services. The results showed lack of experience was a factor in failed project completion (Blixt & Kirytopoulos, 2017). Blixt and Kirytopoulos (2017) surveyed 40 project workers working in the public sector in Australia. Project managers' experience was reported to be a critical factor in project success by several researchers Burger et al. (2015), González et al. (2016) and Ceric (2014). Vicente-Oliva et al. (2015) suggested companies should tap into the knowledge and experience of experienced



project managers to increase the chances of success. Burger et al. conducted interviews with 10 experts and surveyed via questionnaire 40 project managers in South Africa. Besides project managers' experience, Kostalova and Tetreva (2014) noted work experience of the team plays a vital role in project success. Kostalova and Tetreva surveyed 178 project managers and portfolio managers working in the Czech Republic. Likewise, Buys and Van Schalkwyk (2015) concluded experience is of utmost importance for business success. Buys and Van Schalkwyk invited 100 contractors in South Africa to take part in the survey. However, only 49 returned completed questionnaires.

Slevin and Pinto (1987) used their research to develop a set CSFs related to project implementation. Researchers in project management continue to use and cite these CSFs. Slevin and Pinto introduced 10 CSFs and presented four examples for which Slevin and Pinto assessed strategic and tactical effectiveness. Many researchers have listed project managers' experience as a CSF. According to Gudiene, Banaitis, Podvezko, and Banaitiene (2014) project managers' experience is in the top 10 CSFs for construction projects. Gudiene et al. (2014) distributed 45 questionnaires to construction professionals and experts that have project management experience in Lithuania. However, only 27 participants returned the questionnaires.

**Selection.** Project managers' experience plays an essential role in selecting project managers. According to Rubin and Seelig (1967), companies select most experienced project managers to lead critical projects. However, based on contract type, project managers with different levels of experience were selected (Rubin & Seelig,

1967). In sole source contracts cases, project managers selected had fewer years of experience compared to project managers selected for competitive projects (Rubin & Seelig, 1967). This difference could be because, in sole source contracts, project managers with less experience can learn, while this is not the case in competitive projects due to high pressure for results (Rubin & Seelig, 1967). Jeffery (1985) offered similar suggestions. Jeffery mentioned it is critical for an owner to select a project manager that has the adequate experience to ensure success. Jeffery presented no information about the participants or location of the study.

Several authors, including González, Casas, and Coronado (2013), González et al. (2016), and de Oliveira, Alencar, and Costa (2015), noted the significance of project manager selection and the effect experience plays in the selection process. González et al. interviewed 11 experts from the construction industry and three academics, while in the second phase González et al. emailed the questionnaire to 1,699 project managers in Columbia. Only 153 responses were received (González et al., 2013). Oliveira et al. interviewed an engineer and an analyst at a Project Management Office (PMO) in a Brazilian electric energy company.

According to Sadeghi, Mousakhani, Yazdani, and Delavari (2014) choosing a skilled project manager is one of the critical factors for project success. Sadeghi et al. proposed a competency model for selecting project managers. Sadeghi et al. applied the model in a project-based organization in Iran. Project manager must have the required experience to improve project management effectiveness and to increase chances of project success (Burger et al., 2015).

According to Bredin and Söderlund (2013), in order to be selected as a project manager for complex projects, the project manager is expected to be experienced in a specific field. Reports from research conducted in the construction industry by Ayodeji, Bhekisia, and Aigbavboa (2016) and Zhou and Wang (2015) reflected a similarity to the above-mentioned studies by González et al. (2013), González et al. (2016) and Oliveira et al. (2015). Namely, they found experience is critical in appointing project managers. Ayodeji et al. collected data from 38 construction professionals working in Switzerland. Zhou and Wang interviewed managers of the Wenchuan reconstruction project in China.

**Career.** Experience also affects project managers' careers. The project manager's experience will influence hiring or selection for a project. As reported by Bezak and Nahod (2011), Chipulu et al. (2013), and González et al. (2013), experience is one of the main criteria for hiring a project manager.

According to Chipulu et al. (2013), job advertisements for project managers frequently include *experience* as a requirement. Usually, the requirement is for specific industry experience (Chipulu et al., 2013). Chipulu et al. collected data from 30 different job sites advertising jobs in eight countries, Canada, China, India, Hong Kong, Malaysia, Singapore, the United States, and the United Kingdom. González et al. (2013) reported work experience is important for project managers. On average, project managers required six years of work experience in the construction industry before becoming a project manager (González et al., 2013). Even more experience is required for project managers in medium and large companies (González et al., 2013). The fact that adequate

experience increases job security among project managers further affects project managers' careers (Lloyd-Walker et al., 2016).

Bredin and Söderlund (2013) mentioned the intricacies of work experience and project manager assignment. To be selected for a major project, a project manager has to have previous experience and, in turn, that experience in a major project would help the project manager in the next position in her/his career (Bredin & Söderlund, 2013).

Henderson et al. (2013) agreed with Bredin and Söderlund, suggesting women aged 50 and older consider their work experience as an assisting factor in being assigned a major project (Henderson et al., 2013).

The age of the project manager and the timing of a major project is also a factor influencing project managers' career. For example, if a project manager is in her/his mid-forties, then employers may not consider her/him to have enough experience enough to tackle a major project (Jeffery, 1985). However, if she/he is in their fifties or older, employers might consider her/him to be too old to be assigned to a major project (Jeffery, 1985). Companies develop career programs to explain to clients how career progression works and to assure them they will select the right project manager for their project (Bredin & Söderlund, 2013). Such career models would require a certain number of years of experience before progression to the next level (Bredin & Söderlund, 2013). Blixt and Kirytopoulos (2017) reported a connection between age and experience of project managers, leading us to believe that project managers spend most of their career in the project management profession.

Experience affects male and female project managers differently. With lower salaries and fewer opportunities for advancement, female project managers are exposed to more challenges in the workplace than their male counterparts (Crawford et al., 2013). Fewer female project managers are found in high-ranking positions as well (Bilbo, Bigelow, Rybkowski, & Kamranzadeh, 2014). Bilbo et al. (2014) noted women had to take more time off due to family commitments and this might affect their salary and career advancement. Bilbo et al. collected data from 206 female project managers working in the United States. However, in an interesting twist, male project managers reported higher stress levels, due to the pressure for career advancement and the need to change careers more often compared to female project managers (Cattell, Bowen, & Edwards, 2016). Cattell et al. surveyed 36 construction professionals (architects, project managers, construction managers, engineers and quantity surveyors) based in Cape Town, South Africa.

**Risk.** Project managers' experience affects project risk. According to Jin, Zhang, Liu, Feng, and Zuo (2017) project managers' experience has an influence in risk management. Experienced project managers help identify and manage risks more effectively (Herteliu & Despa, 2014). Jin et al. (2017) conducted literature review about risk management approaches. Herteliu and Despa (2014) collected data from scientific articles. According to Yang and Yeh (2014), risks fall into two categories: external and internal. The external risks could be market forces, while the internal risks could be planning or lack of experience (Yang & Yeh, 2014). Yang and Yeh proposed a system

dynamic risk management method and applied the system dynamic risk management in a case study in Taiwan.

Javani and Rwelamila (2016) noted having a formal risk management process help increase the project success rate. According to Yim, Castaneda, Doolen, Tumer, and Malak (2015), the process of risk management starts with identifying risks. An experienced project manager improves the process of risk identification (Yim et al., 2015). Yim et al. interviewed 70 project team members working in 11 design projects. Herteliu and Despa reported similar conclusions and added that experienced project managers are effective and inexpensive in identifying potential risks. Therefore, inexperienced project managers would cause an increase in internal risks.

Having experience in projects helps contractors. Salah and Moselhi (2015) noted contractors' experience affects unplanned risk, therefore lowering the need for contingency planning. Salah and Moselhi introduced a fuzzy-set based model for estimating, allocating, depleting, and managing a contingency fund over the life cycle of construction. Salah and Moselhi applied the fuzzy-set model in a case study project for the city of Edmonton, Canada. However, contractors pose a different risk to companies, since the company does not retain their knowledge internally (Becker & Smidt, 2015). Once a contractor leaves the company, so does the knowledge (Becker & Smidt, 2015). Becker and Smidt (2015) interviewed 15 managers and advisors working in oil and gas industry around the world. Conversely, if inside personnel conduct a project, the knowledge would be disseminated to the team through project risk communications and the company would improve risk management in the long run (Marcelino-Sadaba, Perez-

Ezcurdia, Lazcano, and Villanueva, 2014). Marcelino-Sadaba et al. (2014) conducted interviews with managers in 72 Spanish small businesses (SME).

According to Wang, Xu, Zhang, and Chen (2016), experienced project managers have a better understanding of risk situation and make more stable decisions.

Furthermore, Aaltonen and Kujala (2016) discovered, in complex projects with difficult stakeholders, experienced managers were instrumental in alleviating risk. Wang et al. surveyed 246 project managers in the construction industry in China. Aaltonen and Kujala conducted a systematic literature review of the project stakeholder management. Contrary to the findings by Aaltonen and Kujala and Wang et al., Fabricius and Büttgen (2015) reported experience had no effect on the overconfidence of project managers.

**Performance.** Many factors improve project managers' performance. One of them is work experience. Dulaimi and Langford (1999), Oliveira et al. (2015), and Rubin and Seelig (1967) indicated experience is an important factor for project managers. Project managers' experience helps increase the chances of success in projects (Dulaimi & Langford, 1999; Oliveira et al., 2015; Rubin & Seelig, 1967). Part of the reason experience helps with performance is that project managers learn from previous experiences (Vicente-Oliva et al., 2015).

Rubin and Seelig (1967) were early authors to link project managers' experience with project performance. Dulaimi and Langford (1999) and Oliveira et al. (2015) noted experience influences project managers' performance. Similarly, Vicente-Oliva et al. (2015) reported learning from past experience is beneficial for project performance.

Ofori-Kuragu, Baiden, and Badu (2016) developed a list of CSFs to increase performance

for less experienced contractors. Ofori-Kuragu et al. distributed 139 questionnaires to Ghanaian contractors. Respondents only returned 79 questionnaires.

However, not all researchers agree. Rubin and Seelig (1967) mentioned that, even when companies appoint experienced project managers on critical projects with the intention of increasing performance, experience is not the sole source of success. Santoso and Kulathunga (2016) reported similar findings, stating managers regard less experienced engineers to be more productive than experienced engineers. The explanation put forth by Santoso and Kulathunga is inexperienced engineers are more eager to learn, which makes them appear to have a higher performance.

**Knowledge.** According to Crawford et al. (2013), work is increasingly project-based. Therefore, it is imperative for organizations to develop a team of experts in project management (Crawford et al., 2013). Companies that adequately manage specific knowledge and sharing among team members will increase their project success rate (Vicente-Oliva et al., 2015). Ahern, Leavy, and Byrne (2014) analyzed knowledge management in two large Irish owned organizations. The knowledge management at these organizations was organized around problem-solving in complex projects. This is the only way to learn because the problems are new and not faced before, therefore the project team becomes a community of learners (Ahern et al., 2014).

The requirement for specific knowledge about the industry applies to experienced project managers as well (Burger et al., 2015; Crawford et al., 2013). Burger et al. (2015) reported team members did not trust project managers that lacked experience. For new project managers to learn, Jeffery (1985) suggested project managers they should be



assigned to any junior roles in projects that would allow them to start learning. New project managers need to be exposed to as many specialties as they can so they have a broader experience (Jeffery, 1985). Project managers can learn from lesson learned activities, and knowledge has a positive relation to the capacity of the firm to evaluate and acquire knowledge (Vicente-Oliva et al., 2015). Crawford et al. (2013) noted mentorship from baby boomers, while active in the workforce, is another effective method of learning. Baby boomers often reported not having formal education (Crawford et al., 2013). They learned all they know by experience, but at the same time acknowledged the new requirements for formal knowledge (Crawford et al., 2013). González et al. (2016) reported a new trend among less experienced project managers. González et al. (2013) noted no correlation between education and experience of project managers. González et al. conducted the study in Columbia and noted project managers preferred experience rather than graduate level education.

To help disseminate knowledge, it is essential to set up teams with a mix of experienced and junior team members (Crawford et al., 2013). This way less experienced team members can learn from experienced team members (Crawford et al., 2013). Berg and Karlsen (2014) offered similar suggestions, including mixing experienced and inexperienced members during training with the intention of sharing knowledge. Berg and Karlsen conducted in-depth interviews with three experienced project managers. Furthermore, Jeffery (1985) mentioned experienced project managers are obliged to train new project managers. However, Dulaimi and Langford (1999) reported less experienced project managers place more importance on technical skills, foregoing soft skills.

Therefore, new project managers should start to work on soft skills as early as possible (Dulaimi & Langford, 1999).

### **Project Success (Dependent Variable)**

Despite all the research conducted in the field of project management, a lack of agreement exists about what project success is (Jiang, Lu, & Le, 2016; Lim & Mohamed, 1999; Pinto & Slevin, 1988; von Meding, Oyedele, & Bruen, 2014). Jiang et al. (2016) surveyed 697 owners' representatives, technical professionals, and managers in China. Lim and Mohamed (1999) interviewed 40 experienced project professionals in Kuala Lumpur, Malaysia. According to von Meding et al. (2014), they conducted 24 interviews with NGO experts in Sri Lanka and Bangladesh.

Pinto and Slevin (1988) discussed project success and PIP for measuring project success. According to Pinto and Slevin, the definition of project success is unclear to project management researchers and to project managers themselves. Further to the work of Pinto and Slevin (1988), Lim and Mohamed (1999) noted project success definition originates from the perspective from which those involved view it. Davis (2014) added to this discourse by conducting a thorough literature review of project success perception and reported over twenty-two different definitions of project success. Davis conducted a theoretical paper using the Web of Science search engine and Bibexcel analysis functions to determine key literature related to "project success." Pinto and Slevin emphasized that, until researchers in the field of project management agree upon what project success is, monitoring, controlling, or even measuring project success will be challenging.

**Project success versus project management success.** Besides the ambiguity about project success definition, often no clear distinction exists between project success and project management success. Project management success differs from project success in terms of measurement of success objectives, time of success measurement, macro or micro view of project, success of the product or success of the process, and the influence project has on the company (Baccarini, 1999; Lim & Mohamed, 1999; Munns & Bjeirmi, 1996; Radujkovic & Sjekavica, 2017; Shaw, 2016). Baccarini (1999) introduced the logical framework method (LFM) as a foundation for defining project success. Munns and Bjeirmi (1996) identified the overlap between the definition of the project and project management. Radujkovic and Sjekavica (2017) conducted a detailed comparative analysis of worldwide research focusing on project performance and project management success. Radujkovic and Sjekavica introduced a model aimed at enhancing project management's performance levels by combining three organizational roles, i.e., the strategic role, project-oriented role, and operational role. Shaw (2016) analyzed three case studies of organizational change projects undertaken by Arts Council England (ACE) during 2006–2007 to examine the notion of project management and change management as a duality. According to Radujkovic and Sjekavica, early attempts for measuring project success were around 1960; at that time, a successful project was one delivered within iron triangle specifications.

According to Munns and Bjeirmi (1996), theorists often use project management success and project success interchangeably. Radujkovic and Sjekavica (2017) suggested project success and project management success are two different concepts, even though

they are interlinked. In the application of project management, project managers attempt is to measure time, cost, and progress, while using different measurements to measure project success (Baccarini, 1999; Munns & Bjeirmi, 1996).

Munns and Bjeirmi (1996) stressed that a project might be successful even if project managers have not met their goals. Stakeholders view project management as the process of completing the project within scope, time, and budget, while a project is an activity undertaken by an entity to get a long-term benefit (Munns & Bjeirmi, 1996; Radujkovic & Sjekavica, 2017). Many factors that are outside the project manager's control can influence project success (Munns & Bjeirmi, 1996). Therefore, according to Munns and Bjeirmi (1996), the project manager should not have the sole responsibility for project success.

Contrary to Munns and Bjeirmi (1996), Shenhar et al. (1997) advocated for an expanded role for project managers so they can have more responsibility and higher effect on project success. Shenhar et al. (1997) distributed 182 questionnaires to project managers working in industrial projects in Israel. Participants returned 177 questionnaires completed (Shenhar et al., 1997). Similar to Shenhar et al., Pinto and Slevin (1988) suggested project managers responsibility should not stop at project delivery but should continue even after the client accepts the project. Shaw (2016) suggested project managers have different challenges in reaching project management success versus project success.

The confusion about the definition of project management success and project success is evident in relation to the cost as well (Munns & Bjeirmi, 1996). Radujkovic

and Sjekavica (2017) divided project management literature into four-time periods: (a) in the first period (around the 1960s), researchers considered a project successful if managers completed it within the allocated time, budget, scope, and quality; (b) during the second period (the 1980s to 1990s), researchers started to separate the two concepts of project success and project management success; (c) in the third period (from the 1990s to 2000s) researchers still focused on project success, however, researchers expanded the notion of project success to consider the project's influence on the organization and its operation; (d) during the fourth period (from 2000s to 2017s) project management literature revealed the use of different criteria for public and private projects, and a growing number of researchers suggested project success is a context and time-dependent variable.

According to Munns and Bjeirmi (1996), the goal of project management is to deliver the project within the budget, therefore lowering the cost of project execution. However, the goal of a project to increase the profitability is different from the project management goal of lowering the cost (Munns & Bjeirmi, 1996). Shenhar et al. (1997) shared a similar conclusion with Munns and Bjeirmi. According to Shenhar et al. the effect of a successful project has a long-term impact on the company compared to the effect of project management success.

Project management has a limited lifespan, while a project has a longer lifespan (Munns & Bjeirmi, 1996; Radujkovic & Sjekavica, 2017). According to Shaw (2016), in the beginning of the project, project managers place more emphasis in reaching project management success while later they focus on reaching project success. The evaluation

of the project will continue even after project management implementation activities are closed (Munns & Bjeirmi, 1996). In the case of a project failure, project management success would not be of much value to the company or the client (Munns & Bjeirmi, 1996). However, in a case where project management process has failed, while the project itself is considered a success, the client will be satisfied with the project despite the dissatisfaction on delivery, which gets forgotten in the longer term of the project's use (Munns & Bjeirmi, 1996; Shenhar et al., 1997).

Similarly, Baccarini (1999) noted just as a project could be successful, while the product itself could be a failure, likewise project management delivery could be a failure, while the product itself could be a success. According to Badewi (2016), successful project management delivery would positively affect project success. Badewi posted a survey online on LinkedIn and Facebook groups. Badewi received 300 responses from project and program managers. From 300 responses, 200 responses were valid (Badewi, 2016). Badewi collected data online from different countries (Badewi, 2016). Shenhar et al. (1997) added the client to the criteria for considering a project successful. The client considers a project a failure if it does not meet their expectations despite flawless project management execution (Shenhar et al., 1997). In the end, project management might help reach project success, but project management success alone is not enough to make a project successful (Munns & Bjeirmi, 1996; Radujkovic & Sjekavica, 2017).

Baccarini (1999) divided success into two categories project success and product success. Baccarini defined project management success same as Munns and Bjeirmi (1996). However, in contrast to the project success term defined by Munns and Bjeirmi ,

Baccarini added the concept of product success. According to Baccarini, product success comes into the picture after project management delivery. Product success considers how the product is performing in the market (Baccarini, 1999). Koops et al. (2016) surveyed project managers in the public sector in Europe regarding their project success perspectives. Results showed 42% of respondents viewed project success as project management success and product success (Koops et al., 2016). Koops et al. interviewed 50 respondents: nine from Belgium, 10 from Finland, 11 from Sweden, 10 from Denmark, and 10 from the United Kingdom. Munns and Bjeirmi and Baccarini agreed that project management success is a subset of project success or product success. Lim and Mohamed (1999) classified project success into two levels: macro and micro level. Macro-level covers project success, while micro-level covers the delivery of the project (Lim & Mohamed, 1999).

According to Munns and Bjeirmi, measuring project management success is easier because the existing measurement criteria are almost universal. However, measuring project success is a challenge because quantitative measurements often do not capture the value provided (Munns & Bjeirmi, 1996). In cases where quantitative measurement falls short in capturing the true value, qualitative criteria would be more suitable (Munns & Bjeirmi, 1996). According to Lim and Mohamed (1999), different stakeholders and beneficiaries exist for project success in macro and micro levels. In the macro level owners, users and the public, in general, will have a stake in the project and will evaluate the success of the project (Lim & Mohamed, 1999). However, at the micro

level, the developer and project delivery team will be the ones that are concerned with project completion (Lim & Mohamed, 1999).

Time of evaluating project success is critical as well. Pinto and Slevin (1988) introduced the client as a critical stakeholder, therefore choosing the time of assessing project success or failure is critical. Pinto and Slevin advocated for an expanded role of the project managers after project delivery and after the project is in service. Shenhar et al. (1997) divided timing of project success evaluation into four stages: (a) the first stage is during project implementation; (b) the second stage has the customer as a stakeholder and happens after a short time past project; (c) the third stage of project success evaluation is done one to two years after project delivery, and the customer has started to sell the product; and (d) the fourth stage of project success can be done only three to five years after project completion date. Similarly, Pinto and Slevin warned about not waiting too long to evaluate project success because external factors might make the evaluation of project success difficult.

**Project success criteria and project success factors.** Lim and Mohamed (1999) defined project success criteria and project success factors. According to Lim and Mohamed, project success criteria are a set of benchmarks for evaluating project success, while project success factors are a set of conditions or elements that affect project success (Lim & Mohamed, 1999). According to Jiang et al. (2016), many factors influence project success, therefore no agreement exists about project success criteria. However, Jiang et al. and Williams (2016) noted diversity of criteria for evaluating project success and diversity of project success factors could help achieve project success. Williams



conducted a case study in a program based in the United Kingdom to identify success factors in construction projects. Davis (2014) suggested a consensus regarding project success criteria exists. Time, cost, and quality are critical project success criteria (Davis, 2014). Fahri, Biesenthal, Pollack, and Sankaran (2015) reported similar project success criteria as Davis. However, Fahri et al. (2015) expanded the project success criteria by adding longer-term criteria such as customer satisfaction, fulfillment of strategic objectives, and end-user satisfaction. In a similar fashion as Fahri et al. (2015), Handzic, Durmic, Kraljic, and Kraljic (2016) listed customer as an important factor for project success. Fahri et al. reviewed literature related to success factors and criteria that are applicable to projects in general and mega projects in particular. Handzic et al. (2016) constructed a structural equation model based on data collected from 603 IT professionals working in different projects. Koops et al. (2016) and Osei-Kyei, Chan, Javed, and Ameyaw (2017) developed a different set of project success criteria from the project success criteria mentioned by Davis and Fahri et al. Osei-Kyei et al. surveyed 42 world experts in public-private partnership projects regarding critical success criteria. Therefore, through the literature review I exhibited a lack of agreement regarding project success criteria and project success factors.

**Leadership.** According to Burger et al. (2015), leadership is a critical factor for project success. Famakin and Abisuga (2016) and Cserháti and Szabó (2014) arrived at the same conclusion as Burger et al. Namely, leadership is an essential factor for project success (Cserháti & Szabó, 2014; Famakin & Abisuga, 2016). Gwanlal and Bekker (2015) listed six categories of project success: (a) interpersonal factors (attributes

concerning interaction with team members); (b) application of theory (professional qualifications and application of theoretical planning, controlling and monitoring tools); (c) personal character (personal motivation and character traits); (d) personal contribution (management actions taken to achieve project success); (e) personal skills (managerial skills to apply to projects); and (f) practical application (practices to implement during projects). Famakin and Abisuga received 69 completed questionnaires from construction managers in Lagos, Nigeria. Cserháti and Szabó surveyed 71 presidents or general secretaries of the organizing committees of all of the world and European championships regarding success criteria and factors of organizational event projects. According to Gewanlal and Bekker, in the communication category, leadership is an essential factor for project success. Gewanlal and Bekker delivered 5,000 questionnaires to project managers in South Africa. Only 163 responses were received (Gewanlal & Bekker, 2015). Mir and Pinnington (2014) found a significant relationship between project management leadership and project success, confirming the importance of leadership for project success (Mir & Pinnington, 2014). Mir and Pinnington surveyed 154 project practitioners working in the United Arab Emirates.

Yang, Wu, and Huang (2013) tested two hypotheses regarding the effect of project manager leadership style on teamwork and project performance. Both hypotheses were supported, confirming that project management leadership style has an effect on project performance (Yang et al., 2013). Yang et al. surveyed 213 senior managers regarding project manager's leadership style, teamwork, stakeholder satisfaction, and performance on projects in Taiwan's construction industry. In addition, Ika and Donnelly

(2017) listed leadership as an important condition for project success. Ika and Donnelly conducted interviews with 20 project practitioners in Ghana, Indonesia, Sri Lanka, and Vietnam. Aga, Noorderhaven, and Vallejo (2016) in their study concluded transformational leadership style has a positive influence on project success. Aga et al. surveyed 200 development project managers in the Ethiopian Nongovernmental Organization (NGO) sector. Larsson et al. (2015) advocated that leadership style should be part of critical success factors.

**Communication.** Bubshait, Siddiqui, and Al-Buali (2014) conducted a case study to analyze the role of communication and coordination in project success. According to Bubshait et al., communication is a critical factor in the project success. Liu et al. (2015) mentioned that regardless of the project delivery system, communication is among the most critical factors that would affect project success. Liu et al. collected data from the 73 contractors in China, regarding the contractors' characteristic factors that affect project success under a different project delivery system (PDS). Similarly, Lindhard and Larsen (2016) noted that improvement in communication would help avoid project failure, therefore increasing the chances of project success. Lindhard and Larsen surveyed 87 representatives from construction projects in North Jutland, Denmark.

According to research conducted by Schnetler, Steyn, and van Staden (2015), the quality of communication between project team members increased the project success perception. Schnetler et al. surveyed 37 project managers, 30 functional managers, 36 other team members, and three CEOs or executives working in South African industries. Hidding and Nicholas (2017) suggested project managers should place more emphasis on

the application of PMBOK activities that have a close association with project success. Communication is one of the activities closely linked to project success (Hidding & Nicholas, 2017). Hidding and Nicholas interviewed 12 project managers working on 16 projects in the Chicago region, the United States. According to de Araújo and Pedron (2015), four skills that project managers should possess to increase project success are (a) team management, (b) business domain knowledge, (c) project management, communication, and (d) people skills. De Araújo and Pedron (2015) conducted in-depth interviews with 16 IT managers and project managers working in Brazil.

Besteiro et al. (2015) conducted a research study to discover the factors that help achieve project success. According to Besteiro et al., communication is one of the critical success factor helping managers to achieve project success. Furthermore, Besteiro et al. noted regardless of project management factors or project management phases, communication is a common variable helping project success. Besteiro et al. surveyed 28 project managers from different companies working in Brazil. Similarly, Cserháti and Szabó (2014) noted communication is one of the decisive factors in project success. According to Davis (2014), communication, as ranked by the client and the end user, is one of the five critical success factors. Contrary to reports by Besteiro et al. and Cserháti and Szabó, Schneider, Liskin, Paulsen, and Kauffeld (2015) hypothesized that intense team communication would lead to a higher project success. The hypothesis, however, was rejected (Schneider et al., 2015). Schneider et al. conducted a longitudinal study at Leibniz University at Hannover and observed 20 teams of a total of 97 students over a period of 4 months. The participants conducted a full software project with different

customers and different tasks for each team, but with a common development process for all (Schneider et al., 2015).

**Project manager.** Yang et al. (2013) noted project managers' role is a crucial factor in achieving project success. According to Pinto and Slevin (1988), project success has an important role in the assessment of project managers' performance. However, as Pinto and Slevin pointed out, project managers' emphasis is mainly to deliver the project and not engage after project delivery. Therefore, four criteria project managers place emphasis are budget, schedule, performance, and client satisfaction (Pinto & Slevin, 1988). On the other hand, Shenhar et al. (1997) suggested project managers should expand involvement beyond project delivery and get involved in the business side of the organization.

In their study regarding critical success factors of small to medium-sized projects, du Randt, van Waveren, and Chan (2014) found that the project manager is a critical success factor in many criteria of project success. The project manager was the critical success factor with the most influence in achieving project budget (du Randt et al., 2014). Similarly, for meeting project schedule, participants in the du Randt et al. study rated the project manager as the most critical success factor. Therefore, according to du Randt et al., a competent project manager is the most significant factor in achieving project success. du Randt et al. conducted a case study on the factors that influence the success of small- to medium-sized projects at the Grootegeluk coal mine in the Limpopo Province of South Africa. Varajão, Dominguez, Ribeiro, and Paiva (2014) noted project managers'

efficiency is a critical success factor for project success. Varajão et al. surveyed 80 project managers working in Portuguese companies.

Berssaneti and Carvalho (2015) noted having top management support and a motivated project manager improves the project outcome. Berssaneti and Carvalho surveyed 336 professionals in the field of project management working in Brazilian organizations. Ekrot et al. (2016) conducted a study related to retaining project management competence. According to Ekrot et al., project management competence retention (PMCR) relates positively to the project success. Therefore, having a long-term career development for project managers affects project success (Ekrot et al., 2016). Ekrot et al. surveyed 354 representatives from 177 German companies. According to Rezvani et al. (2016), top management should understand the critical role project managers' job satisfaction plays in the project success. A higher project managers' job satisfaction would improve chances for project success in complex situations (Rezvani et al., 2016). Rezvani et al. surveyed 373 project managers working in the Australian defense industry.

**Client.** Pinto and Slevin (1988) divided success factors into internal and external factors. Internal factors such as schedule, cost, and performance are factors over which the project manager and the team have control over (Pinto & Slevin, 1988). External factors are the usage of the project and client satisfaction (Pinto & Slevin, 1988). Pinto and Slevin (1988) noted a trend that companies are increasingly incorporating is client satisfaction as a criterion for evaluating project success. Project-based organizations and competition on a global level are the forces that have contributed to adding client

satisfaction as a project success criterion (Pinto & Slevin, 1988). In the early phases of the project, internal factors are more important than external factors (Pinto & Slevin, 1988). However, as the project progresses, the external factors start to increase in importance (Pinto & Slevin, 1988). Contrary to Pinto and Slevin, Kloppenborg, Tesch, and Manolis (2014) suggested customer criteria is more important during the initiating phase when compared to the planning phase. Furthermore, Kloppenborg et al. asserted customer satisfaction is more important than the firm's future dimension. Kloppenborg et al. argued that if the customer is satisfied, then the company will have a bright future. Kloppenborg et al. surveyed 687 project managers in the United States.

According to Rodriguez-Segura, Ortiz-Marcos, Romero, and Tafur-Segura (2016), the opinions of the client and the end user are critical, and project managers should take them into account when assessing project success. Rodriguez-Segura et al. conducted a case study to analyze 29 large industrial projects. Munns and Bjeirmi (1996) suggested either extending project team involvement beyond project delivery, or involving the client early in the project during the planning phase could increase project success. According to Shenhar et al. (1997), customer expectations are important criteria for project success. Shenhar et al. noted several projects failed despite excellent project management delivery because those projects did not meet the client's expectations. Therefore, Shenhar et al. asserted a project's effect on the customer has many facets. A project's effect goes beyond meeting project delivery but also involves how the customer will use the project or final product (Shenhar et al., 1997).

### **Measurement of Variables**

Independent variables of the study were project managers' age and years of project experience. I used a demographic questionnaire to collect the data for project managers' age and years of project experience. Bond (2015) and Sava (2016) used demographics questionnaires in previous project success studies. I used the PIP instrument developed by Slevin and Pinto (1987) to measure project success as the independent variable.

Slevin and Pinto (1987) developed an instrument called the project implementation profile (PIP) to measure the project success score. Hosford (2017), Sava (2016), Laird (2016), Gadison (2016), Magby (2016), and Bond (2015) used PIP as an instrument for measuring project success. After receiving results from each factor on the PIP instrument, the researcher calculates the percentile for each item and then compares with a database of over 400 projects already evaluated (Slevin & Pinto, 1987).

### **Literature Review Summary**

In this literature review, I reintroduced the hypothesis of the study and explained the literature search strategy. Then, I discussed the project managers' role. Two important topics covered were independent variables and dependent variables; project managers' age and years of project experience were the independent variables, whereas project success was the dependent variable. I also discussed the measurement of variables. Through the review of the literature, I revealed age and experience play a significant role in project success. However, a lack of studies existed relating to the influence project managers' age and years of project experience have on project success.



## Transition

Section 1 is the foundation of the study. In this section, I covered the background of the problem, the problem statement regarding the high rate of project failures, and the purpose statement of the study related to project failures affecting businesses' bottom lines. Then, I presented the quantitative nature of the study with correlation design.

I presented the research question of this study. I grounded my theoretical framework on the proposition that project managers' age and experience influence project success. I also discussed the operational definitions, assumptions, limitations, delimitations, and significance of the study for business practice and positive social change. In the literature review section, I covered the independent variables (project managers' age, and years of project experience) and the dependent variable (project success). I also presented PIP and demographics questionnaire as measurements for variables.

In Section 2 I include items related to the research project. I start Section 2 by describing the researcher and participants of the study. Then, I present the research method and design. In addition, I discuss target population for the study and ethics. Data collection and analysis were critical subsections as well. Finally, I present a discussion of the validity of the study. Section 3 includes the findings, application of the results to the business practice, and effect for social change. I also present recommendations for action and further research. I close Section 3 by covering the reflections and conclusions.

## Section 2: The Project

Section 2 addresses the research project. I start the section by describing my role as the researcher as well as the participants in the study. Then I present the quantitative research method and correlational design selected for my study. In addition, I discuss the target population for the study—project managers on LinkedIn working in Albania and Kosovo—and ethical considerations involved in the study. I then describe the data collection and analysis effort. Finally, I present a discussion related to the validity of the study.

### **Purpose Statement**

The purpose of this quantitative, correlational study was to examine the relationship between project managers' age and years of project experience and project success. The independent variables were project managers' age and years of project experience, and the dependent variable was project success. The target population consisted of project managers working in Albania and Kosovo.

According to Ika and Donnelly (2017), international development projects cover many areas, including those affecting social change: agriculture, transportation, water, electricity, energy, sewage, mines, health, nutrition, population and urban development, education, environment, social development, reform, and governance. An increased rate of international development project success may translate into improvement of livelihood for local communities in which project managers implement their projects.

### **Role of the Researcher**

According to Fusch and Ness (2015), the researcher plays a critical role in a study. As the researcher, I planned this quantitative research by choosing an instrument and data collection tools. According to Fusch and Ness, the main challenge in conducting a study, especially for a newer researcher, is understanding and avoiding possible biases. McCusker and Gunaydin (2015) noted that the personality of the researcher is important as well. However, the personality of the researcher has a greater influence in qualitative studies than in quantitative studies (McCusker & Gunaydin, 2015). I used PIP as the instrument for this study. I received written approval from the original developers of the PIP instrument, Dr. Pinto and Dr. Slevin. I used the PIP to create a questionnaire in SurveyMonkey. After collecting the data from SurveyMonkey, I analyzed and interpreted the results of the study, as presented in Section 3.

I recruited project managers working in Albania and Kosovo who were LinkedIn members as participants for the study. I did not know any of the participants personally; I was connected to them only through the LinkedIn network. Additionally, none of the participants worked or works directly for me. I was born in Kosovo but emigrated 10 years ago to Canada. The research topic related to my profession because I work as a project manager and am interested in understanding the influence that age and experience have on project success.

According to Wessels and Visagie (2017), the Belmont Report is an essential document used to provide ethical guidance to researchers. The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research in the United

States released the Belmont Report on September 30, 1978 (Wessels & Visagie, 2017). If human participants are involved in research and a chance of injury or harm to them exists, then the researchers must follow the code of ethics (Wessels & Visagie, 2017). I followed the Belmont Report's principles, including upholding basic ethical principles of respect for persons, beneficence, and justice. The principle of *respect for persons* acknowledges the human subject's personal dignity and self-determination and any special protection needed by persons with limited autonomy (Wessels & Visagie, 2017). The principle of *beneficence* involves an obligation to protect subjects from harm by ensuring a favorable risk-benefit ratio, and the principle of *justice* introduces the requirement for a fair procedure in outcome and selection of participants for the research (Wessels & Visagie, 2017).

My research complied with the requirements of Walden University's Institutional Review Board (IRB). In addition, in keeping with the Belmont Report, I respected the study participants, minimized risk to them, and protected each participant's privacy. I did not have any sponsors for my study. I protected data privacy by encrypting the data into an external hard drive. At the beginning of the survey, each participant had to sign a consent form (see Appendix A). Participants could leave the survey at any time.

According to McCusker and Gunaydin (2015), in quantitative studies, the quality of raw data is critical. Low-quality raw data will compromise all calculations and analyses (McCusker & Gunaydin, 2015). According to Bond (2015), SurveyMonkey is a professional web-based tool for conducting surveys. I used SurveyMonkey as a platform to post the two-part survey and collect the data.

## Participants

Norris, Plonsky, Ross, and Schoonen (2015) suggested that a researcher should define a target population and that target population's specific attributes, such as age and experience. The target population's specific attributes limit generalizability for the report of a study (Norris et al., 2015). According to Ivankova (2014), the selection of inappropriate participants will compromise the validity of a study. Honarvar et al. (2015) also asserted that the process of choosing participants may affect a study's outcome.

Serrador and Pinto (2015) used LinkedIn to reach participants for a study related to agile software development and project success. According to Samanta and Pal (2014), LinkedIn is present in 200 countries and has more than 150 million registered users. I used the LinkedIn network to reach my participants. My goal was to select sample participants who represented the target population. The eligibility criteria for study participants were that they must (a) be 18 years or older at the time of the survey; (b) be currently working or have worked either full-time or part-time as a project manager in Albania or Kosovo within the last 5 years; and (c) be a LinkedIn member. LinkedIn offered means to select participants based on keywords. I used the title *project manager* and then filtered by location. I selected only participants based in Albania and Kosovo. If a participant did not meet criteria (a) and (b), I disqualified the participant.

I had 360 project managers from Albania and Kosovo as first connections on my LinkedIn profile. I approached these participants via the LinkedIn email service. Gadison (2016), Dunams (2016), and Magby (2016) used LinkedIn in a similar fashion for their project success studies. I selected the project managers as participants.

Samanta and Pal (2014) stated that social networks are important tools for sharing information. Henderson et al. (2013) used an introductory letter to address potential participants for their research on project management. Magby (2016) used LinkedIn email to reach participants for a project success study. My communication with participants was via LinkedIn emails. Once I posted the survey online, I sent an email to participants to introduce myself. In the email, I mentioned the reason for the study and the benefits of the study for future research in the field of project management. I informed the participants that if they were interested in the study results, they could email me, and I would send the results. The email contained a link to the survey.

According to McPeake, Bateson, and O'Neill (2014), web surveys have a lower response rate than postal surveys. McPeake et al. reported a response rate of 42% on the first invitation. After researchers sent a first reminder, the response rate increased to 58%, and a second reminder increased the response rate to 62% (McPeake et al., 2014). A LinkedIn search for *project manager* in the title and Albania and Kosovo as location resulted in 360 potential participants. These 360 individuals were first connections in my LinkedIn profile.

After a week elapsed, I did not receive enough responses. I had to send a reminder to participants to take part in the survey. With this reminder, I received 138 responses. Of these 138 participants, 30 skipped page 2 of the survey, so I removed those participants from further analysis. As suggested by McPeake et al. (2014), sending reminders can cause the participation rate to rise.

## Research Method and Design

Molina-Azorin et al. (2017) listed three research methods: quantitative, qualitative, and mixed methods. McCusker and Gunaydin (2015) stated that quantitative methods are appropriate for measuring something, whereas qualitative methods deal more with the experiences of participants. According to Molina-Azorin et al., mixed methods combine quantitative and qualitative methods to expand analysis of complex phenomena.

### Research Method

I used the quantitative research method in this study. According to Molina-Azorin et al. (2017), three research methods exist: quantitative, qualitative, and mixed-methods. Babones (2016) described disagreements between positivist and interpretive research that have existed since the beginning of the social sciences. As Babones explained, in positivist quantitative sociology, the researcher measures variables and then creates a model linking two variables. Park and Park suggested that researchers should not decide which method to use without considering the phenomenon of the study. The phenomenon of my study was project success. According to Zare, Mirjalili, and Mirabi (2016), cost, time, and quality are important measurements for project success. Additionally, I was able to measure the variables of my study easily. Therefore, a quantitative method was adequate for my study.

Quantitative social researchers test hypotheses (Babones, 2016). Researchers can also use quantitative methods to provide explanations and make predictions (Park & Park, 2016). In contrast, qualitative methods are suitable for discovery of a phenomenon

(Park & Park, 2016). Qualitative methods are appropriate to exploratory studies, in which they are used to gain a deep understanding of phenomena (Palinkas et al., 2015).

According to Radujkovic and Sjekavica (2017), project management researchers have extensively researched project success as a phenomenon. Therefore, I excluded qualitative methods as an option for this study.

Mixed methods combine quantitative and qualitative methods to expand analysis of complex phenomena (Molina-Azorin et al., 2017). Mixed-methods research has the benefit of eliminating shortcomings of exclusively quantitative or qualitative research methods (Bentahar & Cameron, 2015). However, mixed methods require integration of quantitative and qualitative results (Ivankova, 2014). I did not use a mixed-methods research methodology because of time constraints.

### **Research Design**

Experiments, quasi-experiments, and correlational design are the most commonly used designs in quantitative research (Wells, Kolek, Williams, & Saunders, 2015). According to Curtis, Comiskey, and Dempsey (2016), researchers prefer to use scientific experiments as the most valid way of testing hypotheses. However, in scientific experiments in which researchers test hypotheses, researchers have to use manipulation, controls, and randomization (Curtis et al., 2016). Similarly, Zientek et al. (2016) highlighted the need for controls in experiments. According to Geuens and De Pelsmacker (2017), controls should be in place in experimental design so that the researcher can understand and explain certain changes.



As Curtis et al. noted, in some cases, researchers are unable to carry out experimental research. The researcher does not have control over participants in field experiments (Deck & Smith, 2013). Uncontrolled factors may affect the measurements and ultimately the outcomes of experiments (Sverchkov & Craven, 2017). In quasi-experimental design, some of the participants receive an intervention, whereas another group of participants does not (Connelly, Sackett, & Waters, 2013). Because I could not have controls in my study and uncontrolled factors would influence the results, I did not use experimental or quasi-experimental design.

The research design was correlational. As Curtis, Comiskey, and Dempsey (2016) explained, correlation happens when one variable increases and another variable increases or decreases. Using a correlational design, the researcher measures two or more characteristics and calculates the correlation coefficient (Curtis et al., 2016). In a correlational study, the researcher studies the constructs of a group and identifies whether the characteristics vary without intervention (Field, 2009). Young, Young, and Zapata (2014) mentioned that a correlational design shows a linear or nonlinear correlation between independent and dependent variables. Because the goal of my study was to examine the relationship between project managers' age and years of project experience and project success, following conclusions from Curtis et al. (2016), Field (2009), and Young et al., I decided that correlational design was the most appropriate choice for my research study.

## Population and Sampling

The population for this doctoral study was LinkedIn members who were currently active or former project managers or had been project managers within the last 5 years and were located in Albania or Kosovo. Participants had to be at least 18 years of age on the day of the survey. The selected population was project managers by profession.

According to Omair (2014), two major categories of sampling methods exist: probabilistic and nonprobabilistic. The sampling method chosen for this study was nonprobabilistic. I used a purposive nonprobabilistic sampling method because I selected participants from the population who fit the study. I targeted only participants who were first connections of mine in LinkedIn (a group of 360 potential participants). When using a purposive sampling method, a researcher chooses participants based on the purpose of the study (Garg, 2016; Singh & Masuku, 2014). Purposive nonprobabilistic sampling is useful for small studies in which researchers are not trying to project findings for larger populations (Omair, 2014).

The purposive sampling method, however, has weaknesses. Etikan, Musa, and Alkassim (2016) stressed that purposive sampling might not produce a sample that is a diverse cross-section of ages, backgrounds, and cultures. Barratt, Ferris, and Lenton (2015) highlighted the weakness of purposive sampling when accessing a large sample population. My study was about project managers in Albania and Kosovo who were members of LinkedIn. The entire population consisted of 1,180 individuals; therefore, my target population was small. According to Etikan et al., the intention of purposive sampling is the selection of participants with particular characteristics who will be able to

provide information relevant to the research. I selected only participants who were first connections of mine on LinkedIn; therefore, only 360 participants were selected.

Omar (2014) noted that the random sampling method has intricacies. In colloquial usage, the word *random* has a different meaning than it conveys in the term *random sampling* (Omar, 2014). Omar illustrated this difference by showing how a researcher might mislead readers by stating that he or she selected a sample at random from all patients coming to an outpatient clinic. Furthermore, as Singh and Masuku (2014) noted, in random sampling, each participant should have a preassigned chance of inclusion in the study. However, due to external circumstances, such as availability of participants or lack of Internet access, not every participant has an equal chance of participating. Due to the limitations of LinkedIn, I could not reach all 1,180 LinkedIn members; as a result, I could not preassign an opportunity for inclusion to each participant. Therefore, I could not use the random sampling method for my study.

According to Singh and Masuku (2014), calculating sample size is a critical step because an appropriate sample size is crucial to obtaining accurate results. Using G\*Power 3.1.9.2 software, researchers can calculate sample size range by selecting the a priori sample size option for linear multiple regression analysis. Sava (2016) and Bond (2015) used G\*Power software in previous project success studies. The inputs were two predictor variables and a large effect size ( $f^2 = .30$ ). Selecting a statistical power level of .80, the sample size was calculated to be 36 participants. Sava and Coleman (2014) used a statistical power level of .80 in their previous project success studies. If I increased the power to .99, the sample size required would be 75. Therefore, I needed between 36 to 75

participants, as shown in Figure 2. However, as mentioned by McPeake et al. (2014), web surveys receive a lower response rate than in mail surveys. Therefore, I approached 360 participants who were my first connections on LinkedIn, and I was able to get 138 responses. The large effect size ( $f^2 = .30$ ) was chosen based on previous studies on project success conducted by Coleman, Nguyen (2015), and Sava.

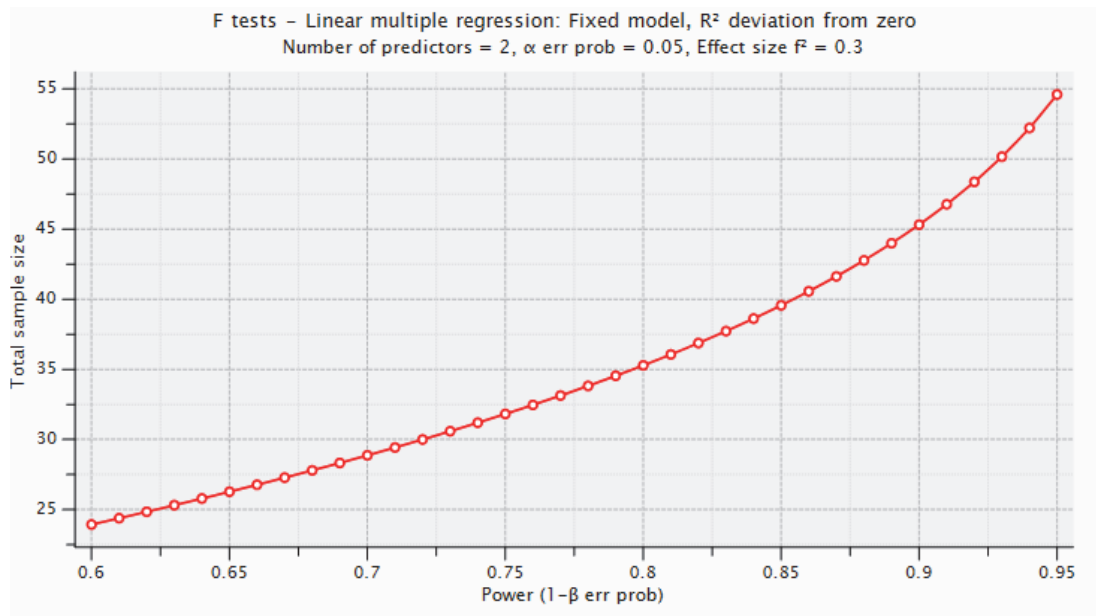


Figure 2. Power as a function of sample size.

### Ethical Research

Macfarlane et al. (2015) suggested any project study proposal must contain a consent form and that student and chair should discuss its formulation. Participants in my study read and electronically signed a consent form before starting the survey (see Appendix A). The survey was posted online via SurveyMonkey. Participants were invited via email to fill in the survey online. Participants could refuse to take part in the survey,

or abandon the survey anytime if they chose. The online survey continued to be active online until I was able to fulfill the required number of participants.

According to Meuleman and Langer (2017), incentives might increase the number of participants in a web survey. However, incentives might influence participants' behaviors during the web survey as well (Meuleman & Langer, 2017). Therefore, I decided not to have any form of compensation for participants. Participants had the option to request a copy of the study results by checking the appropriate box in the consent form or by emailing me. My contact information, phone number, and email address were available to the participants.

According to Macfarlane et al. (2015), analysis of the ethical application is part of every study, regardless of the risk involved in the study. Before I started collecting the data, I filled in the Institutional Review Board (IRB) form and received approval from Walden University. The final doctoral study had a Walden IRB approval number. The Walden IRB approval number for this study was 11-09-17-0240336, and it expires on November 8, 2018.

Teitcher et al. (2015) emphasized data encryption is critical when conducting research in the internet. I did not collect any personal identification information from the participants, such as name or employer name, during this study. Therefore, the participants remained anonymous. As required by Walden University policy, I stored the data collected for the next 5 years in a hardware encrypted hard drive. After 5 years, I will delete the data by using the Department of Defense (DoD) overwriting method.

## **Instrumentation**

According to Mulholland (2016), the instrument selected should be validated and should be a reliable research instrument for assessing a phenomenon. Rehman, Shrivastava, and Shrivastava (2015) noted researchers could use the instrument to examine certain hypotheses concerning the phenomenon. In the following section, I introduced the instrument that I used in my study.

### **Project Implementation Profile (PIP)**

I used the project implementation profile (PIP) as an instrument to measure project success. In 1986, Slevin and Pinto developed the PIP instrument to deal with the shortcomings of other more technical tools in measuring project success (Sava, 2016). At the time of PIP development, many technical tools were available for project managers, such as critical path schedules, activity flow charts, the Program Evaluation Review Technique (PERT), and Gantt charts (Slevin & Pinto, 1986). However, critical path schedule, activity flow chart, PERT, and Gantt charts did not capture the softer and managerial side of the projects (Slevin & Pinto, 1986). PIP's ten critical success factors are: project mission, top management support, project schedule/plan, client consultation, personnel, technical tasks, client acceptance, monitoring and feedback, communication, and troubleshooting (Slevin & Pinto, 1986).

In 1988, Pinto and Slevin (1988) published an article titled *Project success: Definitions and measurement techniques* and added a section to PIP to measure project success using 12 specific project success questions—see Appendix CB. To verify the revised PIP, Pinto and Slevin (1988) applied it to over 400 different project types. The

results show that researchers can generalize PIP for use in different types of projects (Slevin & Pinto, 1986).

According to Gadison (2016), PIP's 12 Likert type questions on a 7-point ordinal scale can measure project success. Hosford (2017) and Gadison (2016) used PIP with 12 questions to measure project success. The rating of each question on the PIP is on a Likert ordinal scale from 1 – strongly agree, to 7 – strongly disagree (Mazur, Pisarski, Chang, & Ashkanasy, 2014). Therefore, I implemented PIP to measure project success by using 12 questions.

The survey was posted online on the SurveyMonkey website. Participants were invited to take part in the survey via email. The time estimated for completion of PIP and the demographics survey was between 10-15 min. The PIP project success instrument was not modified.

According to Pinto and Slevin (1988) to calculate a total score to assess project success, researchers must calculate the ratings for all 12 questions. Total project success score was interval data. Based on Pinto and Slevin's suggestion, I calculated a total score for all 12 questions to measure project success.

Hosford (2017) used the PIP instrument with project managers in the IT industry, collecting data from project managers that were members of PMI. Sava (2016) selected project managers in the public sector as the population for implementing the PIP instrument. The selected organizations had over 100 employees, while the project managers had to have over 4 years of work experience (Sava, 2016). SurveyMonkey services were used to provide participants (Sava, 2016). However, Sava did not provide

information about the geographic location of the participants. In another study, Coleman (2014) used project managers based in the United States that were working in the informational technology (IT) and construction industry. The population that Laird (2016) used was from a large scientific organization in the United States. Seventy project team members participated in the survey (Laird, 2016).

According to Saadé, Dong, and Wan (2015), Cronbach alpha demonstrates a measure of the internal consistency of the instrument. Cronbach alpha ranges from 0 to 1 (Saadé et al., 2015). A Cronbach alpha over .70 is acceptable (Saadé et al., 2015). Sava (2016) asserts that PIP has a published reliability score of above .70, while, according to a study on project success conducted by Mazur et al. (2014), PIP reliability was .93 for overall scale.

In each of the studies performed by Slevin and Pinto (1986), and Slevin and Pinto (1987), researchers reported the overall reliability and validity of the PIP instrument to be over .70. Hosford (2017), Sava (2016), Coleman (2014), Laird (2016), Gadison (2016), Rusare and Jay (2015), and by Mazur et al. (2014) have successfully used PIP to measure project success. Therefore, PIP was an appropriate tool for measuring project success in my study.

Gadison (2016) selected his study population from the LinkedIn professional network. The selected participants were chief executive officers, senior management, middle management, and operations staff workers working in diverse industries (Gadison, 2016). Rusare and Jay (2015) applied the PIP instrument in a case study for a project undertaken by a non-governmental organization (NGO) in South Africa, Nigeria,



and Cameroon, while Mazur et al. (2014) chose their study population from employees working on a large Australian project through the Australian military.

The PIP project success instrument was not modified. I received written permission from the original developers Slevin and Pinto (1986) to use the PIP instrument for my doctoral study (see Appendix B). I stored the raw data from the study in a hardware-encrypted drive for next 5 years. The raw data can be made available upon request.

### **Demographic Questionnaire**

The five demographic questions were gender, age, education, years of experience in managing projects, and base country (see Appendix D). Hosford (2017), Sava (2016), Coleman (2014) and Bond (2015) used similar demographic questions. Information about the two independent variables (age and years of experience) came from the demographics questionnaire. Age and years of experience were the interval variables.

### **Data Collection Technique**

According to McPeake et al. (2014), researchers can survey participants via mail, phone, face to face, telephone, or online. Holley, Collins, Morgan, Callister, and Hutchesson (2016) describe SurveyMonkey as an online survey management tool. According to Heen, Lieberman, and Miethe (2014), one of the benefits of online surveys is the ability to survey participants regardless of local or national borders. Several commercial companies are already providing online survey services (Heen et al., 2014). Online surveys are more cost-effective than surveys by mail or phone (McPeake et al., 2014). I prepared the two-part survey and posted it online on the SurveyMonkey website.

Participants were invited to take part in the survey via the LinkedIn email service. I only invited 360 participants who were in my first connection on LinkedIn and were residing in Albania or Kosovo.

According to Horwitz, Kreuter, and Conrad (2017), a researcher's the main goal in using surveys is to obtain accurate data from participants. Horwitz et al. acknowledged that the difficulty of questions might affect the accuracy of data. Furthermore, Rada and Domínguez-Álvarez (2014) claimed that online participants might just scan the question without fully understanding them, therefore affecting the accuracy of the data. However, the results from Rada and Domínguez-Álvarez's study suggested more questions were unanswered on paper surveys than on online surveys, proving the advantage of online surveys.

The survey began with demographic questions. Based on demographic questions, I disqualified participants younger than 18 or not working in Albania or Kosovo. There were 12 questions from PIP in the second part of the survey. The survey had a progress bar so that participants could see their progress. The window closed at the end of the survey. The survey showed my contact information in case participants needed to reach me. I closed the survey once I reached the necessary number of participants. I used SurveyMonkey services to export the data. Rada and Domínguez-Álvarez (2014) mentioned that online surveys are not very useful for large population generalization. My study was regarding project managers in Albania and Kosovo, which was a small population. Therefore the web survey adequately served the research purpose. Furthermore, researchers have successfully used SurveyMonkey in studies of project

success previously, such as those by Sava (2016), Coleman (2014), Bond (2015), Hosford (2017), Waller (2015), Alagba (2014), and Nnamchi (2014). Since I used PIP, an instrument with acceptable reliability and validity values, I did not conduct a pilot study.

### **Data Analysis**

The study's research question was: Does a linear combination of project managers' age and years of project experience significantly predict project success? The null hypothesis ( $H_0$ ) for the study was: The linear combination of project managers' age and years of project experience will not significantly predict project success; while the alternative hypothesis ( $H_1$ ) was: The linear combination of project managers' age and years of project experience will significantly predict project success.

**Descriptive statistics.** I used demographic data from the survey to describe the sample using descriptive statistics. Descriptive statistics describe the data set, mean, and variability of data (Larson-Hall & Plonsky, 2015). Furthermore, Larson-Hall and Plonsky (2015) stress that descriptive statistics provide the foundation for statistical calculations. Descriptive statistics help researchers describe the data set, providing a point estimate of the average trend of the data (the mean), as well as estimates of variability in the data (Larson-Hall & Plonsky, 2015). Sava (2016), Coleman (2014) and Bond (2015) all used descriptive statistics in their project success studies. I used descriptive statistics to show the basic attributes of the distribution of the data for my study. Through descriptive statistics, I showed the sample size, average age, gender distribution, the mean, and standard deviation for project success score.

**Inferential statistics.** I had two independent variables and one dependent variable in my study. All three variables were interval variables. I collected the data from one sample. Baird and Bieber (2016) suggested researchers should use multiple regression to deal with research questions with multiple predictor variables. According to O'Neill, McLarnon, Schneider, and Gardner (2014), multiple regression considers multiple independent variables. Hosford (2017) and Bond (2015) used multiple regression analysis in project success studies to analyze interval data between multiple variables. Since I had two independent variables (interval) and one dependent variable (interval), and based on suggestions by Baird and Bieber (2016), and O'Neill et al., I only used multiple regression analysis for interval data analysis in my study.

According to Field (2009), two types of correlation exist, bivariate and partial correlation. Partial correlation analyzes the relationship between two variables while controlling the effect of one or more additional variables (Field, 2009). Because I was unable to control any of the variables, I could not use partial correlation in my study. Field (2009) stated a bivariate correlation is a correlation between two variables. According to Field (2009), Pearson's  $R$ , Spearman's rho ( $\rho$ ) and Kendall's tau ( $\tau$ ) are correlation analysis that researchers can use for bivariate correlations.

Puth, Neuhäuser, and Ruxton (2014) mentioned that Pearson's correlation coefficient  $r$  measures any linear trend between two variables. Because I had more than two variables, bivariate Pearson's correlation analysis was not suitable for my study. According to Heiman (2010), the Spearman rank-order correlation coefficient is appropriate for calculating the linear relationship between two variables when measured

by ranked scores. However, as mentioned, the independent variables were interval, and therefore I could not rank variables. As a result, I could not use the Spearman correlation for my study. According to Field (2009), Kendall's tau,  $\tau$ , can be used in cases where the researcher has a small data set with a large number of tied ranks, therefore, if the researcher ranks all of the scores and many scores have the same rank then the researcher should use Kendall's tau. However, I could not rank the scores in my study and, therefore, I did not use Kendall's correlation.

According to Heiman (2010), researchers perform a one-way ANOVA when they only need to test one independent variable. Again, I had two independent variables in my study, so I could not use ANOVA. Researchers use a two-way ANOVA with two independent samples (Heiman, 2010), but since I only had one sample in my study, I could not use this method either. Another technique I considered was a multivariate analysis of variance (MANOVA). According to Salkind (2011), MANOVA is an advanced technique that helps examines whether group differences occur on more than one dependent variable. However, I did not have two or more groups in my study. Therefore I could not use MANOVA.

**Data cleaning.** According to Temtime (2016), and Wiedermann and von Eye (2015), the process of data cleaning involves checking data for any missing information that would make data invalid. Further, as McCusker and Gunaydin (2015) mentioned, the accuracy of raw data is critical for quantitative studies. According to Nigaglioni (2016), before conducting data analysis, data should be cleaned and screened for missing

information. In this study, 30 participants did not complete the second page of the survey. Therefore, I removed the entire data records of 30 participants from further analysis.

**Statistical analysis assumptions.** According to Wu, Li, and Chang (2015), a researcher should test and assess the assumptions for the chosen statistical analysis. In addition, Granato, Calado, and Jarvis (2014) stated that, before applying the inferential test, data should conform to a normal distribution (normality) and should satisfy the assumption of homoscedasticity (uniformity of variance). Hopkins and Ferguson (2014) listed four assumptions about the relationship between dependent and independent variables in a case where a researcher uses multiple regression. The four assumptions are linearity, homoscedasticity, independence of error terms, and normality (Hopkins & Ferguson, 2014).

According to Frempong et al. (2016), variables should display linearity. The linearity assumption is that a linear relationship exists between independent and dependent variables (Frempong et al., 2016). According to Hopkins and Ferguson (2014) and Frempong et al., the simplest way to check for linearity is to plot residual-predicted dependent values. Residual points are distributed evenly around the diagonal line (Frempong et al., 2016; Hopkins & Ferguson, 2014). Therefore, I used the normal probability Plot (P-P) to test for linearity.

Frempong et al. (2016) explained that homoscedasticity is when independent variables present constancy at all levels. Temtime (2016) demonstrated testing for homoscedasticity by scatterplot and normal probability plot (P-P), which I used in the current study.

The assumption of independence of error terms means the model does not show multicollinearity; therefore, the predicted values are independent of other values (Hopkins & Ferguson, 2014). Hopkins and Ferguson (2014) noted that having more independent variables assists the prediction process of the research, however, they also pointed out that having more independent variables means a higher chance for the presence of multicollinearity. Hopkins and Ferguson suggest a simple method for analyzing the presence of multicollinearity is observing for any high correlation coefficient between any two independent variables. I analyzed the data for any high correlation coefficient between any two independent variables.

According to Hopkins and Ferguson (2014), the assumption of normality is the requirement of multiple regression analysis to have normality between independent and dependent variables. The presence of outliers will violate normality (Hopkins & Ferguson, 2014). Temtime (2016) used a scatterplot and normal probability plot (P-P) to test for normality. I used a scatterplot and normal probability plot (P-P) to test for normality.

The results did not violate the four assumptions. Therefore, I did not need to apply bootstrapping. According to Hassan and Abbas (2017), bootstrapping is a nonparametric method that will generate an estimate of the indirect effect, including a 95% confidence interval. According to Barratt et al. (2015), bootstrapping helps the researcher assess standard errors and other statistical parameters from the sample data. Onyebuenyi (2016) noted that if the results violate multiple regression assumptions, then the researcher needs to conduct 1,000 bootstrapping procedures to approximate the distribution of sample

data. The data did not violate the four assumptions of linearity, homoscedasticity, independence of error terms, and normality. Therefore, I did not apply bootstrapping procedures.

For statistical significance, I used an alfa level of 0.05 with a 95% confidence interval. According to Trafimow and Earp (2017), with an alfa level 0.05, the researcher potentially will reject null hypothesis only 5% of the time. Based on previous studies on project success by Sava (2016), Coleman (2014) and Bond (2015), I applied an alfa level of 0.05.

According to Singh and Masuku (2014), the possibility that the sample the researcher obtains might not represent the true population always exists. However, with a confidence level of 95%, 95 out of 100 samples would represent the true population (Singh & Masuku, 2014). Coleman (2014) and Bond (2015) chose a confidence level of 95% for their studies on project success. Therefore, I chose a 95% confidence level.

Boysen (2015) stressed the importance of statistical significance when interpreting results. According to Heiman (2010), in every study, the researcher must indicate if results are significant or nonsignificant. Singh and Masuku (2014) reported that researchers customarily set statistical significance to 5 percent. In the current study, I determined statistical significance by checking the probability value output of the statistical test. If the value was equal to or smaller than the alpha level of 0.05, then I would consider the alternative hypothesis to be true and, therefore, rejected the null hypothesis.



Gignac and Szodorai (2016) stated the importance of using guidelines based on good quality data to interpret effect sizes. Gignac and Szodorai suggested using an effect size of 0.10, 0.20, and 0.30. The large effect size ( $f^2 = .30$ ) was chosen based on previous studies on project success conducted by Coleman (2014), Nguyen (2015) and Sava (2016). Therefore, as advised by Gignac and Szodorai, and the previous studies on project success, I used a large effect size ( $f^2 = .30$ ) to conduct the statistical test.

The PIP instrument was used to measure the project success variable: if the total score was less than the 50th percentile (or a raw score of 69), then project success was considered to be in critical condition (Pinto & Slevin, 1988). To analyze the data, I used IBM SPSS Statistics software version 24. Hosford (2017), Johnson (2016), and Bond (2015) used SPSS software to analyze the data by in their studies about project success. I used SurveyMonkey services to export the data and import into from SPSS.

### **Study Validity**

Halperin, Pyne, and Martin (2015) noted that researchers should understand the risks regarding variables affecting the internal validity of the study. According to Lancsar and Swait (2014), external validity is the capability of the model to produce satisfactory forecasts about study results. In the following sections, I discussed the internal and external validity of this study.

#### **Internal Validity**

In experimental designs, researchers achieve internal validity when they understand the cause-effect relationship between dependent and independent variables in experiments (Chytilova & Maialeh, 2015; Halperin, Pyne, & Martin, 2015). Alm,

Bloomquist, and McKee (2015) noted analyzing the design of the study is the way to assess internal validity. However, this doctoral study was a correlational study, so threats to internal validity were not applicable. However, threats to statistical conclusion validity were of concern, and I addressed these in the following section.

### **External Validity**

According to Kennedy-Martin, Curtis, Faries, Robinson, and Johnston (2015), external validity is the ability to generalize findings from a study to a population outside of the sample. Alm et al. (2015) noted that external validity could only be assessed in an empirical way, whereas Lancsar and Swait (2014) stress that external validity is a critical component of a study. Furthermore, Lancsar and Swait argued that analysis of external validity should be more extensive than just analyzing the results of the study. I provided detailed information about the research procedures, sample, and a population of this study so that any future researcher interested in assessing its generalizability has access to the relevant information.

### **Statistical Conclusion Validity**

According to Trafimow and Earp (2017), type I error happens when a researcher rejects the null hypothesis when the hypothesis is actually true. Trafimow and Earp suggested probability for type error I is generated based on alfa level. For an alfa level 0.05, the researcher potentially will reject null hypothesis only 5% of the time (Trafimow & Earp, 2017). Based on previous studies on project success by Sava (2016), Coleman (2014) and Bond (2015), I chose an alfa level of 0.05.

Sava (2016) stated that PIP has a published reliability score of above .70. Mazur et al. (2014) conducted a study on project success and reported PIP reliability of .93 for overall scale. Cronbach's alpha calculated demonstrated strong results for the PIP instrument (as cited in Bond, 2015). PIP's overall reliability and validity are reported to be over .70 by Slevin and Pinto (1986), and Slevin and Pinto (1987). I calculated the reliability coefficient for PIP instrument and reported it in the reliability analysis in Section 3. I adopted Saadé et al.'s (2015) view that a Cronbach alpha value over .70 is acceptable.

According to Iram, Khan, and Sherani (2016), having a small sample size will increase the sampling error. Sava (2016) and Bond (2015) used G\*Power 3.1.9.2 software in their project success studies to calculate sample size, and I used it in this study as well, in particular, to mitigate sampling errors. Since I had two predictor variables in my study, I chose the large effect size ( $f^2 = .30$ ) based on previous studies conducted on project success by Coleman (2014), Nguyen (2015), and Sava (2016). The sample size calculated for a statistical level power of .80 is 36 participants. Sava (2016) and Coleman (2014) used a statistical level power of .80 in previous project success studies. If I increased the power to .99, the sample size required is 75. However, I approached 360 participants due to possible low participation levels, and only 138 participants responded to the survey.

### **Transition and Summary**

In Section 2, I explained the pivotal role of the researcher in a study, followed by a description of the study participants. The participants were project managers in Albania

and Kosovo who were LinkedIn members. I selected the quantitative research method and a correlational study design based on the research question.

In the ethical section, I presented important discussions about the study ethics. Based on previous studies on project success, I chose the PIP instrument for data collection related to project success. I used a demographic questionnaire to collect demographic information from selected participants. I posted the survey online to the SurveyMonkey website. The last sections covered data analysis and the internal and external validity of the study.

In Section 3, I cover this study's results and application to professional practice, implications for social change, recommendations for action, and further research, reflections, and conclusions.

### Section 3: Application to Professional Practice and Implications for Change

In Section 2, I presented and justified the selection of research methods for this study. In Section 3, I present the results and discuss the study's potential application for professional practice and social change. I close Section 3 by presenting recommendations for action and further research, as well as study conclusions.

#### **Introduction**

The purpose of this quantitative, correlational study was to examine whether a relationship exists between project managers' age and years of project experience, and project success. The population of this study included active and former project managers working in Albania or Kosovo who were LinkedIn members. My target number of participants was 75. I invited 360 first connections in LinkedIn to participate in the SurveyMonkey questionnaire.

Only 138 participants responded to the invitation. However, of these 138 participants, 30 skipped the second page of the questionnaire, which contained 12 PIP questions. Therefore, I had to exclude those 30 participants from further analysis. I conducted descriptive and inferential statistics on data for the remaining 108 participants. Based on multiple regression analysis, in results portion, I reveal that the linear combination of project managers' age and years of project experience did not significantly predict project success. Project managers' age has a negative effect on project success, though this effect is not statistically significant. Project managers' experience has a positive influence on project success. However, project managers' experience is also not statistically significant. Therefore, I could not reject the null

hypothesis at an alpha level of 0.05. The null hypothesis was the following: The linear combination of project managers' age and years of project experience will not significantly predict project success.

### **Presentation of the Findings**

The statistical test applied for data analysis was multiple linear regression. The purpose of this quantitative, correlational study was to examine whether a relationship exists between project managers' age and years of project experience, and project success. The independent variables were project managers' age and years of project experience, and the dependent variable was project success. The target population consisted of project managers working in Albania and Kosovo.

The research question was the following: Does a relationship exist between project managers' age and years of project experience and project success? The following are the hypotheses of this study.

Null hypothesis ( $H_0$ ): The linear combination of project managers' age and years of project experience will not significantly predict project success.

Alternative hypothesis ( $H_1$ ): The linear combination of project managers' age and years of project experience will significantly predict project success.

To answer my research question, I analyzed the potential existence of a significant relationship between project managers' age and years of project experience and project success. I downloaded data from SurveyMonkey and placed the data in a Microsoft Excel format. Then I performed data cleaning by removing 30 participants who

skipped the second page of the survey. For further analysis, I coded data in SPSS (see Table 2).

Table 2

*Coding Used in SPSS*

Codes for variables	Response options	Code used in SPSS
Gender	Female	1
	Male	2
Age	18-24	1
	25-34	2
	35-44	3
	45-54	4
	55-64	5
	65-74	6
	75 or older	7
Highest education	Associate's	1
	Bachelor's	2
	Master's	3
	Doctorate	4
Years of project management experience	Less than 1	1
	1-5	2
	6-10	3
	11-15	4
	16-20	5
	More than 20	6
Indicate your location	Albania	1
	Kosovo	2
	Other	3

## Descriptive Statistics

According to Pinto and Slevin (1988), the researcher or project manager has to add all individual scores from the 12 questions on the PIP instrument to calculate the total project success score. I calculated the project success score in SPSS and created a new variable to use for further data analysis. The project score ranged from a minimum of 22 to a maximum of 84 points. Pinto and Slevin stated that a score below 69 indicates that a project may run into issues and the project manager should pay more attention in managing that project. Based on a project score of 69, 55.5% ( $n = 60$ ) of participants rated projects lower than Pinto and Slevin's suggested guidelines, while 44.4% ( $n = 48$ ) of participants rated projects above 69 points, indicating successful projects. Figure 3 is a histogram of project success scores.

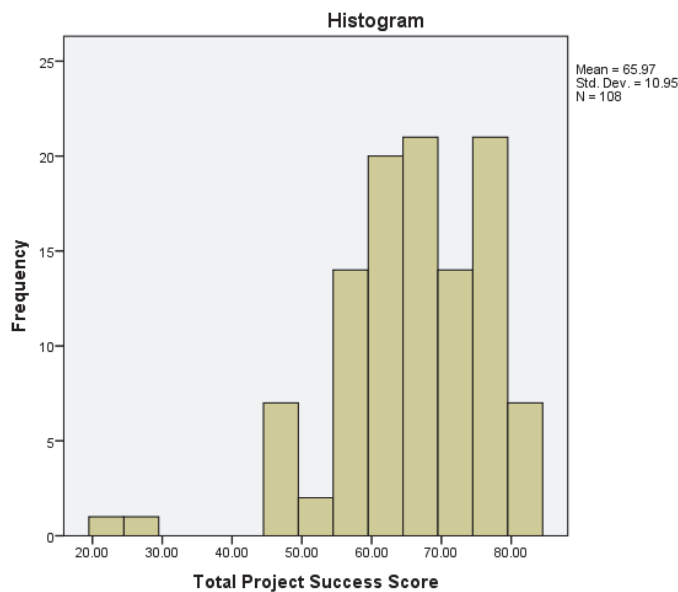
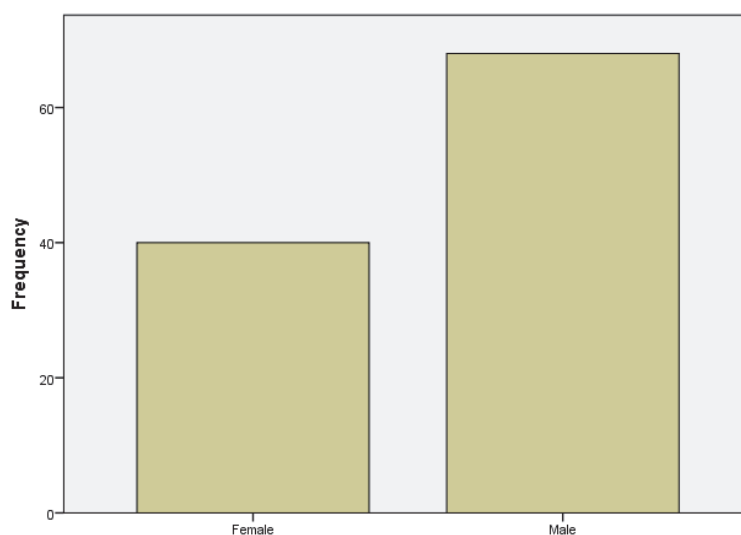


Figure 3. Project success score.



From the data results that 37% ( $n = 40$ ) of participants were female, and 63% ( $n = 68$ ) were male. In Figure 4, I present the frequency of gender distribution. Based on the data responses from participants, 6.5% ( $n = 7$ ) were 18-24 years old, 47.2% ( $n = 51$ ) were 25-34 years old, 38% ( $n = 41$ ) were 35-44 years old, 6.5% ( $n = 7$ ) were 45-54 years old, and 1.9% ( $n = 2$ ) were 55-64 years old. No participants were in the age ranges of 65-74 years or 75 years or older. Therefore, younger group age category represented a larger number of participants. In Figure 5, I show the frequency of age distribution.



*Figure 4.* Frequency of gender distributions.

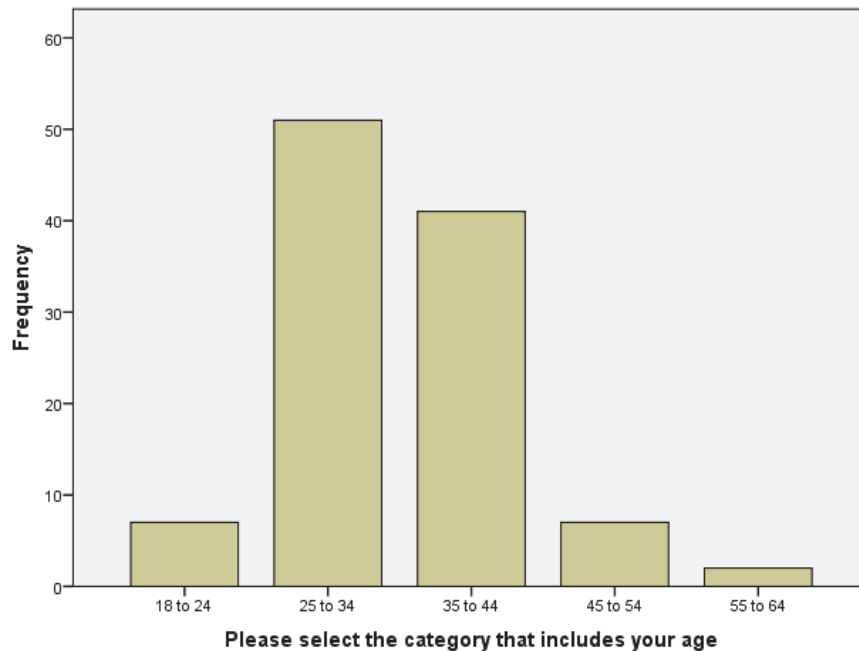


Figure 5. Frequency of age distribution.

The next demographic information collected was related to the education level of participants. In this study, 1.9% ( $n = 2$ ) of the participants had associate's degrees, 32.4% ( $n = 35$ ) had bachelor's degrees, 61.1% ( $n = 66$ ) had master's degrees, and 4.6% ( $n = 5$ ) had doctoral degrees. In Figure 6, I show the distribution of participants' education levels.

Years of project management experience was another important piece of demographic information collected from participants. Based on the data, 6.5% ( $n = 7$ ) had less than 1 year of project management experience, 52.8% ( $n = 57$ ) had 1-5 years, 30.6% ( $n = 33$ ) had 6-10 years, 6.5% ( $n = 7$ ) had 11-15 years, and 3.7% ( $n = 4$ ) had 16-20 years. None of the participants had over 20 years of experience. In Figure 7, I show participants' years of experience in project management.

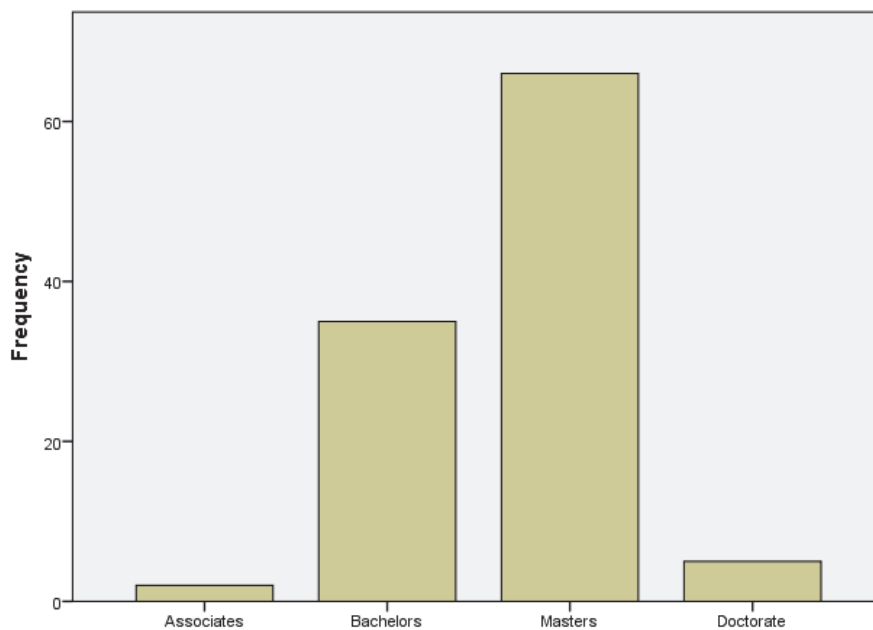


Figure 6. Highest education level.

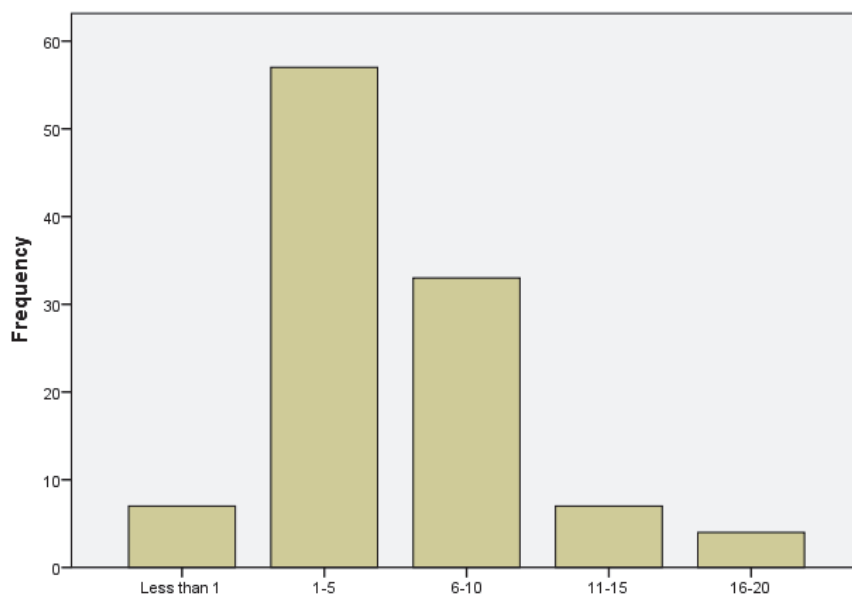


Figure 7. Years of experience in project management.

The last question regarded participants' location. With this question, I intended to screen out participants not working in Albania or Kosovo. There were six participants from location *other*. Once I removed these six participants from further analysis, 52.8% ( $n = 57$ ) of participants were from Albania and 47.28% ( $n = 51$ ) were from Kosovo. In Figure 8, I show participants' country distribution.

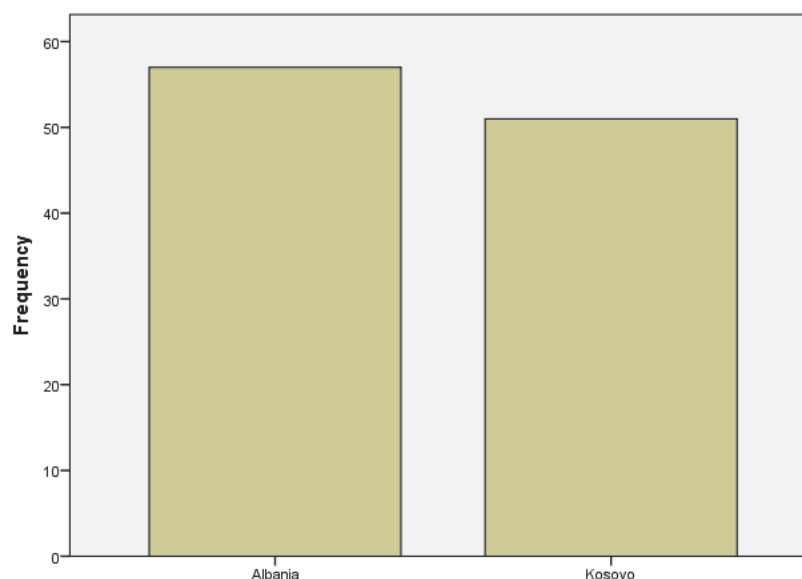


Figure 8. Participants' country distribution.

In Table 3, I present descriptive statistics related to project success score. I calculated the project success score by adding all ratings for each individual question on the PIP instrument. I adopted the view of Saadé et al. (2015) view that a Cronbach's alpha value over .70 was acceptable. Cronbach's alpha was calculated as .879. Therefore, the PIP is shown to be a reliable instrument for measuring project success.

Table 3

*Project Success Score Descriptive Statistics*

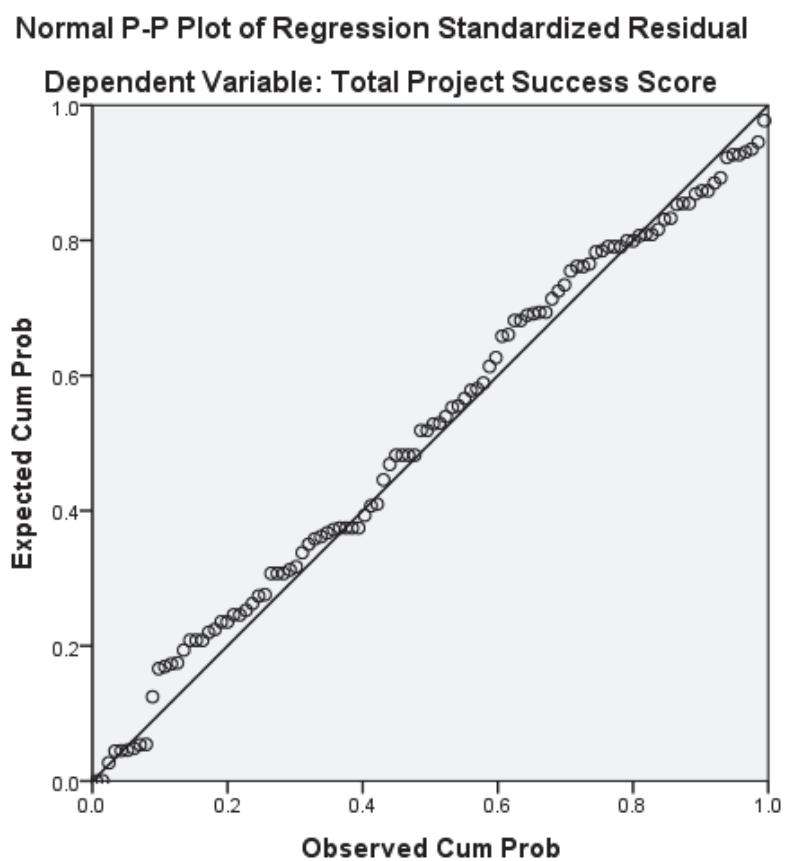
	<i>N</i>	Min	Max	Mean	Std. deviation	Cronbach's $\alpha$	No. of items
Project success score	108	22.00	84.00	65.97	10.94	.879	12
Valid <i>N</i>	108						

**Statistical Analysis Assumptions Testing**

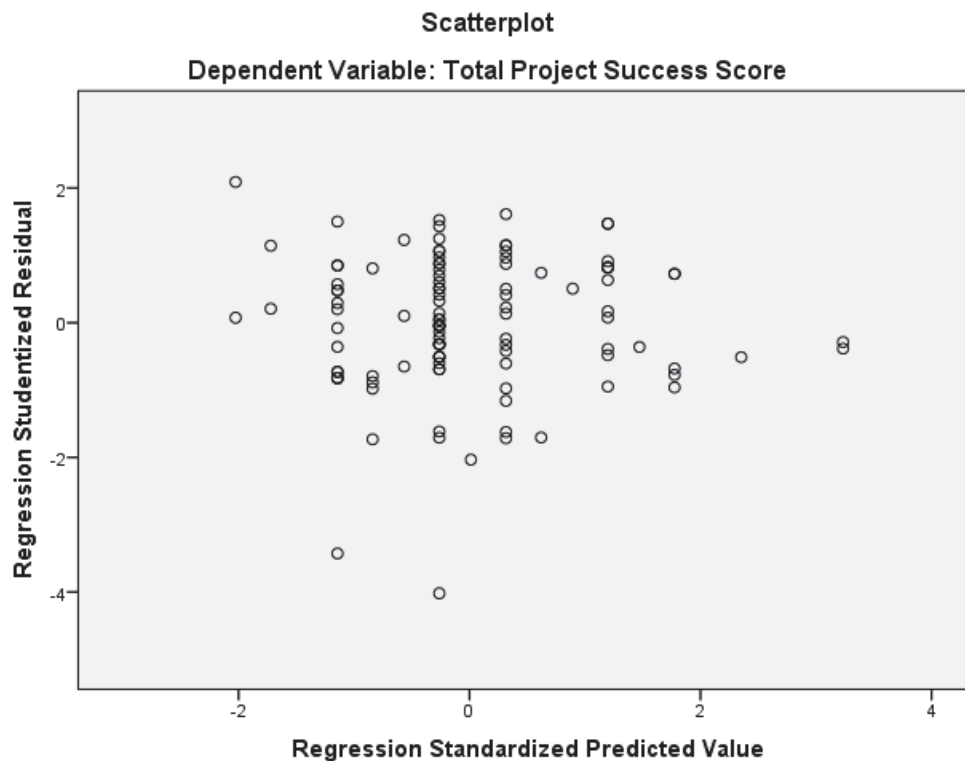
From 138 participants, 30 participants skipped the 12 questions from PIP instrument; therefore, I excluded the data from those participants from further analysis. The remaining 108 participants completed all questions. Therefore, I did not need to clean the data further.

Before I conducted multiple regression analysis, I evaluated the assumptions of normality, linearity, homoscedasticity, and the absence of multicollinearity. I used a normal probability plot (P-P) to test for normality. Through the plot I show the results did not violate the assumption of normality, as the distribution of responses is not far from the diagonal line. See Figure 9. To test for assumption of linearity, I plotted the residual-predicted dependent values. With this plot I show that a linear relationship exists between the independent variables and the dependent variable. Hence, as shown in Figure 10, the linearity assumption is valid. To test for assumption of homoscedasticity, I used a

scatterplot and normal probability plot (P-P), as shown in Figures 9 and 10. As shown in the plot, the data met the assumption of homoscedasticity. Therefore, the homoscedasticity assumption of constant-variance is valid.



*Figure 9.* P-P plot on project success scores.



*Figure 10.* Scatterplot of project success residual-predicted dependent values.

The fourth and last assumption is regarding the absence of multicollinearity. I analyzed the data for any high correlation coefficient between any two independent variables. In Table 4, I display these results. A variance inflation factor (VIF) value above 10.0 would indicate the presence of multicollinearity. From the results in Table 4, I show that VIF is low at 1.57; therefore, meeting the assumption of the absence of multicollinearity.

Table 4

*Multicollinearity (VIF Values)*

Mode	Collinearity statistics	
	Tolerance	VIF
Age	.634	1.57
Project management experience	.634	1.57

In Table 5, I present the results of the multiple linear regression of the independent variables, project manager's age and years of project experience, to the dependent variable, project success. According to the results, project managers' age and years of project experience did not predict project success,  $F(2,105) = 1.544, p > 0.05$ . The coefficient of determination,  $R^2$  value, is 0.029. This means that 2.9% of the variation in the dependent variable project success is a result of the independent variables project manager's age and years of project experience management.

Table 5

*Project Manager's Age and Years of Experience Predicting Project Success*

Model	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i>
Age	-1.63	1.67	-.118	-.976	.331
Project mgt. experience	2.70	1.54	.212	1.754	.082

*Note.* Dependent variable: Project success score.



By using further regression analysis, I found that age has a negative effect on project success, though not statistically significant ( $p = 0.331$ ). Project managers' experience has a positive influence on project success. However, project managers' experience is not statistically significant ( $p = 0.082$ ). Therefore, I could not reject the null hypothesis at an alpha level of 0.05. The null hypothesis was *the linear combination of project managers' age and years of project experience will not significantly predict project success.*

As per regression analysis shown in Table 5, neither project managers' age nor years of project experience have a significant effect on project success. These results are startling, considering many resources used in literature review would indicate a link between project managers' age or years of project experience and project success. Seboni and Tutesigensi (2015) interviewed top management and reported that age was a factor in selecting project managers. Similarly, Dulaimi and Langford (1999) surveyed project managers and reported age impacted performance.

The results of my study regarding the influence of project manager's experience in project success align with results presented by Rubin and Seelig (1967) and Bond (2015). Rubin and Seelig reported higher project success rate by experienced project managers compared to less experienced project managers and attributed project success to the company's managers offering more support and placing a higher priority on critical projects and not on project manager's experience. Similarly, Bond (2015) reported that project managers' years of experience did not predict project success.

The results from this study are in contradiction with other studies that reported project manager's experience positively influenced project success. According to Ceric (2014), work experience plays a critical role in project managers' success. Furthermore, Paton and Hodgson (2016), Jeong and Bozkurt (2014), and Vicente-Oliva, Martinez-Sanchez, and Berges-Muro (2015) noted project managers' experience influences their knowledge, training, performance, and, overall project success.

### **Applications to Professional Practice**

According to Ekrot, Kock, and Gemünden (2016), average project success reflects the overall business success in project-orientated companies. Therefore, project success is critical to businesses. Söderland, Geraldi, Müller, and Jugdev (2012) and Mutua, Waiganjo, and Oteyo (2014) suggested project success is the core of project management. Project management researchers and practitioners have attentively researched the subject of project success for decades (Söderland et al., 2012). Project success continues to be one of the most important subjects researched in the field of project management (Söderland et al., 2012). Despite the strong interest of researchers and practitioners, Standish Group (2014) continues to report a high failure rate for projects. Project managers play a critical role in project success (Blaskovics, 2016).

Through this study, I demonstrated the need for business owners to understand and evaluate the effect that project managers' age and years of project experience have on project success. As demonstrated in the literature review, many researchers in their studies in project management reported different results regarding the effect project manager's age and years of project experience have on project success. While the results

of this study might not have shown a statistically significant effect of project manager's age and years of project experience to project success for an alpha level of 0.05, the literature review includes a high number of studies emphasizing the effect of project managers' age and years of experience in overall project success.

In the results section, I showed that age has a negative effect on project success, though not statistically significant, while experience has a positive effect, again, not statistically significant. Project managers' age and years of project experience did not predict project success,  $F(2,105) = 1.544, p > 0.05$ . The coefficient of determination,  $R^2$  value, was 0.029. This means that 2.9% of the variation in the dependent variable project success was a result of the independent variables project manager's age and years of project experience.

Standish Group (2014) researchers reported low project success rate, illustrating the importance for further research to understand critical factors for project success. Ko and Kirsch (2017) mentioned technical and business training for project managers would increase the project success rate. Business owners need to have conclusive information about the effect project managers' age and years of project experience have on project success so they can make appropriate decisions about the training and selection of suitable project managers for future projects to improve project success rates.

### **Implications for Social Change**

Project success is also crucial for not-for-profit organizations. Development agencies continually undertake projects for development. Ika and Donnelly (2017)

revealed that although experts value the international development (ID) sector in the billions, little research exists regarding the project success of ID projects.

One of the criteria for successful projects is delivery within the schedule (Lehtonen, 2014); therefore, timely delivery of infrastructure projects could improve the livelihood of communities where projects are implemented. Ika and Donnelly (2017) noted the importance and widespread influence of international development projects for social change through development. According to Ika and Donnelly, international development projects cover many areas, including areas affecting social change, such as agriculture, transportation, water, electricity, energy, sewage, mines, health, nutrition, population and urban development, education, environment, social development, reform, and governance. An increased rate of project success might translate into an improvement of livelihood for local communities where projects are implemented. Regardless of whether personnel of the private or not-for-profit sector conduct the project, the project manager plays a key role in achieving project success.

### **Recommendations for Action**

Project success continues to be a crucial factor for businesses. Companies undertake projects to launch a new product, improve a process, and expand their presence in other territories. Therefore, increasing the project success rate would translate into an increased return on investment (ROI) for companies.

Project managers are in charge of delivering projects. Often, project managers have financial incentives to deliver successful projects. Because project managers receive incentives for delivering successful projects, I concluded that project managers' play a

critical role in project success. However, as presented in the literature review, the effect of project managers age and years of experience require further research in the context of achieving project success.

Results of this study confirmed a negative influence project managers' age has on project success. As Seboni and Tutesigensi (2015) mentioned, project manager's age was a factor in project managers selection, though not mentioned specifically, due to possible lawsuits. Through this study, I brought attention to the influence the project managers' age has on project success. Business owners and project manager should deliver training to help older project managers. Project managers' experience has a positive impact on project success, though not statistically significant. Business owners could use this information to allocate project managers, so more experienced project managers are selected to execute more challenging projects, while less experienced project managers can learn in less risky projects.

Business owners and project management organizations, such as PMI, PMI chapter, and the International Project Management Association (IPMA), should use the results from this study and the wealth of insight from the literature review to further advocate for training and development for project managers. It is in the best interest of business owners, project management organizations advocating for project management, and local and national governments to increase project success rates. A higher project success rate would mean a higher ROI for everyone. I will be offering my full support to project management organizations, such as PMI and IPMA, to present results of this

study in a summary form and continue to advance the field of project management research regarding success.

### **Recommendations for Further Research**

My recommendation for further research is to study a larger population and in other countries. The population of this study was a small group of project managers based in Albania or Kosovo. A similar study can be conducted with project managers from other countries to evaluate whether there are variations in terms of the countries, ethnicities, or cultures of the project managers. Project managers' age effect on project success requires further research. The abolishment of retirement age and an increase in populations working in their late years indicates the importance of studying the effect of project managers' age in project success.

Aside from a small population, the main limitation of my study was the use of an online survey. Participants did not complete all the questions in the survey; 30 participants or 21% of population skipped the 12 questions on the PIP instrument. The PIP instrument was critical in the survey because I used it for regression analysis. Therefore, I had to exclude 30 participants. The third limitation was that using the online survey did not allow me to know the accuracy of the information provided by participants. I recommend using a mixed-methods research study because by combining two researched methods, quantitative and qualitative, the researchers would be able to gather more in-depth information regarding participants' answers on the questionnaire.

## **Reflections**

I was enthusiastic to start this research regarding the influence project manager's age and years of project experience have on project success. The three variables of this study are close to myself and any project management practitioner. Age and experience are factors that keep changing, and project managers have no control over these factors. Project success is the main goal of every project manager. Every project manager accepting a new project, accepts with the intention to turn it into a success story.

Therefore, as a project management practitioner and researcher, I am deeply interested in the subject of project success. The goal of researchers is to help project managers improve project delivery results. Therefore, I strongly believe project success will continue to capture more attention of project management researchers.

A doctoral study is not a sprint but a marathon. It required different thinking, planning, and execution. In a way, it was another project for me, though on a larger scale. At times, progress was so slow that it felt I was moving like a snail. It was difficult to keep the momentum and to keep going. However, I persisted, and in the end, I succeeded.

## **Conclusion**

In this study, I intended to analyze the effect project managers' age and years of project experience have on project success. Project success captures the attention of many researchers and practitioners. It is the main goal of any projects undertaken. I showed project managers' age has a negative effect on project success, though not statistically significant. Project managers' experience has a positive influence on project success. However, project managers' experience was not statistically significant. I conducted

further multiple regression analysis and through results, I revealed the linear combination of project managers' age and years of project experience did not significantly predict project success.



## References

- Aaltonen, K., & Kujala, J. (2016). Towards an improved understanding of project stakeholder landscapes. *International Journal of Project Management*, 34, 1537-1552. doi:10.1016/j.ijproman.2016.08.009
- Aga, D. A., Noorderhaven, N., & Vallejo, B. (2016). Transformational leadership and project success: The mediating role of team-building. *International Journal of Project Management*, 34, 806-818. doi:10.1016/j.ijproman.2016.02.012
- Ahern, T., Leavy, B., & Byrne, P. (2014). Complex project management as complex problem solving: A distributed knowledge management perspective. *International Journal of Project Management*, 32, 1371-1381.
- Alagba, T. J. (2014). *Examination of the relationship between project management critical success factors and project success of oil and gas drilling projects* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 3610243)
- Allen, M., Alleyne, D., Farmer, C., McRae, A., & Turner, C. (2014). A framework for project success. *Journal of Information Technology and Economic Development*, 5(2), 1-17. Retrieved from <http://www.gsmi-ijgb.com/Pages/JITED.aspx>
- Alm, J., Bloomquist, K. M., & McKee, M. (2015). On the external validity of laboratory tax compliance experiments. *Economic Inquiry*, 53, 1170-1186. doi:10.1111/ecin.12196
- Amin, S., & Kamal, Y. (2016). Impact of natural born leader qualities on the project team performance: The influences of demographics (gender and age). *International*

*Journal of Management, Accounting and Economics*, 3, 306-318. Retrieved from <http://www.ijmae.com>

Armstrong, A. L. (2015). *The value of project management certification in achieving project success: A qualitative study* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 3714323)

Ayodeji, O., Bhekisia, M., & Aigbavboa, C. (2016). Site meeting as a sustainable construction tool. *Socioeconomica*, 5, 83-92. doi:10.12803/SJSECO.590009

Babones, S. (2016). Interpretive quantitative methods for the social sciences. *Sociology*, 50, 453-469. doi:10.1177/0038038515583637

Baccarini, D. (1999). The logical framework method for defining project success. *Project Management Journal*, 30, 25-32. Retrieved from <http://www.pmi.org/learning/library/logical-framework-method-defining-project-success-5309>

Badewi, A. (2016). The impact of project management (PM) and benefits management (BM) practices on project success: Towards developing a project benefits governance framework. *International Journal of Project Management*, 34, 761-778. doi:10.1016/j.ijproman.2015.05.005

Baird, G. L., & Bieber, S. L. (2016). The Goldilocks dilemma: Impacts of multicollinearity—A comparison of simple linear regression, multiple regression, and ordered variable regression models. *Journal of Modern Applied Statistical Methods*, 15, 332-357. doi:10.22237/jmasm/1462076220

- Bal, P. M., Kleef, M., & Jansen, P. G. (2015). The impact of career customization on work outcomes: Boundary conditions of manager support and employee age. *Journal of Organizational Behavior*, 36, 421-440. doi:10.1002/job.1998
- Barratt, M. J., Ferris, J. A., & Lenton, S. (2015). Hidden populations, online purposive sampling, and external validity: Taking off the blindfold. *Field Methods*, 27, 3-21. doi:10.1177/1525822X14526838
- Baruch, Y., Grimland, S., & Vigoda-Gadot, E. (2014). Professional vitality and career success: Mediation, age and outcomes. *European Management Journal*, 32, 518-527. doi:10.1016/j.emj.2013.06.004
- Bausch, S., Michel, A., & Sonntag, K. (2014). How gender influences the effect of age on self-efficacy and training success. *International Journal of Training and Development*, 18, 171-187. doi:10.1111/ijtd.12027
- Bebe, I. A. (2016). *Employee turnover intention in the U.S. fast food industry* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 10016173)
- Becker, K., & Smidt, M. (2015). Workforce-related risks in projects with a contingent workforce. *International Journal of Project Management*, 33, 889-900. doi:10.1016/j.ijproman.2014.10.014
- Bentahar, O., & Cameron, R. A. (2015). Design and implementation of a mixed method research study in project management. *Electronic Journal of Business Research Methods*, 13, 3-15. Retrieved from <http://www.ejbrm.com/main.html>

- Berg, M. E., & Karlsen, J. T. (2014). How project managers can encourage and develop positive emotions in project teams. *International Journal of Managing Projects in Business*, 7, 449-472. doi:10.1108/IJMPB-01-2013-0003
- Berssaneti, F. T., & Carvalho, M. M. (2015). Identification of variables that impact project success in Brazilian companies. *International Journal of Project Management*, 33, 638-649. doi:10.1016/j.ijproman.2014.07.002
- Besteiro, É. N. C., Pinto, J. de S., & Novaski, O. (2015). Success factors in project management. *Business Management Dynamics*, 4, 19-34. Retrieved from <http://bmdynamics.com>
- Bezak, S., & Nahod, M.-M. (2011). Project manager's role analysis as a project management concept. *Tehnicki Vjesnik*, 18, 33-40. Retrieved from <https://www.ebscohost.com/>
- Bhoola, V. (2015). Impact of project success factors in managing software projects in India: An empirical analysis. *Business Perspectives and Research*, 3, 109-125. doi:10.1177/2278533715578555
- Bhoola, V., & Mallik, D. (2014). Determinants of agile practices: A gini index approach. *The XIMB Journal of Management*, 11, 95-114. Retrieved from <http://home.ximb.ac.in/~jcr/index.html>
- Bilbo, D., Bigelow, B. F., Rybkowski, Z., & Kamranzadeh, A. (2014). Effects of family-related factors on female project managers' salaries in the construction industry in the United States. *International Journal of Construction Education and Research*, 10, 255-267. doi:10.1080/15578771.2014.886641

- Blaskovics, B. (2016). The impact of project manager on project success-The case of ICT sector. *Society and Economy in Central and Eastern Europe*, 38, 261-281.  
doi:10.1556/204.2016.38.2.7
- Blixt, C., & Kirytopoulos, K. (2017). Challenges and competencies for project management in the Australian Public Service. *International Journal of Public Sector Management*, 30, 286-300. doi:10.1108/IJPSM-08-2016-0132
- Bond, U. E. (2015). *Project management, leadership, and performance: A quantitative study of the relationship between project managers' leadership styles, years of experience and critical success factors (CSFs) to project success* (Doctoral dissertation). Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 3682570)
- Bown-Wilson, D., & Parry, E. (2013). Career progression in older managers. *Employee Relations*, 35, 309-321. doi:10.1108/01425451311320495
- Boysen, G. A. (2015). Uses and misuses of student evaluations of teaching: The interpretation of differences in teaching evaluation means irrespective of statistical information. *Teaching of Psychology*, 42, 109-118.  
doi:10.1177/0098628315569922
- Bredin, K., & Söderlund, J. (2013). Project managers and career models: An exploratory comparative study. *International Journal of Project Management*, 31, 889-902.  
doi:10.1016/j.ijproman.2012.11.010
- Bubshait, A. A., Siddiqui, M. K., & Al-Buali, A. M. A. (2014). Role of communication and coordination in project success: Case study. *Journal of Performance of*

*Constructed Facilities*, 29, 04014107. doi:10.1061/(ASCE)CF.1943-5509.0000610

- Buengeler, C., Homan, A. C., & Voelpel, S. C. (2016). The challenge of being a young manager: The effects of contingent reward and participative leadership on team-level turnover depend on leader age. *Journal of Organizational Behavior*, 37, 1224-1245. doi:10.1002/job.2101
- Burger, M., Verster, B., & Zulch, B. (2015). The construction project manager in South Africa: Analysis of industry-specific knowledge. *Acta Structilia*, 22, 48-72. Retrieved from <https://www.ajol.info/index.php/actas/index>
- Buys, F., & Van Schalkwyk, T. (2015). The relevance of ethical conduct in creating a competitive advantage for entry-level emerging contractors. *Acta Structilia*, 22, 81-109. Retrieved from <https://www.ajol.info/index.php/actas/index>
- Cattell, K., Bowen, P., & Edwards, P. (2016). Stress among South African construction professionals: A job demand-control-support survey. *Construction Management and Economics*, 34, 700-723. doi:10.1080/01446193.2016.1203967
- Ceric, A. (2014). The impact of project managers' experience on the selection of strategies for minimizing information asymmetries in construction projects. *Engineering Project Organization Journal*, 4, 44-57. doi:10.1080/21573727.2014.886563
- Chipulu, M., Neoh, J. G., Ojiako, U. U., & Williams, T. (2013). A multidimensional analysis of project manager competences. *International Journal of Operations & Production Management*, 60, 506-517. doi:10.1108/ijopm-04-2012-0156

Chipulu, M., Ojiako, U., Gardiner, P., Williams, T., Mota, C., Maguire, S., ... Marshall,

A. (2014). Exploring the impact of cultural values on project performance: The effects of cultural values, age and gender on the perceived importance of project success/failure factors. *International Journal of Operations & Production Management*, 34, 364-389. doi:10.1108/ijopm-04-2012-0156

Chytilova, H., & Maialeh, R. (2015). Internal and external validity in experimental economics. *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 9, 1944-1951. Retrieved from scholar.waset.org/1999.10/10001764

Coleman, R. A. (2014). *The relationship between project managers' competence, professional experience, and education on career success: A correlation study* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 3646089)

Connelly, B. S., Sackett, P. R., & Waters, S. D. (2013). Balancing treatment and control groups in quasi-experiments: An introduction to propensity scoring. *Personnel Psychology*, 66, 407-442. doi:10.1111/peps.12020

Connelly, L. M. (2013). Limitation section. *Medsurg Nursing*, 22, 325-336. Retrieved from <http://www.medsurnursing.net>

Crawford, L., French, E., & Lloyd-Walker, B. (2013). From outpost to outback: project career paths in Australia. *International Journal of Project Management*, 31, 1175-1187. Doi:10.1016/j.ijproman.2013.03.003

- Cserhádi, G., & Szabó, L. (2014). The relationship between success criteria and success factors in organisational event projects. *International Journal of Project Management*, 32, 613-624. doi:10.1016/j.ijproman.2013.08.008
- Curtis, E. A., Comiskey, C., & Dempsey, O. (2016). Importance and use of correlational research. *Nurse Researcher*, 23, 20-25. doi:10.7748/nr.2016.e1382
- Davis, K. (2014). Different stakeholder groups and their perceptions of project success. *International Journal of Project Management*, 32, 189-01. doi:10.1016/j.ijproman.2013.02.006
- De Araújo, C. C. S., & Pedron, C. D. (2015). IT project manager competencies and IT project success: A qualitative study. *Organisational Project Management*, 2, 53-75. doi:10.5130/opm.v2i1.4142
- De Carvalho, M. M., & Junior, R. R. (2014). Impact of risk management on project performance: the importance of soft skills. *International Journal of Production Research*, 53, 321-340. doi:10.1080/00207543.2014.919423
- De Oliveira, E. C. B., Alencar, L. H., & Costa, A. P. C. S. (2015). An integrated model for classifying projects and project managers and project allocation. *International Journal of Industrial Engineering: Theory, Applications and Practice*, 22, 330-342. Retrieved from <http://journals.sfu.ca/ijietap/index.php/ijie/index>
- Deck, C., & Smith, V. (2013). Using laboratory experiments in logistics and supply chain research. *Journal of Business Logistics*, 34, 6-14. doi:10.1111/jbl.12006



- Ding, S., Jia, C., Qu, B., & Wu, Z. (2015). Corporate risk-taking: Exploring the effects of government affiliation and executives' incentives. *Journal of Business Research*, 68, 1196-1204. doi:10.1016/j.jbusres.2014.11.014
- Du Randt, F. J., van Waveren, C. C., & Chan, K.-Y. (2014). An empirical study on the critical success factors of small-to medium-sized projects in a South African mining company. *South African Journal of Industrial Engineering*, 25, 13-28. doi:10.7166/25-2-832
- DuBois, M., Hanlon, J., Koch, J., Nyatuga, B., & Kerr, N. (2015). Leadership styles of effective project managers: Techniques and traits to lead high performance teams. *Journal of Economic Development, Management, IT, Finance, and Marketing*, 7, 30-46. Retrieved from <http://www.gsmi-ijgb.com/Pages/JEDMITFM.aspx>
- Dulaimi, M. F., & Langford, D. (1999). Job behavior of construction project managers: Determinants and assessment. *Journal of Construction Engineering and Management*, 125, 256-264. doi:10.1061/(ASCE)0733-9364(1999)
- Dunams, B. (2016). *Examining the project management professional certification as a predictor of project performance outcomes* (Doctoral dissertation). Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 10120822)
- Ekrot, B., Kock, A., & Gemünden, H. G. (2016). Retaining project management competence—Antecedents and consequences. *International Journal of Project Management*, 34, 145-157. doi:10.1016/j.ijproman.2015.10.010

- Froehlich, D. E., Beusaert, S., Segers, M., & Gerken, M. (2014). Learning to stay employable. *Career Development International*, 19, 508-525. doi:10.1108/CDI-11-2013-0139
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5, 1-4. doi:10.11648/j.ajtas.20160501.11
- Fabricius, G., & Büttgen, M. (2015). Project managers' overconfidence: How is risk reflected in anticipated project success? *Business Research*, 8, 239-263. doi:10.1007/s40685-015-0022-3
- Fahri, J., Biesenthal, C., Pollack, J., & Sankaran, S. (2015). Understanding megaproject success beyond the project close-out stage. *Construction Economics and Building*, 15, 48-58. doi:10.5130/AJCEB.v15i3.4611
- Famakin, I., & Abisuga, A. (2016). Effect of path-goal leadership styles on the commitment of employees on construction projects. *International Journal of Construction Management*, 16, 67-76. doi:10.1080/15623599.2015.1130601
- Fernando, N. G., Amaratunga, D., & Haigh, R. (2014). The career advancement of the professional women in the UK construction industry: The career success factors. *Journal of Engineering, Design and Technology*, 12, 53-70. doi:10.1108/JEDT-04-2012-0018
- Ferreira, M. P., Serra, F. A. R., & Pinto, C. S. F. (2014). Culture and Hofstede (1980) in international business studies: A bibliometric study in top management journals. *REGE-Revista de Gestão*, 21, 379-399. doi:10.5700/rege536

- Field, A. (2009). *Discovering statistics using IBM SPSS statistics* (3rd ed.). Thousand Oaks, CA: Sage Publications Inc.
- Francis, R. D. (2014). Assumptions and deeming. *Journal of Financial Crime*, 21, 204-214. doi:10.1108/JFC-07-2013-0049
- Frempong, M., Aboagye, P., & Duncan, L. (2016). Statistical modeling of the performance of first year evening school of takoradi polytechnic: Does prior education level, age at the time of admission, and course load matter? *European Journal of Statistics and Probability*, 4, 49-58. Retrieved from [www.eajournals.org](http://www.eajournals.org)
- Froehlich, D. E. (2016). Older managers' informal learning in knowledge-intensive organizations: Investigating the role of learning approaches among Austrian bank managers. *The International Journal of Human Resource Management*, 2, 1-18. doi: 10.1080/09585192.2016.1244897
- Fuertes, V., Egdell, V., & McQuaid, R. (2013). Extending working lives: Age management in SMEs. *Employee Relations*, 35, 272-293. doi:10.1108/01425451311320477
- Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, 20, 1408-1416. Retrieved from <http://nsuworks.nova.edu/tqr/>
- Gadison, P. D. (2016). *A study of the relationship between the project management office (PMO) leader sources of power and the quality of the PMO leader member*

*exchange influence on project success* (Doctoral dissertation). Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 10129805)

Garg, R. (2016). Methodology for research I. *Indian Journal of Anaesthesia*, 60, 640-645. doi:10.4103/0019-5049.190619

Geuens, M., & De Pelsmacker, P. (2017). Planning and conducting experimental advertising research and questionnaire design. *Journal of Advertising*, 46, 83-100. doi:10.1080/00913367.2016.1225233

Gewanlal, C., & Bekker, M. (2015). Project manager attributes influencing project success in the South African construction industry. *Acta Structilia*, 22, 33-47. Retrieved from <https://www.ajol.info/index.php/actas/index>

Gignac, G. E., & Szodorai, E. T. (2016). Effect size guidelines for individual differences researchers. *Personality and Individual Differences*, 102, 74-78. doi:10.1016/j.paid.2016.06.069

González, G. E. G., Casas, G. H. P., & Coronado, C. A. L. (2013). Project manager profile characterization in the construction sector in Bogotá, Colombia. *Project Management Journal*, 44, 68-93. doi:10.1002/pmj.21381

González, G. E. G., Coronado, C. A. L., & Casas, G. H. P. (2016). Project manager profile characterization in energy sector. *International Journal of Information Technology Project Management (IJITPM)*, 7, 64-84. doi:10.4018/IJITPM.2016100105

- Granato, D., Calado, V. M. de A., & Jarvis, B. (2014). Observations on the use of statistical methods in food science and technology. *Food Research International*, 55, 137-149. doi:10.1016/j.foodres.2013.10.024
- Standish Group. (2014). Standish group report: Chaos. Retrieved from <https://www.projectsmart.co.uk/white-papers/chaos-report.pdf>
- Standish Group. (2015). Standish Group 2015 Chaos Report. Retrieved from <https://www.infoq.com/articles/standish-chaos-2015>
- Gudiene, N., Banaitis, A., Podvezko, V., & Banaitiene, N. (2014). Identification and evaluation of the critical success factors for construction projects in Lithuania: AHP approach. *Journal of Civil Engineering and Management*, 20, 350-359. doi:10.3846/13923730.2014.914082
- Halperin, I., Pyne, D. B., & Martin, D. T. (2015). Threats to internal validity in exercise science: a review of overlooked confounding variables. *International Journal of Sports Physiology and Performance*, 10, 823-829. doi:http://dx.doi.org/10.1123/IJSPP.2014-0566
- Handzic, M., Durmic, N., Kraljic, A., & Kraljic, T. (2016). An empirical investigation of the relationship between intellectual capital and project success. *Journal of Intellectual Capital*, 17, 471-483. doi:10.1108/JIC-01-2016-0004
- Hassan, M. M. B. S., & Abbas, S. M. (2017). The impact of project managers' personality on project success in NGOs: the mediating role of transformational leadership. *Project Management Journal*, 48, 74-87. Retrieved from <https://www.pmi.org/learning/publications/project-management-journal>

- Heen, M. S. J., Lieberman, J. D., & Miethe, T. D. (2014). A comparison of different online sampling approaches for generating national samples. *Center for Crime and Justice Policy, 1*, 1-8. Retrieved from [https://www.unlv.edu/sites/default/files/page\\_files/27/ComparisonDifferentOnlineSampling.pdf](https://www.unlv.edu/sites/default/files/page_files/27/ComparisonDifferentOnlineSampling.pdf)
- Heiman, G. W. (2010). *Basic statistics for the behavioral sciences* (6th ed.). Belmont, CA: Cengage Learning.
- Henderson, L. S., Stackman, R. W., & Koh, C. Y. (2013). Women project managers: The exploration of their job challenges and issue selling behaviors. *International Journal of Managing Projects in Business, 6*, 761-791. doi:10.1108/IJMPB-06-2012-0033
- Hennekam, S. (2015). Career success of older workers: The influence of social skills and continuous learning ability. *Journal of Management Development, 34*, 1113-1133. doi:10.1108/JMD-05-2014-0047
- Hennekam, S. (2016). Competencies of older workers and its influence on career success and job satisfaction. *Employee Relations, 38*, 130-146. doi:10.1108/ER-05-2014-0054
- Herteliu, E., & Despa, M. L. (2014). Risk management in citizen oriented innovative software development projects. *Journal of Information Systems & Operations Management, 8*, 1-18. Retrieved from <http://jisom.rau.ro/forward.html>
- Hidding, G. J., & Nicholas, J. M. (2017). A New Way of Thinking about IT Project Management Practices: Early Empirical Results. *Journal of Organizational*

*Computing and Electronic Commerce*, 27, 81-95.

doi:10.1080/10919392.2016.1263113

Hofstetter, H., & Cohen, A. (2014). The mediating role of job content plateau on the relationship between work experience characteristics and early retirement and turnover intentions. *Personnel Review*, 43, 350-376. doi:10.1108/PR-03-2012-0054

Holley, T. J., Collins, C. E., Morgan, P. J., Callister, R., & Hutchesson, M. J. (2016). Weight expectations, motivations for weight change and perceived factors influencing weight management in young Australian women: A cross-sectional study. *Public Health Nutrition*, 19, 275-286. doi:10.1017/S1368980015000993

Honarvar, B., Lankarani, K. B., Rostami, S., Honarvar, F., Akbarzadeh, A., Odoomi, N., ... Arefi, N. (2015). Knowledge and practice of people toward their rights in urban family physician program: A population-based study in Shiraz, Southern Iran. *International Journal of Preventive Medicine*, 6, 6:46. doi:10.4103/2008-7802.158172

Hopkins, L., & Ferguson, K. E. (2014). Looking forward: The role of multiple regression in family business research. *Journal of Family Business Strategy*, 5, 52-62. doi:10.1016/j.jfbs.2014.01.008

Horwitz, R., Kreuter, F., & Conrad, F. (2017). Using mouse movements to predict Web survey response difficulty. *Social Science Computer Review*, 35, 388-405. doi:10.1177/0894439315626360

- Hosford, B. (2017). *Correlational study of project managers' competence, experience, education, and technology experience on project success* (Doctoral dissertation). Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 10269745)
- Ika, L. A., & Donnelly, J. (2017). Success conditions for international development capacity building projects. *International Journal of Project Management*, 35, 44-63. doi:10.1016/j.ijproman.2016.10.005
- Iram, N., Khan, B., & Sherani, A. W. (2016). Critical factors influencing the project success: An analysis of projects in manufacturing and construction in Pakistan. *Arabian Journal of Business and Management Review (Oman Chapter)*, 6, 20-24. Retrieved from <https://www.omicsonline.org/arabian-journal-business-management-review.php>
- Ivankova, N. V. (2014). Implementing quality criteria in designing and conducting a sequential QUAN→ QUAL mixed methods study of student engagement with learning applied research methods online. *Journal of Mixed Methods Research*, 8, 25-51. doi:10.1177/1558689813487945
- Javani, B., & Rwelamila, P. M. D. (2016). Risk management in IT projects-a case of the South African public sector. *International Journal of Managing Projects in Business*, 9, 389-413. doi:10.1108/IJMPB-07-2015-0055
- Jeffery, P. (1985). Project managers and major projects. *International Journal of Project Management*, 3, 225-230. Retrieved from <https://www.journals.elsevier.com/international-journal-of-project-management>



- Jekabsone, S., & Purmalis, K. (2016). Latvian labour market development challenges and problems. In *Proceedings of the New challenges of economic and business development-2016*, 300-306. Retrieved from <http://www.evfl.lv/conf2016>
- Jeong, K.-Y., & Bozkurt, I. (2014). Evaluating a project management simulation training exercise. *Simulation & Gaming*, 45, 183-203. doi:10.1177/1046878113518481
- Jiang, W., Lu, Y., & Le, Y. (2016). Trust and project success: A twofold perspective between owners and contractors. *Journal of Management in Engineering*, 32, 04016022. doi:10.1061/(ASCE)ME.1943-5479
- Jin, X., Zhang, G., Liu, J., Feng, Y., & Zuo, J. (2017). Major participants in the construction industry and their approaches to risks: A theoretical framework. *Procedia Engineering*, 182, 314-320. doi:10.1016/j.proeng.2017.03.100
- Johnson, L. (2016). *Predictors of job satisfaction among telecommuters* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 3746636)
- Kennedy-Martin, T., Curtis, S., Faries, D., Robinson, S., & Johnston, J. (2015). A literature review on the representativeness of randomized controlled trial samples and implications for the external validity of trial results. *Trials*, 16, 495. doi:10.1186/s13063-015-1023-4
- Keren, B., Hadad, Y., & Laslo, Z. (2014). Combining AHP and DEA methods for selecting a project manager. *Management*, 2014, 17-28. doi:10.7595/management.fon.2014.0016

- Kirkwood, A., & Price, L. (2013). Examining some assumptions and limitations of research on the effects of emerging technologies for teaching and learning in higher education. *British Journal of Educational Technology*, 44, 536-543.  
doi:10.1111/bjet.12049
- Kloppenborg, T. J., Tesch, D., & Manolis, C. (2014). Project success and executive sponsor behaviors: Empirical life cycle stage investigations. *Project Management Journal*, 45, 9-20. doi:10.1002/pmj.21396
- Ko, D.-G., & Kirsch, L. J. (2017). The hybrid IT project manager: One foot each in the IT and business domains. *International Journal of Project Management*, 35, 307-319. doi:10.1016/j.ijproman.2017.01.013
- Koops, L., Bosch-Rekvelde, M., Coman, L., Hertogh, M., & Bakker, H. (2016). Identifying perspectives of public project managers on project success: Comparing viewpoints of managers from five countries in North-West Europe. *International Journal of Project Management*, 34, 874-889.
- Kostalova, J., & Tetreva, L. (2014). Project Management and its Tools in Practice in the Czech Republic. *Procedia-Social and Behavioral Sciences*, 150, 678-689.  
doi:10.1016/j.sbspro.2014.09.087
- Kremljak, Z., Palcic, I., & Kafol, C. (2014). Project evaluation using cost-time investment simulation. *International Journal of Simulation Modelling*, 13, 447-457. doi:10.2507/IJSIMM13(4)5.279

- Kulik, C. T., Ryan, S., Harper, S., & George, G. (2014). Aging populations and management. *Academy of Management Journal*, 57, 929-935.  
doi:10.5465/amj.2014.4004
- Lain, D., & Loretto, W. (2016). Managing employees beyond age 65: From the margins to the mainstream? *Employee Relations*, 38, 646-664. doi:10.1108/ER-04-2015-0062
- Laird, D. J. (2016). *The impact of planning and other organizational factors on the success of small information technology projects* (Doctoral dissertation). Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 10183722)
- Lancsar, E., & Swait, J. (2014). Reconceptualising the external validity of discrete choice experiments. *PharmacoEconomics*, 32, 951-965. doi:10.1007/s40273-014-0181-7
- Larson-Hall, J., & Plonsky, L. (2015). Reporting and interpreting quantitative research findings: What gets reported and recommendations for the field. *Language Learning*, 65, 127-159. Doi:10.1111/lang.12115
- Larsson, J., Eriksson, P. E., Olofsson, T., & Simonsson, P. (2015). Leadership in civil engineering: Effects of project managers' leadership styles on project performance. *Journal of Management in Engineering*, 31, 04015011.  
doi:10.1061/(ASCE)ME.1943-5479.0000367
- Lehtonen, M. (2014). Evaluating megaprojects: From the "iron triangle" to network mapping. *Evaluation*, 20, 278-295. doi:10.1177/1356389014539868

- Lim, C. S., & Mohamed, M. Z. (1999). Criteria of project success: An exploratory re-examination. *International Journal of Project Management*, 17, 243-248.  
doi:10.1016/S0263-7863(98)00040-4
- Lindebaum, D., & Jordan, P. J. (2012). Relevant but exaggerated: The effects of emotional intelligence on project manager performance in construction. *Construction Management and Economics*, 30, 575-583.  
doi:10.1080/01446193.2011.593184
- Lindhard, S., & Larsen, J. K. (2016). Identifying the key process factors affecting project performance. *Engineering, Construction and Architectural Management*, 23, 657-673. doi:10.1108/ECAM-08-2015-0123
- Liu, B., Huo, T., Meng, J., Gong, J., Shen, Q., & Sun, T. (2015). Identification of key contractor characteristic factors that affect project success under different project delivery systems: Empirical analysis based on a group of data from China. *Journal of Management in Engineering*, 32, 05015003.  
doi:10.1061/(ASCE)ME.1943-5479.0000388
- Lloyd-Walker, B., French, E., & Crawford, L. (2016). Rethinking researching project management: Understanding the reality of project management careers. *International Journal of Managing Projects in Business*, 9, 903-930.  
doi:10.1108/IJMPB-04-2016-0033
- Long, H. (2014). An empirical review of research methodologies and methods in creativity studies (2003-2012). *Creativity Research Journal*, 26, 427-438.  
doi:10.1080/10400419.2014.961781

Macfarlane, M. D., Kisely, S., Loi, S., Macfarlane, S., Merry, S., Parker, S., ... Looi, J.

C. (2015). Getting started in research: designing and preparing to conduct a research study. *Australasian Psychiatry*, 23, 12-15.

doi:10.1177/1039856214562075

Magby, S. L. (2016). *The significance of trust within the virtual team environment*

*focusing on the effect it has on overall project success* (Doctoral dissertation).

Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 10142050)

Marcelino-Sadaba, S., Perez-Ezcurdia, A., Lazcano, A. M. E., & Villanueva, P. (2014).

Project risk management methodology for small firms. *International Journal of Project Management*, 32, 327-340. Doi:10.1016/j.ijproman.2013.05.009

Marneros, S., & Gibbs, P. (2015). An evaluation of the link between subjects studied in

hospitality courses in Cyprus and career success: Perceptions of industry professionals. *Higher Education, Skills and Work-Based Learning*, 5, 228-241.

doi:10.1108/HESWBL-01-2015-0001

Mazur, A., Pisarski, A., Chang, A., & Ashkanasy, N. M. (2014). Rating defence major

project success: The role of personal attributes and stakeholder relationships.

*International Journal of Project Management*, 32, 944-957.

McCusker, K., & Gunaydin, S. (2015). Research using qualitative, quantitative or mixed

methods and choice based on the research. *Perfusion*, 30, 537-542.

doi:10.1177/0267659114559116

- McPeake, J., Bateson, M., & O'Neill, A. (2014). Electronic surveys: How to maximise success. *Nurse Researcher*, 21, 24-26. doi:10.7748/nr2014.01.21.3.24.e1205
- Medina, R., & Medina, A. (2014). The project manager and the organisation's long-term competence goal. *International Journal of Project Management*, 32, 1459-1470. doi:http://dx.doi.org/10.1016/j.ijproman.2014.02.011
- Meuleman, B., & Langer, A. an. (2017). Can incentive effects in web surveys be generalized to us -western countries? Conditional and unconditional cash incentives in a web survey of Ghanaian university students. *Social Science Computer Review*, 2017, 1-20. doi:10.1177/0894439317699577
- Mir, F. A., & Pinnington, A. H. (2014). Exploring the value of project management: Linking project management performance and project success. *International Journal of Project Management*, 32, 202-217. Doi:10.1016/j.ijproman.2013.05.012
- Molina-Azorin, J. F., Bergh, D. D., Corley, K. G., & Ketchen, D. J. Jr. (2017). Mixed methods in the organizational sciences: Taking stock and moving forward. *Organizational Research Methods*, 20, 179-192. doi:10.1177/1094428116687026
- Mulholland, S. (2016). ADHD-specific knowledge and attitudes of teachers (ASKAT): Development and validation of a new research instrument. *International Journal of Educational Research*, 77, 109-116. doi:10.1016/j.ijer.2016.03.010
- Munns, A., & Bjeirmi, B. (1996). The role of project management in achieving project success. *International Journal of Project Management* , 14, 81-87. doi:http://dx.doi.org/10.1016/0263-7863(95)00057-7

- Mutua, J. M., Waiganjo, E., & Oteyo, I. N. (2014). The influence of contract management on performance of outsourced projects in medium manufacturing enterprises in Nairobi County, Kenya. *International Journal of Business and Social Science*, 5, 25-33. Retrieved from [www.ijbssnet.com](http://www.ijbssnet.com)
- Neverauskas, B., Bakinaite, L., & Meiliene, E. (2014). Contemporary approach to the possibility of project's success increase. *Economics and Management*, 18, 829-836. doi:10.5755/j01.em.18.4.5710
- Nguyen, A. P. (2015). *Relationship between IT project managers' emotional intelligence and project success* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 3734008)
- Nigaglioni, R. (2016). *The relationship between the emotional intelligence of managers and the success of construction projects* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 10103878)
- Nnamchi, J. (2014). *Examining the relationship among systems requirements and information systems project success* (Doctoral dissertation). Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 3681807)
- Norris, J. M., Plonsky, L., Ross, S. J., & Schoonen, R. (2015). Guidelines for reporting quantitative methods and results in primary research. *Language Learning*, 65, 470-476. doi:10.1111/lang.12104
- O'Neill, T. A., McLarnon, M. J., Schneider, T. J., & Gardner, R. C. (2014). Current misuses of multiple regression for investigating bivariate hypotheses: An example

from the organizational domain. *Behavior Research Methods*, 46, 798-807.

doi:10.3758/s13428-013-0407-1

Ofori-Kuragu, J. K., Baiden, B., & Badu, E. (2016). Critical success factors for Ghanaian contractors. *Benchmarking: An International Journal*, 23, 843-865.

Doi:10.1108/BIJ-03-2014-0018

Ojiako, U., Chipulu, M., Marshall, A., Ashleigh, M., Maguire, S., Williams, T., & Obokoh, L. (2015). Heterogeneity and perception congruence of project outcomes. *Production Planning & Control*, 26, 858-873.

doi:10.1080/09537287.2014.994684

Omair, A. (2014). Sample size estimation and sampling techniques for selecting a representative sample. *Journal of Health Specialties*, 2, 142-147.

doi:10.4103/1658-600X.142783

Onyebuanyi, K. C. (2016). *Factors affecting job satisfaction in Nigerian international oil companies* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 10146298)

Osei-Kyei, R., Chan, A. P. C., Javed, A. A., & Ameyaw, E. E. (2017). Critical success criteria for public-private partnership projects: International experts' opinion. *International Journal of Strategic Property Management*, 21, 87-100.

doi:10.3846/1648715X.2016.1246388

Oshagbemi, T. (2008). The impact of personal and organisational variables on the leadership styles of managers. *The International Journal of Human Resource Management*, 19, 1896-1910. doi:10.1080/09585190802324130



- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health, 42*, 533-544. doi:10.1007/s10488-013-0528-y
- Park, J., & Park, M. (2016). Qualitative versus quantitative research methods: Discovery or justification. *Journal of Marketing Thought, 3*(1), 1-7. doi:10.15577/jmt.2016.03.01.1
- Paton, S., & Hodgson, D. (2016). Project managers on the edge: Liminality and identity in the management of technical work. *New Technology, Work and Employment, 31*, 26-40. doi:10.1111/ntwe.12056
- Pejrova, I. (2014). Changing the perception of younger workers towards older workers: Workers under the age 50 imagine themselves as older ones. *Working with Older People, 18*, 152-160. doi:10.1108/WWOP-04-2014-0010
- Pinto, J. K., & Slevin, D. P. (1988). Project success: Definitions and measurement techniques. *Project Management Journal, 19*, 67-72. Retrieved from <https://www.researchgate.net>
- Project Management Institute. (2017). *A guide to the project management body of knowledge* (6th ed.). Newtown Square, PA: Author.
- Pollack, J., & Adler, D. (2014). Does project management affect business productivity? Evidence from Australian small to medium enterprises. *Project Management Journal, 45*, 17-24. doi:10.1002/pmj.21459

- Prion, S., & Haerling, K. A. (2014). Making sense of methods and measurement: Pearson product-moment correlation coefficient. *Clinical Simulation in Nursing*, 10, 587-588. doi:<http://dx.doi.org/10.1016/j.ecns.2014.07.010>
- Puth, M.-T., Neuhäuser, M., & Ruxton, G. D. (2014). Effective use of Pearson's product-moment correlation coefficient. *Animal Behaviour*, 93, 183-189. doi:10.1016/j.anbehav.2014.05.003
- Rada, V. D. de, & Domínguez-Álvarez, J. A. (2014). Response quality of self-administered questionnaires: A comparison between paper and web questionnaires. *Social Science Computer Review*, 32, 256-269. doi:10.1177/0894439313508516
- Radujkovic, M., & Sjekavica, M. (2017). Development of a project management performance enhancement model by analysing risks, changes, and limitations. *Gradjevinar*, 69, 105-120. doi:10.14256/JCE.1866.2016
- Ramazani, J., & Jergeas, G. (2015). Project managers and the journey from good to great: The benefits of investment in project management training and education. *International Journal of Project Management*, 33, 41-52. doi:10.1016/j.ijproman.2014.03.012
- Rasheed, R., & Wilson, P. (2014). Overeducation and the Influence of Job Attributes: A study Conducted in the City of Kochi. *Journal of Services Research*, 14, 145-165. Retrieved from <http://www.jsr-iimt.in/main.asp>
- Reich, B. H., & Sauer, C. (2010). Roles of the external IT project manager. *Communications of the ACM*, 53, 126-129. doi:10.1145/1735223.1735254

- Remer, D. S., & Ross, E. M. (2014). Review of project and engineering management certifications offered by professional organizations. *Engineering Management Journal*, 26, 3-12. doi:10.1080/10429247.2014.11432023
- Rezvani, A., Chang, A., Wiewiora, A., Ashkanasy, N. M., Jordan, P. J., & Zolin, R. (2016). Manager emotional intelligence and project success: The mediating role of job satisfaction and trust. *International Journal of Project Management*, 34, 1112-1122. Doi:10.1016/j.ijproman.2016.05.012
- Rodriguez-Segura, E., Ortiz-Marcos, I., Romero, J. J., & Tafur-Segura, J. (2016). Critical success factors in large projects in the aerospace and defense sectors. *Journal of Business Research*, 69, 5419-5425. doi:10.1016/j.jbusres.2016.04.148
- Rolison, J. J., Hanoch, Y., Wood, S., & Liu, P.-J. (2014). Risk-taking differences across the adult life span: A question of age and domain. *The Journals of Gerontology: Series B Psychological Sciences and Social Sciences*, 69, 870-880. doi:10.1093/geronb/gbt081
- Rubin, I. M., & Seelig, W. (1967). Experience as a factor in the selection and performance of project managers. *IEEE Transactions on Engineering Management*, 14, 131-135. Retrieved from <http://ieeexplore.ieee.org/Xplore/home.jsp>
- Rule, P., & John, V. M. (2015). A necessary dialogue theory in case study research. *International Journal of Qualitative Methods*, 14, 1-11. doi:10.1177/1609406915611575

- Rusare, M., & Jay, C. I. (2015). The project implementation profile: A tool for enhancing management of NGO projects. *Progress in Development Studies*, 15, 240-252.  
doi:10.1177/1464993415578976
- Russo, F. (2011). Correlational data, causal hypotheses, and validity. *Journal for General Philosophy of Science*, 42, 85-107. doi:10.1007/s10838-011-9157-x
- Saadé, R. G., Dong, H., & Wan, J. (2015). Factors of project manager success. *Interdisciplinary Journal of Information, Knowledge, and Management*, 10, 63-80. Retrieved from <https://www.informingscience.org/Journals/IJKM/Articles>
- Sadeghi, H., Mousakhani, M., Yazdani, M., & Delavari, M. (2014). Evaluating project managers by an interval decision-making method based on a new project manager competency model. *Arabian Journal for Science and Engineering*, 39, 1417-1430.  
doi:10.1007/s13369-013-0631-0
- Sage, D., Dainty, A., & Brookes, N. (2014). A critical argument in favor of theoretical pluralism: Project failure and the many and varied limitations of project management. *International Journal of Project Management*, 32, 544-555.  
doi:10.1016/j.ijproman.2013.08.005
- Salah, A., & Moselhi, O. (2015). Contingency modelling for construction projects using fuzzy-set theory. *Engineering, Construction and Architectural Management*, 22, 214-241. doi:10.1108/ECAM-03-2014-0039
- Salkind, N. J. (2011). *Exploring Research* (8th ed.). New York, NY: Pearson.

- Samanta, S., & Pal, M. (2014). A new approach to social networks based on fuzzy graphs. *Turkish Journal of Fuzzy Systems*, 5, 78-99. Retrieved from <http://www.tjfs-journal.org>
- Santos, G. G. (2016). Career barriers influencing career success: A focus on academics' perceptions and experiences. *Career Development International*, 21, 60-84. doi:10.1108/CDI-03-2015-0035
- Santoso, D. S., & Kulathunga, H. E. R. (2016). Examining happiness: Towards better understanding of performance improvement. *Procedia Engineering*, 164, 354-361. doi:10.1016/j.proeng.2016.11.630
- Sava, D. C. Jr. (2016). *The relationship between project managers' age, gender, and professional experience on career success: A correlation study* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 10075467)
- Savolainen, P., Ahonen, J. J., & Richardson, I. (2015). When did your project start?-The software supplier's perspective. *Journal of Systems and Software*, 104, 32-40. doi:10.1016/j.jss.2015.02.041
- Schneider, K., Liskin, O., Paulsen, H., & Kauffeld, S. (2015). Media, mood, and meetings: Related to project success? *ACM Transactions on Computing Education (TOCE)*, 15, 21. doi:10.1145/2771440
- Schnetler, R., Steyn, H., & van Staden, P. J. (2015). Characteristics of matrix structures, and their effects on project success. *South African Journal of Industrial Engineering*, 26, 11-26. doi:10.7166/26-1-1096

- Schreiber, S. (2015). *Leadership and aging workforces: Effects of leader's relative age on team's and leader's effectiveness* (Doctoral dissertation, Heidelberg University, Heidelberg, Germany). Retrieved from Retrieved from <http://www.ub.uni-heidelberg.de/archiv/19867>
- Seboni, L., & Tutesigensi, A. (2015). Project manager-to-project allocations in practice: An empirical study of the decision-making practices of a multi-project based organization. *Construction Management and Economics*, 33, 428-443. doi:10.1080/01446193.2015.1077981
- Serrador, P., & Pinto, J. K. (2015). Does Agile work?—A quantitative analysis of agile project success. *International Journal of Project Management*, 33, 1040-1051. doi:10.1016/j.ijproman.2015.01.006
- Shaw, D. (2016). Managing dualities in organizational change projects. *Journal of Change Management*, 16, 201-222. doi:10.1080/14697017.2015.1118142
- Shenhar, A. J., Levy, O., & Dvir, D. (1997). Mapping the dimensions of project success. *Project Management Journal*, 28, 5-13. Retrieved from <http://www.pmi.org/learning/library/mapping-dimensions-project-success-5378>
- Shepherd, D. A., Haynie, J. M., & Patzelt, H. (2013). Project failures arising from corporate entrepreneurship: Impact of multiple project failures on employees' accumulated emotions, learning, and motivation. *Journal of Product Innovation Management*, 30, 880-895. doi:10.1111/jpim.12035
- Singh, A. S., & Masuku, M. B. (2014). Sampling techniques & determination of sample size in applied statistics research: An overview. *International Journal of*

*Economics, Commerce and Management*, 2, 1-22. Retrieved from  
<http://ijecm.co.uk/>

Slevin, D. P., & Pinto, J. K. (1986). The project implementation profile: New tool for project managers. *Project Management Journal*, 17, 57-70. Retrieved from  
<https://www.pmi.org/learning/library/project-implementation-profile-tool-project-managers-5220>

Slevin, D. P., & Pinto, J. K. (1987). Balancing strategy and tactics in project implementation. *Sloan Management Review*, 29, 33-41. Retrieved from  
<https://www.researchgate.net>

Söderland, J., Geraldi, J., Müller, R., & Jugdev, K. (2012). Critical success factors in projects: Pinto, Slevin, and Prescott-The elucidation of project success. *International Journal of Managing Projects in Business*, 5, 757-775.  
doi:10.1108/17538371211269040

Soltani, S., Azadi, H., Hosseini, S. J. F., Witlox, F., & Passel, S. V. (2015). Marketing innovation in rural small food industries in Iran. *Journal of Food Products Marketing*, 21, 533-551. doi:10.1080/10454446.2015.1041196

Spisak, B. R., Grabo, A. E., Arvey, R. D., & van Vugt, M. (2014). The age of exploration and exploitation: Younger-looking leaders endorsed for change and older-looking leaders endorsed for stability. *The Leadership Quarterly*, 25, 805-816.  
doi:10.1016/j.leaqua.2014.06.001

- Sturges, J. (1999). What it means to succeed: Personal conceptions of career success held by male and female managers at different ages. *British Journal of Management*, *10*, 239-252. doi:10.1111/1467-8551.00130
- Sverchkov, Y., & Craven, M. (2017). A review of active learning approaches to experimental design for uncovering biological networks. *PLoS Computational Biology*, *13*(6), 1-26. doi:10.1371/journal.pcbi.1005466
- Tavitiyaman, P., Weerakit, N., & Ryan, B. (2014). Leadership competencies for hotel general managers: The differences in age, education, and hotel characteristics. *International Journal of Hospitality & Tourism Administration*, *15*, 191-216. doi:10.1080/15256480.2014.901069
- Teitcher, J. E., Bockting, W. O., Bauermeister, J. A., Hoefler, C. J., Miner, M. H., & Klitzman, R. L. (2015). Detecting, preventing, and responding to “fraudsters” in internet research: Ethics and tradeoffs. *The Journal of Law, Medicine & Ethics*, *43*, 116-133. doi:10.1111/jlme.12200
- Teixeira, P. N. (2014). Gary Becker’s early work on human capital-collaborations and distinctiveness. *IZA Journal of Labor Economics*, *3*, 1-20. doi:10.1186/s40172-014-0012-2
- Temtime, Z. T. (2016). *Relationship between working capital management, policies, and profitability of small manufacturing firms* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (Order No. 10017861)
- Tlaiss, H. A., & Mendelson, M. B. (2014). Predicting women’s job satisfaction with personal demographics: evidence from a Middle Eastern country. *The*



*International Journal of Human Resource Management*, 25, 434-458.

doi:10.1080/09585192.2013.792859

Trafimow, D., & Earp, B. D. (2017). Null hypothesis significance testing and Type I error: The domain problem. *New Ideas in Psychology*, 45, 19-27.

doi:10.1016/j.newideapsych.2017.01.0020

Varajão, J., Dominguez, C., Ribeiro, P., & Paiva, A. (2014). Critical success aspects in project management: similarities and differences between the construction and software industry. *Tehnivcki Vjesnik*, 21, 583-589. Retrieved from

<http://hrcak.srce.hr/tehnicki-vjesnik?lang=en>

Verheyen, T., Deschacht, N., & Guerry, M.-A. (2016). The occurrence of demotions regarding job level, salary and job authority. *Personnel Review*, 45, 1217-1239.

doi:10.1108/PR-06-2014-0139

Vicente-Oliva, S., Martinez-Sanchez, A., & Berges-Muro, L. (2015). Research and development project management best practices and absorptive capacity: Empirical evidence from Spanish firms. *International Journal of Project Management*, 33, 1704-1716. doi:10.1016/j.ijproman.2015.09.001

Visagie, S., & Koekemoer, E. (2014). What it means to succeed: Personal perceptions of career success held by senior managers. *South African Journal of Business Management*, 45, 43-54. Retrieved from

<https://journals.co.za/content/journal/busman>

- Von Meding, J., Oyedele, L., & Bruen, J. (2014). Linking organisational competency to project success in post-disaster reconstruction. *Open House International*, 39, 7-16. Retrieved from <http://www.openhouse-int.com/aseachr.php>
- Waller Jr., E. B. (2015). *Uncertainty, leadership style, and information technology project success in a dynamic public sector environment* (Doctoral dissertation). Retrieved from Retrieved ProQuest Dissertations & Theses database. (Order No. 3724734)
- Wang, C. M., Xu, B. B., Zhang, S. J., & Chen, Y. Q. (2016). Influence of personality and risk propensity on risk perception of Chinese construction project managers. *International Journal of Project Management*, 34, 1294-1304. doi:10.1016/j.ijproman.2016.07.004
- Wells, R. S., Kolek, E. A., Williams, E. A., & Saunders, D. B. (2015). "How we know what we know": A systematic comparison of research methods employed in higher education journals, 1996—2000 v. 2006—2010. *The Journal of Higher Education*, 86, 171-198. doi:10.1080/00221546.2015.11777361
- Wessels, J. S., & Visagie, R. G. (2017). The eligibility of Public Administration research for ethics review: A case study of two international peer-reviewed journals. *International Review of Administrative Sciences*, 83, 156-176. doi:10.1177/0020852315585949
- Wiedermann, W., & von Eye, A. (2015). Direction of effects in multiple linear regression models. *Multivariate Behavioral Research*, 50, 23-40. doi:10.1080/00273171.2014.958429

- Williams, T. (2016). Identifying success factors in construction projects: A case study. *Project Management Journal*, 47, 97-112. doi:10.1002/pmj.21558
- Wu, C.-H., Li, J.-B., & Chang, T.-Y. (2015). SLinRA2S: actively supporting regression analysis with R. *Information Systems and E-Business Management*, 13, 309-328. doi:10.1007/s10257-014-0262-3
- Yang, C.-C., & Yeh, C.-H. (2014). Application of system dynamics in environmental risk management of project management for external stakeholders. *Systemic Practice and Action Research*, 27, 211-225. doi:10.1007/s11213-013-9283-y
- Yang, L. R., Wu, K. S., & Huang, C. F. (2013). Validation of a model measuring the effect of a project manager's leadership style on project performance. *KSCE Journal of Civil Engineering*, 17, 271-280. doi:10.1007/s12205-013-1489-0
- Yim, R. L., Castaneda, J. M., Doolen, T. L., Tumer, I. Y., & Malak, R. (2015). Exploring the relationship between rework projects and risk indicators. *Project Management Journal*, 46, 63-75. doi:10.1002/pmj.21509
- Young, M., Young, R., & Zapata, J. R. (2014). Project, programme and portfolio maturity: a case study of Australian Federal Government. *International Journal of Managing Projects in Business*, 7, 215-230. doi:10.1108/IJMPB-08-2013-0034
- Zaniboni, S. (2015). The interaction between older workers' personal resources and perceived age discrimination affects the desired retirement age and the expected adjustment. *Work, Aging and Retirement*, 1, 266-273. doi:10.1093/workar/wav010

- Zare, M. B., Mirjalili, A., & Mirabi, M. (2016). Ranking and evaluating the factors affecting the success of management team in construction projects. *Journal of Fundamental and Applied Sciences*, 8, 614-630. Retrieved from <http://www.jfas.info>
- Zhou, J., & Wang, H. (2015). An empirical study on project management of reconstruction after disaster based on interpretation system. *Journal of Industrial Engineering and Management*, 8, 1409-1427. doi:10.3926/jiem.1468
- Zientek, L., Nimon, K., & Hammack-Brown, B. (2016). Analyzing data from a pretest-posttest control group design: The importance of statistical assumptions. *European Journal of Training and Development*, 40, 638-659. doi:10.1108/EJTD-08-2015-0066

## Appendix A: Introduction and Informed Consent Form

***INTRODUCTION AND CONSENT FORM***

You are invited to take part in a research study to understand the relationship between project managers' age, years of project experience and project success. The name of the study is "*Relationship between project managers' age, years of project experience and project success.*"

Participants must fulfill all of the following criteria to participate in the study

Must be minimum 18 years old

Must be LinkedIn members

Must be from Albania or Kosovo and are project managers or were project managers in last 5 years

Must be proficient in English language

I obtained your name/contact info via LinkedIn Network. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Lulzim Hoxha, who is a doctoral at Walden University in United States.

**Background Information:**

The purpose of this study is to understand the influence of project managers' age and years of project experience and project success.

### **Procedures:**

If you agree to be in this study, you will be asked to:

Take part in a survey posted online at SurveyMonkey

The survey should take 10-15 minutes

Survey has two pages so two questionnaires, demographic questionnaire and project implementation questionnaire

The survey is completely anonymous. You do not have to provide your name, email address, or any identifying information to participate in the study.

Here are some sample questions:

Please indicate your gender

Please select the category that includes your age

This project has/will come in on schedule

### **Voluntary Nature of the Study:**

This study is voluntary. You are free to accept or turn down the invitation. No one at LinkedIn will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time.

### **Risks and Benefits of Being in the Study:**

Your information will be kept confidential, and you will remain anonymous. You do not have to provide any personal information, so there is no personal risk associated with participating in the study, nor will it have a negative impact on your standing within your organization. The study does not involve any physical risk and it is highly unlikely that you will be psychologically affected.

This study could help provide a better understanding of what impact project managers' age and experience have on project success. Project success is critical for businesses, more successful projects mean a higher return on investments. However, also for not for profit organizations implementing development projects, would mean a higher impact on targeted communities.

A summary of study results will be published on LinkedIn.

#### **Payment:**

There are no compensation provided for participation in this study

#### **Privacy:**

Reports coming out of this study will not share the identities of individual participants. Details that might identify participants will not be shared. Even the researcher will not know who you are. The researcher will not use your personal information for any purpose outside of this research project. Data will be kept secure by in a hardware encrypted

external hard drive. Data will be kept for a period of at least 5 years, as required by  
Walden University.

### **Contacts and Questions:**

You may ask any questions you have now. Or if you have questions later, you may  
contact the researcher via email at [Lulzim.Hoxha@waldenu.edu](mailto:Lulzim.Hoxha@waldenu.edu).

The researcher's doctoral study chairperson is Dr. Cheryl McMahan. She can be reached  
via email at [Cheryl.McMahan@waldenu.edu](mailto:Cheryl.McMahan@waldenu.edu)

If you want to talk privately about your rights as a participant, you can call the Research  
Participant Advocate at Walden University at + 1 612-312-1210.

Walden University's approval number for this study is 11-09-17-0240336 and it expires  
on November 8, 2018.

Please print or save this consent form for your records.

### **Obtaining Your Consent**

If you feel you understand the study well enough to make a decision about it, please  
indicate your consent by clicking the link below.

<https://www.surveymonkey.com/r/LHoxha>



## Appendix B: PIP Permission

**From:** JEFFREY PINTO  
**Sent:** June 9, 2017 10:38 AM  
**To:** Lulzim Hoxha  
**Cc:** dpslevin@katz.pitt.edu  
**Subject:** Use of the PIP instrument

Good afternoon,

Dr. Slevin passed along your request for use of the project implementation profile (PIP) for your doctoral research. This note serves as our permission to use the PIP for your research purposes. Please note that this permission does not extend to its use for consulting or training purposes.

Best of luck with your research!

Jeff Pinto

Jeffrey K. Pinto, Ph.D.

Andrew Morrow and Elizabeth Lee Black Chair

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## Appendix C: PIP Instrument

<b>Project Performance</b>								
	<b>Strongly Disagree</b>		<b>Neutral</b>			<b>Strongly Agree</b>		
1. This project has/will come in on schedule .....	1	2	3	4	5	6	7	
2. This project has/will come in on budget .....	1	2	3	4	5	6	7	
3. The project that has been developed works (or, if still being developed, looks as if it will work) .....	1	2	3	4	5	6	7	
4. The project will be/is used by its intended clients .....	1	2	3	4	5	6	7	
5. This project has directed benefited/will directly benefit the intended users through either increasing efficiency or employee effectiveness .....	1	2	3	4	5	6	7	
6. Given the problem for which it was developed, this project seems to do the best job of solving that problem—i.e., it was the best choice among the set of alternatives .....	1	2	3	4	5	6	7	
7. Important clients, directly affected by this project, will make use of it .....	1	2	3	4	5	6	7	
8. I am/was satisfied with the process by which this project is being/was completed .....	1	2	3	4	5	6	7	
9. We are confident that nontechnical start-up problems will be minimal, because the project will be readily accepted by its intended users .....	1	2	3	4	5	6	7	
10. Use of this project has led/will lead directly to improved or more effective decision making or performance for the clients .....	1	2	3	4	5	6	7	
11. This project will have a positive impact on those who make use of it .....	1	2	3	4	5	6	7	
12. The results of this project represent a definite improvement in performance over the way clients used to perform these activities .....	1	2	3	4	5	6	7	
<b>Project Performance Total</b>								

## Appendix D: Demographic Questionnaire

Please indicate your gender:

- Male
- Female

Please select the category that includes your age:

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 or older

Please indicate highest education degree obtained:

- Associates
- Bachelors
- Masters
- Doctorate

Please indicate how many years of project management experience you have:

- Less than 1
- 1-5
- 6-10
- 11-15
- 16-20
- More than 20

Please indicate your location:

- Albania
- Kosovo
- Other

## Appendix E: NIH Completion Certificate

