

Project Manager's Perceptions of the Motivation for, and Benefits, of Certification

Tomas Blomquist, Ph.D.
Umea University
Tomas.Blomquist@usbe.umu.se

Janice Thomas, Ph.D.
Athabasca University
JaniceT@Athabascau.ca

Contact info:

Tomas Blomquist, Ph.D.
Umea University
Umea School of Business
901 87 Umeå, Sweden
Phone: +46 90 786 77 22
Email: tomas.blomquist@usbe.umu.se

Janice L. Thomas, Ph.D.
Athabasca University
C/O 96 Manyhorses Drive
Redwood Meadows, Alberta, T3Z 1A1,
Canada
Phone: 403-949-4965
Email: janicet@athabascau.ca

IRNOP VI
Turko, Finland
August 25-27, 2004

Project Manager's Perceptions of the Motivation for, and Benefits, of Certification

Tomas Blomquist, Ph.D.
Umea University
tomas.blomquist@fek.umu.se

Janice Thomas, Ph.D.
Athabasca University
JaniceT@Athabascau.ca

ABSTRACT

Trends in society for groups of occupation to become professionals are also found within project management. Professional associations create value for their members by offering programs of certification. This paper explores the motivation of individuals who make the personal investment and commitment to voluntary certification programs. Or more over arching; why do project managers want to certify? The paper is based on a survey with answers from 435 certified and non-certified project managers in North American and Scandinavia in early 2004. The preliminary results indicate that certification does not give higher professional behavior and rewards from certification are not realized as often as expected. Future analysis of data will examine deeper relations between motivations, reasons, and benefits of certification.

Key Words: Certification, Project Management, Professionalization, Motivation

INTRODUCTION

As an occupation matures mechanisms develop to provide individuals the opportunity to acquire training in the field and to signal competency and specialization (Gramling and Myers, 1997). Professional associations arise to offer various services for their members. Certification is one such program that establishes and diffuses a management area in society (Blomquist and Söderholm 2002; Sahlin-Andersson and Engwall, 2002). Because certification entails costs associated with acquiring the required training and the time and effort to study and apply, economists would certify that rational individuals would not seek certification unless the expected benefits exceeded the associated costs. The fact that certification is growing rapidly (witness for example the growth in Certified Safety Professionals, Certified Trust and Financial Advisor, Certified Financial Planners, Certified Quality Examiner, Certified Fraud Examiner, Certified Internal Auditor etc) in today's world implies that individual's perceive that there are significant benefits associated with acquiring such designations.

Project management is one such occupation. Project managers have been encouraged by professional associations and much of the practitioner literature to adopt professional attitudes towards project management to facilitate the creation of a project management “profession”. This concept of professionalism has captured the interest and attention of many practitioners. Calls for the development of a professional community (for example see, Wang, 2002) are increasingly evident in the project management literature. Voluntary certification has been developed as one critical step on the road to professionalization (Hall, 1968, Zwerman and Thomas, 2001).

Certification is often viewed as a way to promote competence and ensure consistent, uniform standards of practise. Professional training and accreditation serve to pass on the special skills and knowledge associated with sound practise. Certification and the training involved in receiving it are also seen as sound methods to develop a professional culture by increasing the individual’s level of identification with the occupation and instilling a professional ethos.

In traditional professions, certification is mandatory and one of the primary benefits is admission to the specialized field of work. In situations where certification is voluntary, much less is known about the motivation driving certification and the value received from it. In the audit industry, some have questioned whether the drive to professionalization is simply self-serving aggrandizement for the members or whether it’s structure provides important benefits to the members and the professional community or practise (Kalbers and Fogarty, 1995). Similar questions have not been asked in the project management context.

The purpose of this study is to explore the motivation of individuals who make the personal investment and commitment to voluntary certification programs in "new" occupational groups here project management. By using the project management occupation as a case study, we seek to identify the key drivers at the individual level for this increased certification activity world wide. This work will expand current theoretical and empirical knowledge in the areas of professionalization and work identity. More importantly for this forum perhaps are the contributions this study will make to understanding why individual’s certify and how this process is related to developing a strong knowledge entity around project management theory and practice.

THEORETICAL FOUNDATIONS

In order to answer the question of why people certify we explored a broad range of literature examining the nature of work, professions and occupations. After reviewing this literature, we brainstormed the question of why people certify and came up with the following model to guide the study, figure 1.

Demographics

Personal and organizational demographics are likely to play a key role in the drive towards certification. Understanding the impact of these key variables will allow us to understand the trend better. We focused on the following demographic information.

- Personal Demographics
 - age, sex, education etc
 - project experience
 - PM Self Efficacy at a high level
- Organizational Demographics
 - size, industry etc

Research Question: Are there any differences in the demographics of those project managers who chose to certify over those that do not?

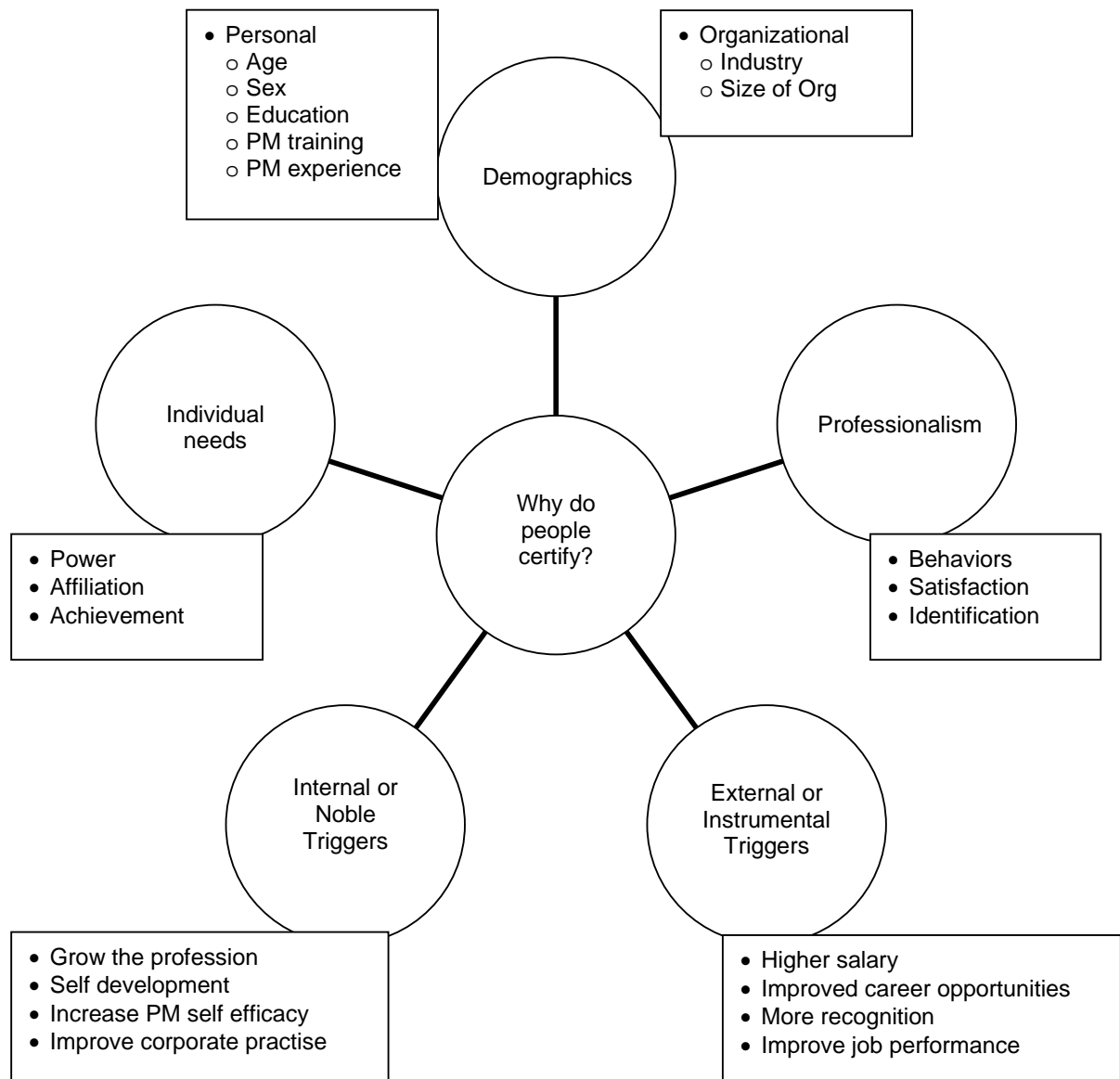


Figure 1: Major Impacts on a Person's decision to Certify

Individual Needs

Individual needs are a powerful motivating factor. Theory and research tell us that each of us gives a different priority to these needs and that this priority can change over time, experience, and maturity. Identifying the kinds of needs that are taking precedent in project manager's decision to seek certification will tell us something about the characteristics of those individuals from which we can deduce behaviors.

Based on the conceptual framework of McClelland's trichotomy of needs theory (need for affiliation, power, and achievement) we included items in our potential benefits list designed to get a these need areas as follows:

- Achievement
 - challenge myself
 - prove I can do it
 - assess skills
 - provide evidence of proficiency
- Affiliation
 - to network with PMs
 - to meet people
 - to learn from others
- Power
 - to gain line managers recognition
 - to increase credibility
 - to demonstrate ambition

Research Question: Are there any patterns to the individual needs that seem to be driving the move towards PM certification?

Triggers

At the simplest level a trigger can be considered something that introduces a topic to an individual. Lehr and Rice (2002) explored the influence of various influencers on individuals likelihood to certify as quality examiners. The trigger introductions they looked at included:

- Company management
- Association Representative
- Colleagues
- Corporate publicity
- Association publicity
- And other

It seems likely that these instigators will also influence the drive towards project management certification and will be explored in this study.

In exploring the motivation for certification, the literature suggests a number of possible key motivators ranging from purely economic and self centered to the more altruistic ideals associated with building a profession. This study makes use of well researched and newly developed items to collect motivation information. We collect information about individual

triggers to pursue certification. The following identifies the major triggers we identified from the literature.

Internal or noble triggers are those associated with making the individual, the organization or the profession better. This sort of motivation is evidenced in reporting the following kinds of triggers:

- Grow the profession
 - to become a professional
 - to signal commitment to the profession
- Self Development
 - learn about PM
 - increase and broaden PM knowledge
 - refresh PM knowledge
 - get a more global perspective
- Improve Corporate Practise
 - improve company's ability to manage projects

External or instrumental triggers are those associated with financial or other gain to the individual. The most obvious of these would be “to be able to charge higher rates”. The following provides examples of these sorts of motivations:

- Higher Salary
- Improved career opportunities
- Higher recognition
- Improve Job Performance
 - General Job
 - Become more effective
 - Improve ability to manage projects
 - Make better decisions
 - Improve Project Success
 - Projects closer to Schedule
 - Projects closer to specifications
 - Projects closer to Budget

We used multiple items and in some instances, multiple questions to test for the motivations expressed by our participants.

Research question: What are the key benefits project managers seem to be seeking when they certify? Do people seek project management certification for noble or instrumental reasons?

Similarly, there have been studies looking at why people do not pursue certification. Redd and Alexander (1997) explored this issue from a nursing perspective and we will build from their list of reasons to explore why project managers chose not to certify.

Professional Characteristics

Members of professions exhibit a combination of behaviors and attitudes towards their life work that are thought to distinguish them from those with more of a “work to live” attitude. Hall (1968) and Snizek (1972) defined five dimensions of professionalism as follows:

- Autonomy – professionals are characterized by the desire and opportunity to exercise judgment in the day to day practice of their profession.
- Self Regulation – professionals believe that their work is such that the quality must be judged by other practitioners.
- Public Service – professionals believe that their job is essential to society.
- Calling – professionals have a calling to their field and believe that their work is much more than simply a job. These individuals engage with the content of the work on an intellectual level not solely to reap the instrumental rewards of work.
- Reference to Professional Association – professionals refers to the professional association as the primary disseminator of information about the best way to practise their profession.

Many research studies have been undertaken exploring the impact of professionalism (see for example Boyt, Lusch, Naylor, 2001) and the items used to measure these constructs are well defined.

Professional satisfaction is a measure of an individual’s personal satisfaction with their choice of occupation. Hackman and Oldmham (1975) originally created measures of Job and organizational satisfaction that have been modified marginally to measure professional satisfaction (see for example Kalbers & Fogerty, 1995). These items are included here to gain a sense of the respondents satisfaction with the occupational choices made to date. They are likely to overlap somewhat with the calling dimension above and may be removed in future research.

Professional commitment is measured using a combination of affective and continuance commitment items derived from Allen and Meyer’s (1990) instruments. These items are included to explore the respondent’s commitment to continue in the project management role. For an occupation to grow into a profession, it must retain it’s members as they become more senior in organizations. For project management to successfully attain profession status in organizations, it is important that project managers commit to long term involvement with the profession. This measure will give us some indication of the profession’s status.

As project managers aspire to professional status, it is interesting to know if the characteristics of professionals impact the decision to seek project management certification. Ideally it would be interesting to know which came first, the certification or the professionalism, or the satisfaction. However, this would require a longitudinal design. This study will only be able to tell us if there is any difference between the level of reported behaviors and beliefs of certified and non certified project managers.

Research Question: Is there any difference between the certified project managers and the non certified project managers with respect to professional behavior, professional satisfaction and professional continuance?

STUDY OVERVIEW

The primary objective of this study is to better understand the prominent trend towards certification of project managers. We seek to understand the key drivers of this trend and the significant individual, organizational and occupational impacts likely to arise out of this trend. In particular, we want to understand the motivation for individuals to obtain project management certification. For anyone to make this commitment, the benefits must outweigh the costs of doing so. Thus we seek to understand the key benefits individuals believe accompany certification. For an individual to continue his or her professional commitment, they must attribute some key outcomes to the achievement of project management certification. We also seek to explore these outcomes. Finally, we are interested in identifying any differences in attitudes, training, self efficacy or outcomes evident between certified and uncertified project managers.

This paper presents results associated with an initial descriptive analysis of the data collected to date. Further analysis will explore the statistical relationships between key variables and sub groups within the data.

Survey Methodology

A web based survey site, zoomerang.com, was used to host the online survey. Technology did not cooperate as fully as we might have liked but the functionality of providing reminders to those who had not yet responded and offering respondents immediate access to summarized web results to date were powerful and useful features provided by this tool.

For this initial survey, email invitations were sent to 1961 individuals:

- A Random Sample of 500 PMI members of a local Chapter
- A mailing list of 1461 individuals who have expressed an interest in being involved in project management research

A total of 396 of the emails were not valid, making the total number of valid email invitations 1565. In addition due to technical difficulties ranging from truncated emails (42) to time out problems (27), a further 69 individuals who would have liked to participate were not able to. Finally a further 22 individuals were out of the office for the period that we collected data. Thus, the final number of valid email invitations was 1474.

The initial survey invitation was sent out on January 21. Participants were offered the chance to win a \$200USD gift certificate to Amazon.com as an incentive to participate. Reminders were sent out on January 30 and February 6. A final reminder will be sent out on February 13 with the survey site closing on Feb 15. As of February 7, total number of respondents is 435. Thus, to date the response rate is a very respectable 29.5%.

Admittedly this is a potentially biased sample in that it is drawn from a set of people that are interested enough in project management to either belong to a project management association or submit their name to participate in project management research. However, the nature of the study is such that we are interested in the opinions of project managers and these are two of the best available samples to access these individuals. This bias must however be recognized and considered in discussing the findings.

Survey Structure

The instrument consisted of 43 questions including 7 open-ended questions. A five point Likert scale was used and the anchors were “strongly agree” and “strongly disagree”. The intermediate choices were somewhat agree, somewhat disagree, and neutral. Instrument validity was strengthened through the use of pre-existing, pre-tested, constructs with comparable validity and reliability measures. A small panel of academic colleagues and project management practitioners tested the instrument for readability and for timing. Criterion validity was addressed by using groups of items (survey questions) to reflect the key constructs (independent variables) instead of single ones. Content validity was addressed through a use of the literature review to identify the constructs and through the pilot with academics to solicit their judgments.

The survey asked questions on three areas of interest. The first set of questions explores reasons these participants either did or did not seek certification. These questions examined the primary reasons given for obtaining or not obtaining certification. The second set of questions explored the individual’s attitudes towards project management as a profession. The final set of questions explored of the individual, professional and organizational demographics of the sample.

Participants will be invited to fill out a survey consisting of three parts. One part of the survey will request standard demographic data to aid in assessing generalizability and analysis. Another will collect individual's knowledge about their professional association. A third section will enquire about their motivation for pursuing certification. Finally participants will be asked to identify the benefits they have received as a result of engaging in the certification process. Participants will also be invited to share comments about particular questions and about the study as a whole.

This research project utilizes a fairly standard survey methodology to gather qualitative and quantitative data from certified professional association members. Participants will be asked to answer a series of Likert-scale questions about their perceptions of and motivation for engaging with the certification process. E-mail lists of certified professional association members from four professional associations (Project Management Institute, Australian Institute of Project Management, Japanese Project Management Association and the International Project Management Association) will be used to contact potential participants. Each potential participant will receive an introductory email containing information on the study, and on how to access the survey. When the participant accesses the survey they will be required to acknowledge their informed consent before proceeding. Data from the surveys will be collected online via a secure commercial website survey service, and data subsequently given to the principal investigators. It is anticipated that it will take about 20 minutes for each participant to complete the survey. Content analysis will be used to analyze themes from the open-ended questions, and statistical analysis (group means and modal scores initially) will be used to analyze the interval questions.

Survey Respondents

435 individuals have responded to the survey in January and February of 2004. The following provides a description of these respondents. This section of the survey collects demographic information on the individual and the organization/industry within which they

work. We also collect information on the types of projects and self report indicators of project performance and project management competence.

General Respondent Demographics

Study participants comprise a well-educated, experienced, and mobile group of project management professionals. Some highlights on individual characteristics as follows:

- Seventy five percent of the participants are men and 72% are over 40.
- 26% have undergraduate degrees and 41% hold Masters degrees
- 40% of the respondents had been with the current organization for 5 or less years and 31% had been with the organization for more than 10 years.
- Participants range in their responsibility levels from being project team members to those managing program portfolios or sponsoring projects. In general, respondents can be divided into Project Sponsor (20.5%), Program Manager (manages project managers) (37.9%), Project Managers (45.3%), and other project professionals (30.8%).

Project Management Demographics

On average, survey respondents have significant levels of engagement with the project management profession as indicated by their level of project management experience, and level of project responsibility.

- Fifty five percent or 241 of our respondents held some form of project management certification. 22% of those responding had received their certification in 2003. In total, 61% of those responding had received their certification since 2000. Over 71% of these certified respondents held association sponsored certification. Out of the certified respondents 13% held company sponsored certification and an additional 15% held education based. 95% of these held valid certificates as of the date of the study. 5% had let their certification expire at some point.
- Forty-four percent of the respondents report having taken more than 40 days of formal project management education at the same time 49% report having taken relatively little (single courses) or no formal PM education.
- 45% had have experience in their within their organization as a project manager, 38% as program manager and 20% as project sponsor.
- 32% have been working on projects for more than 20 years. 95% have more than 5 years of project experience.
- 52% have between 6 and 15 years of project management experience.
- Fully 59% agree or strongly agree with the statement that they consider themselves expert project managers.
- 32% report that over 90% of their work is project management.
- 71% have been involved in IT related projects, 48% in Service and Product Development, 44% in Organizational Renewal projects, 38% in R&D
- 42% reported being involved in 3 or less projects last year 18% reported working on more than 10 projects
- 74% reported being involved in 2 or more projects at the current time.

- 18% reported that none of the project managers working for their organization are certified while 3.7% reported that all the project managers working for their organization were certified. 58% reported that fewer than 10% were certified.

Organizational Characteristics

The survey respondents come from a wide variety of organizations in many industries and of disparate sizes. In general, most of the respondents come from functional areas within their organization where project management would be expected to be an important issue (information technology or project management). The industry distribution is a wide and varied selection of industries reflecting the increased projectization of organizations today. Respondents are almost evenly spread across small and large organizations. Specifics follow:

- 49% of the respondents worked within their organizations project management department. 33% of respondents worked within the Information Technology
- Over 80% of the respondents came from organizations whose main business activity falls in the following six industries: Consulting (24%), Information Technologies (19%), Telecommunications (7%), Government (11%), Manufacturing (8%) or Engineering/Construction (8%), Banking or Oil and Gas (4%) each.
- While 34% of all firms had gross sales of less than \$50 million (USD) during the calendar year 2003, 30% had sales of \$1 billion dollars or more.
- Roughly, one quarter of the organizations represented had less than 100 employees (24,9%) and nearly one third (26%) had over 10,000 employees
- 57.7% of respondents stated that less than 10% of the project managers in their organizations were certified. Only 6% of respondents indicated that 90% or more of the project managers working for their organization were certified.

PRELIMINARY FINDINGS

These preliminary findings are based on sample descriptive statistics for the moment. This section explores the reported motivation for and benefits of project management certification and the reasons those who have not chosen this route provide for their decision. We have collected a rich data set for exploring the interrelationships of these concepts. However, that analysis is only underway at the time of writing this paper.

Why do project managers certify?

This section of the survey explores the respondents motivation for obtaining this certification. The participant is first asked to provide the top three reasons they decided to become certified in freeform text. This is to allow us to examine their reasoning before they are influenced by the reasons suggested by our questions. The qualitative data is not analysed in this paper. Then they are asked to answer “Why did you become a certified project manager?” by indicating the level of influence an item had on the decision based on a 5 point Likert scale ranging from No Influence to Great Influence.

The top five influences on the decision to pursue project management certification appear to be:

- To challenge myself to meet professional standards (85%)
- To provide evidence of a level of proficiency in project management (85%)
- To increase my credibility as a project manager (85%)
- To increase and broaden my knowledge of project management (81%)
- To become more marketable for other jobs (81%)

Factors most often reported to have little or no influence on the decision appear to be:

- To satisfy my boss (67%)
- To keep my job (64%)
- To meet new people (57%)
- To have line managers listen to my recommendations (52%)
- To earn a promotion (36%)
- To earn more money (31%)

Exploring these respondents in greater detail provides further insights into the motivation driving the trend towards certification.

Who chooses to certify?

Research Question: Are there differences in the demographics of those project managers who chose to certify over those that do not?

Descriptive statistics imply that there are differences between those individuals who choose to certify as compared to those who don't. Table presents some of these differences.

Table 1: Differences between Certified and Uncertified Project Managers

	Certified Project Managers (238)	Uncertified Project Managers (197)
Average Age in years	45.3	45.2
% Male	75%	80%
Expert Self Ranking	53%	67.6%
Novice Self Ranking	14.6%	4.6%
Formal Project Management Education		
None	1.7%	5.3%
1-2 days	.4%	3.2%
3-5 days	3.3%	6.4%
6-10 days	5.4%	11.8%
11-20 days	15.1%	19.3%
21-40 days	21.3%	19.8%
more than 40 days	52.7%	34.2%
Years of Project Experience		
Less than 1	0%	1.1%
1-5 years	3.4%	8.1%
6-10 years	24.8%	20.0%
11-15 years	24.4%	21.1%
16-20 years	15.5%	17.8%
21-25 years	17.6%	13.5%
more than 25 years	14.3%	18.4%
Years as Project Manager		
Less than 1	.8%	4.3%
1-5 years	18.6%	26.5%
6-10 years	35%	25.9%
11-15 years	22.4%	18.9%
16-20 years	14.8%	11.9%
21-25 years	4.6%	4.3%
more than 25 years	3.8%	8.1%

It would seem from these numbers that certified and not certified project managers are roughly the same age. There are slightly more men who are non certified. Certified project managers are more likely to have more than 20 days of project management education than the non certified project managers.

What triggers certification?

Research question: How do project managers learn about certification?

Project managers learned of certification from the following sources:

- Their company suggesting it (35%)
- Their colleagues (21%)
- Publicity (20%)
- Other PMs mentioning it (19%)

There seems from this information to be a significant “word of mouth” process at work in spreading knowledge about the certification process. At the same time, 35% of the respondents were made aware of the process by their employers suggesting an element of organization driven demand for certification.

Research Question: Are there any patterns to the individual needs that seem to be driving the move towards certification?

The literature suggests that there are a small set of individual needs that drive human behavior in the work setting. Table 2 explores the responses to items designed to indicate the individual needs the respondent is seeking to meet in obtaining project management certification.

Table 2: Individual needs for achievement, affiliation and power

Individual Need	Percentage agreeing with this motivation (agree and strongly agree)	Percentage strongly agreeing with this motivation
<ul style="list-style-type: none"> • Achievement <ul style="list-style-type: none"> ○ challenge myself ○ prove I can do it ○ assess skills ○ provide evidence of proficiency 	85.1% 58.5% 58.1% 87.2%	51.9% 29.0% 30.7% 54.4%
<ul style="list-style-type: none"> • Affiliation <ul style="list-style-type: none"> ○ to network with PMs ○ to meet people ○ to learn from others 	40.7% 16.6% 53.9%	11.2% 3.3% 14.5%
<ul style="list-style-type: none"> • Power <ul style="list-style-type: none"> ○ to gain line managers recognition ○ to increase credibility ○ to demonstrate ambition 	24.9% 84.6% 47.7%	5.0% 48.1% 14.5%

It would appear from this rudimentary examination of motivations that there is definitely a need for achievement driving the individuals who certify. In addition, there seems to be some need to increase personal power evident. Further analysis of this data will likely yield further insights.

Research Question: Are there any patterns evident in the types of benefits project managers seem to be seeking when they certify? Do project managers seek certification for noble or instrumental reasons?

The literature indicates that there are two types of benefits that can trigger certain kinds of behaviors: instrumental and noble. Table 3 explores responses to items designed to get at these two types of benefits.

From this rather rudimentary analysis, it seems that there both types of benefits are driving the move towards certification. It seems clear that the drive to improve job performance which is likely to link with the individual need for achievement is clearly a significant motivator as is the self development items from the top category of benefits. Further analysis of this data breaking it down by age, industry, types of projects etc may provide further insights into the motivations of individuals seeking certification. In addition, factor analysis of the items will

provide insight into how the items group and whether they support the underlying theory from which they are derived in this case.

Table 3: Benefits of certification

Types of Benefits	Items	Percentage agreeing with this motivation (agree and strongly agree)	Percentage strongly agreeing with this motivation
Noble	Grow the profession		
	to become a professional	74.9%	46.5%
	to signal commitment to the profession	70%	28.6%
	Self Development		
	learn about PM		
	increase and broaden PM knowledge	66.0%	32.8%
	refresh PM knowledge	83.4%	49.4%
	get a more global perspective		
	Improve Corporate Practice	47.7%	14.1%
	improve company's ability to manage projects	51.0%	19.2%
		60.6%	19.1%
Instrumental	Higher Salary	45.2%	12.8%
	Improved career opportunities		
	Better job	54.4%	24.5%
	Higher recognition	56.4%	19.1%
	Improve Job Performance		
	Become more effective	70.5%	30.7%
	Improve ability to manage projects	77.1%	27.3%
	Make better decisions		
		61.4%	24.9%

What inhibits certification?

Research question: Why do individuals choose not to certify?

Top 5 reasons reported for not certifying:

- Certification is not considered a necessity in my organization (64%)
- Not having enough time to study for certification (61%)
- There is no financial reward to certification (60%)
- Certification is not considered a necessity in my industry (56%)
- Certification has a high financial cost (47%)

Reasons for not certifying most strongly disagreed with:

- Not enough experience (70%)
- No knowledge of the certification process (69%)
- Worried about failing the test (63%)
- Too old to benefit from certification (58%)
- Too experienced to benefit from certification (54%)

From this data it seems that the primary reasons individuals do not pursue certification is that it does not carry an instrumental reward that motivates them. They seem to recognize benefits to certification just not to them in their particular industry or organization.

Do certified and uncertified project managers differ with respect to the characteristics of professionals?

Research question: Is there any differences evident between certified and non certified project managers with respect to professional behavior, professional satisfaction and professional continuance?

On average, our participants appear too satisfied with their career choices in project management and committed to and proud of the occupation. Somewhat in contradiction to this stands the result that they see project management as a stepping stone to higher management positions. They tend to stay up on the journals and publications and on average believe that project management associations should be supported. At the same time, they are relatively neutral about attending PM chapter meetings and participating in research and holding office, or gaining benefits from project management associations.

An Anova analysis with an F-test on the differences between the mean responses of the certified and uncertified project managers was used to discover differences in the two groups professional attitudes towards project management. The items with significantly different means (using a .005 cutoff) are as follows in table 4.

Table 4: Differences in professional attitude between Certified and Uncertified Project Managers

Professional Attitude Item	Certified Project Managers Mean Response	Uncertified Project Managers Mean Response	Significance
If I could do it over again I would choose to work in project management	4.00	3.59	.000
I would recommend a job in project management to others	4.09	3.82	.001
I could easily become as attached to another occupation as I am to Project Management	3.08	3.49	.002
I am proud to be a project manager.	4.31	3.97	.000
I talk up project management to my friends as a great occupation	3.78	3.36	.000
I feel fairly well satisfied with project management as a career	3.93	3.65	.000
I definitely dislike project management work	1.42	1.72	.000
I will voluntarily leave project management within the next three years	2.12	2.47	.001
I will voluntarily leave project management within the next six years	2.36	2.83	.000
I regularly attend meetings of my local chapter of the project management association	2.99	2.35	.000
I believe that project management associations should be supported	4.10	3.87	.001
I have held office in a PM association or served as a committee member.	2.36	1.96	.005
Associations of Project Management professionals don't really do much for the average member	2.59	2.92	.001

From this analysis we can see that certified project managers appear to be somewhat more satisfied with their career choice than non certified project managers, somewhat less likely to leave the profession in the near future and more likely to support the project management associations. These are all characteristics of professionalism that one might expect certified practitioners to rank higher on. The interesting finding is that on many of the professional characteristics the two groups did not provide different answers. This seems to indicate that on many of the characteristics of professional behavior the two groups are very similar indicating that certification may not influence these aspects of professional behavior. Further analysis of this data will likely provide more important insights into the relationship between certification and professionalism.

Exploring the Outcomes of Certification

Here we look for what the individual reports as outcomes of the certification process. We ask questions exploring:

Types of Rewards received – The participant is first asked to provide us with the 3 main benefits they have received from certification in free form text (this data is not analysed for this paper). Next the participant is asked to review a list of statements that describe the benefits an individual could receive as a result of becoming a certified project manager and then indicating the level of agreement they have with each statement based on a 5 point Likert scale ranging from strongly disagree to strongly agree. These items are derived from work in other occupations on the benefits of voluntary certification.

Benefits most often reported as accruing to PM certification:

- Increased and broadened my knowledge of project management (87%)
- Provided evidence of proficiency (80%)
- Increased my credibility as a project manager (80%)
- Challenged me to meet professional standards (74%)
- Proved to myself that I could do it (73%)

Benefit statements most highly disagreed with:

- Satisfied my boss (37%)
- Allowed me to charge higher rates (48%)
- Resulted in a raise (55%) more than one raises (65%)
- Resulted in a promotion (52%) more than one promotion (62%)
- Enabled me to keep my job (49%)

By examining the differing percentages of respondents reporting a potential benefit as a motivation to certify with the percentage of respondents reporting obtaining that benefit as a result of certification, we can get a rough measure of the gap between what people think they will get and what they get as a result of certification. First lets look at the benefits that seemed to come as a surprise to people. In other words more people reported receiving these benefits from certification than reported expecting to obtain them. Those reporting a gap between expectations and reported benefits of more than 10% include:

- Refreshed knowledge of project management
- Independently assessed skills
- Proved they could do it
- Allowed them to meet new people
- Demonstrated ambition
- Satisfied the boss

On the other hand, there were some benefits that survey participants expected to receive in conjunction with certification that were not as often realized. These include:

- Challenged to meet professional standards
- Realized desire to become a project management professional
- Resulted in a raise
- Improved visibility within the organization
- Allowed me to qualify for a better job
- Resulted in a promotion

Many of these seem to be instrumental goals that are not being met for some portion of the certified project managers.

While these gaps provide interesting insights into the benefit realization that this group of certified project managers reports, this analysis only gets at the highest level of reporting. The relationships between who is getting what and how satisfied they are with it will require further statistical analysis of the data. However, these preliminary findings suggest that there will be important relationships to discover in the data. This is after all the starting point of analysis on an important dataset.

CONCLUSIONS

This study was conducted to help to better understand the factors motivating a decided trend towards certification in project management. In particular, the research set out to answer the following questions:

- Why do individuals seek project management certification?
- What benefits do they report receiving from certification?
- Is there a relationship between certification and professional attitudes?

We believe that we have made an initial contribution towards answering these questions. This preliminary analysis provides interesting findings based upon descriptive analysis that wet our collective appetite for the richer findings available to us from this dataset. Further analysis of this data will provide a basis to continue to validate both the statistical reliability of the survey tool and the correlations and conclusions that we have drawn.

The preliminary results of the study demonstrate that project managers are very interested in the topic of certification – evidenced by the high response rate we have for this study and their patience with technical difficulties. On average the sample was predominantly male, with an average age of 40 and a significant level of both project management training and experience.

The demographics between the certified and uncertified project managers are relatively stable between the two groups. The non-certified project managers are slightly more likely to have less than 5 years experience and slightly more likely to have more than 20 years experience. With respect to professional characteristics, the two groups are not statistically different to their responses to questions on professionalism behaviors. However, an appreciable difference in their responses to questions surveying commitment to and satisfaction with the career of project management. This seems to indicate that certification does not have a statistically significant impact on the professional identity of project managers. At the same time, certified project managers are more slightly more likely to support the project management associations though neither group does so wholeheartedly. This data may provide insights into the typically high turnover rate of membership in project management associations.

From our preliminary review of the data, it seems clear that the motivation for certification is complex and that the key factors identified from the literature will all play inter-related roles in motivating individuals to seek certification. This initial review of the descriptive statistics on various variables provides insights into some interesting questions to ask of the question and so raises more questions than are answered at this point. One of the most intriguing aspects of this is the indication from the analysis to date that certification does not seem to be either driven by higher levels of professional behaviors and attitudes nor result in higher levels. This data must be examined more rigorously to see what that has to say about the occupation of project management. Another interesting finding appears to be that the instrumental rewards that are expected while coming home to a great number of those who seek certification are not realized by a significant proportion of the project manager who expect to obtain them. This has the potential to inhibit the professionalization drive if individuals are driven by instrumental motivations.

Practical and Theoretical Implications

This research will benefit the research community by providing current empirical data about the motivation of individuals to participation in the process of professionalization in new knowledge occupations, and will provide insight into the ways these certification processes may change the working situation. It will be of huge practical import to professional associations, educators, researchers, individuals and organizations interested in the professionalization of project management. Results of this study will provide insights as to why individuals get involved in a certification process and whether it can accurately be construed as a step in creating a professional identity. An identity over and above traditional tools and methods and held together by an idea of project management theory.

This study includes respondents from Scandinavia and North America. Most of the respondents are PMI members. All of the participants are interested enough in project management to participate in a lengthy survey. All of these features of the dataset introduce biases into the analysis that limit the generalizability of the study. However, for the kind of data we were looking for this is the best data available at the current time. Future studies will try to increase the generalizability of the sampling to improve on this limitation.

Directions for future research

The findings of this research suggest a number of areas for further study. This paper presents preliminary descriptive analysis of an extremely valuable dataset. Future analysis of this dataset will explore the relationships between the reasons for certification, the benefits

reported and the demographic variables. In addition, we will explore the similarities and differences among various subsets of the data particularly exploring the impact of certification and the reported motivation for pursuing it on professional continuance, professional satisfaction, and professional behaviors. Future studies could be designed to replicate the findings here using a randomly generated sample, a variety of personality and competency measures, and varied geographic settings.

The survey used in this study makes use of measures and items from a wide body of literature. The items should factor into constructs that can be analyzed using more sophisticated statistical methods. Until this is done, we can not be sure what constructs are being examined and we cannot get into exploring the relationships between these constructs. This is the next step in analysis of this dataset.

In the future, there is also an opportunity to link these findings to the effectiveness of project managers in actually delivering projects. The current data should be able to demonstrate a linkage between certification and project outcomes based on self report data. This does not yet extend to being able to demonstrate the linkage between certification and competency on the ability to successfully deliver project results nor does it get into the impact of certification on self efficacy measures. Future analysis of this data is being planned by the authors to address this critical dimension.

Overall, this research contributes to the expanding literature exploring the role of certification in the development of a profession. From a project management perspective, this research serves to ground speculation on the impact and benefits of project manager certification empirical evidence. It also provides a foundation from which to analyze the development of a profession of project management.

REFERENCES

Allen, N. J. and Meyer, J. P. (1990) The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63: 1-18.

Blomquist, T. & Söderholm, A., (2002) "How project management got carried away" in Sahlin-Andersson, K. and Söderholm, A. (eds) *Beyond project management. New perspectives on the temporary-permanent dilemma*, Malmö: Liber, pp 25-38.

Boyt, T. E., Lusch, R. F. and Naylor, G. (2001). The Role of Professionalism in Determining Job Satisfaction in Professional Services: A Study of Marketing Researchers. *Journal of Service Research* 3(4): 321-331.

Gramling, A. A. and Myers, P. M. (1997). Practitioners' and users' perceptions of the benefits of certification of internal auditors. *Accounting Horizons* 11(1): 39-53.

Hackman, J.R. and Oldham, G.R. (1975), "Development of the job diagnostic survey", *Journal of Applied Psychology*, 60(2): 2159-70.

Hall, R. (1968) Professionalization and bureaucratization. *American Sociological Review* 33: 92-104

Kalbers, L. P. and Fogarty, T. J. (1995). Professionalism and its consequences: A study of internal auditors. *Auditing* 14(1): 64-86.

Lehr, J.K. and Rice, R.E. (2002). Motivation, organizational identification, and experiences of the quality examiner. *The Quality Management Journal*. 9(1): 63-90.

McClelland, D.C. (1961). *The Achieving Society*. Van Nostrand, Princeton NJ.

Redd, M L, Alexander, J W (1997) Does certification mean better performance? *Nursing Management*. 28 (2): 45-49.

Sahlin-Andersson, K. & Engwall, L., (2002). *The expansion of management knowledge: carriers, flows and sources*. Stanford, Calif : Stanford Univ. Press.

Snizek, W. (1972) Hall's professionalism scale: An empirical reassessment. *American Sociological Review*: 37(1): 109-114.

Wang, X. (2002) Developing a True Sense of Professional Community: An Important Matter for PM Professionalism. *Project Management Journal*. 33(1): 5-11.

Zwerman, W.L. and Thomas, J., 2001 "Roadbumps on the road to Professionalization", *PMNetwork*, 15 (4).