

The Links between the Values of Abu-Dhabi Police and the Competenceis of Their Project Managers

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Abstract

There are five values which Abu-Dhabi Police (ADP) expects its employees to uphold and fifteen associated competencies which their project managers should attain. The links between these values and competencies were explored. Literature was reviewed on organizational culture, project management culture and characteristics of project managers to influence the establishment of the research aim and objectives. A mixed-methods approach was adopted in the study where the first phase used a quantitative study to assess the attainment of values and competencies by ADP's project managers. 157 Questionnaires were administered and 71 fully completed versions were returned, representing a response rate of 45%. Descriptive and inferential statistics were used to assess the attainment of ADP's values and competencies by the respondents as well as the link between these two main constructs. Although the levels of attainment of these values and competencies were quite high, there was room for improvement. Thus means of enhancing ADP's project managers' competencies were sought in the second phase where focus group meetings were used to generate a checklist of advanced training subject matters.

Keywords: Organizational values, organizational competencies, project manager, training.

1. Introduction

Construction projects in the Gulf Community Countries (GCC) recently transformed from being simple to massive and complex. Between 2006 and 2010 the contribution of the construction sector to the United Arab Emirate's (UAE's) GDP increased from 8.9% to 11.5%. In 2011, it was reported that the UAE had the highest value of construction projects and real estate value among the GCC, which was worth US\$ 319.1 billion (Alpen Capital, 2012).

The Abu-Dhabi Police (ADP) Engineering Department of the UAE was established in 2003. Although it is relatively young, ADP's construction Project management is constantly improving, especially as the Force wants the implementation of its projects to match good practices elsewhere. Since 2008, ADP saw a period of spectacular boom in terms of construction activities (Abu-Dhabi Police GHQ, 2013). Different internal reports (for example; project performance monthly report submitted by the project manager consultant) have continued to deplore the poor performance of ADP's construction projects. As a result performance improvement has become a number one priority of ADP's Engineering Department (EPA) (Secure, 2013).

Lindbergh (2009) depicted factors that influence project performance and outcomes in an organizational system and these include organizational culture, project management culture, and the project manager. Based on that, Alqahtani et al (2015) developed a conceptual framework defining different factors that could influence construction project performance and outcomes. Their framework, which is shown in Figure 1, consists of the project manager's characteristics (including competencies and Skills, Capabilities, Self-Efficiency, and Leadership Style), Organizational Culture (including Values, Norms, Artefacts, and Leadership), and Project Management Culture (including Strategic emphasis, Top management support, Project management methodology, Different stakeholder commitment and involvement, Communication system, and Project review and learning).

ADP has values which the Organization expects its officers to uphold. The organization also has competencies which officers are expected to attain. The link or conflict between these values and competencies is not known precisely. Thus an in-depth research was conducted to study the link between values and project managers' competencies in the context of ADP. The research aimed to verify if ADP's values affect their project managers' competencies. This paper reports on the connection between ADP's values and their project managers' competencies.

The next section provides a literature review on the subject matters and following it is the methodology section. Section 4 highlights empirical and descriptive analysis of the impact of ADP's values on their project managers' competencies. The later parts of the paper then concern the conclusions and recommendations.

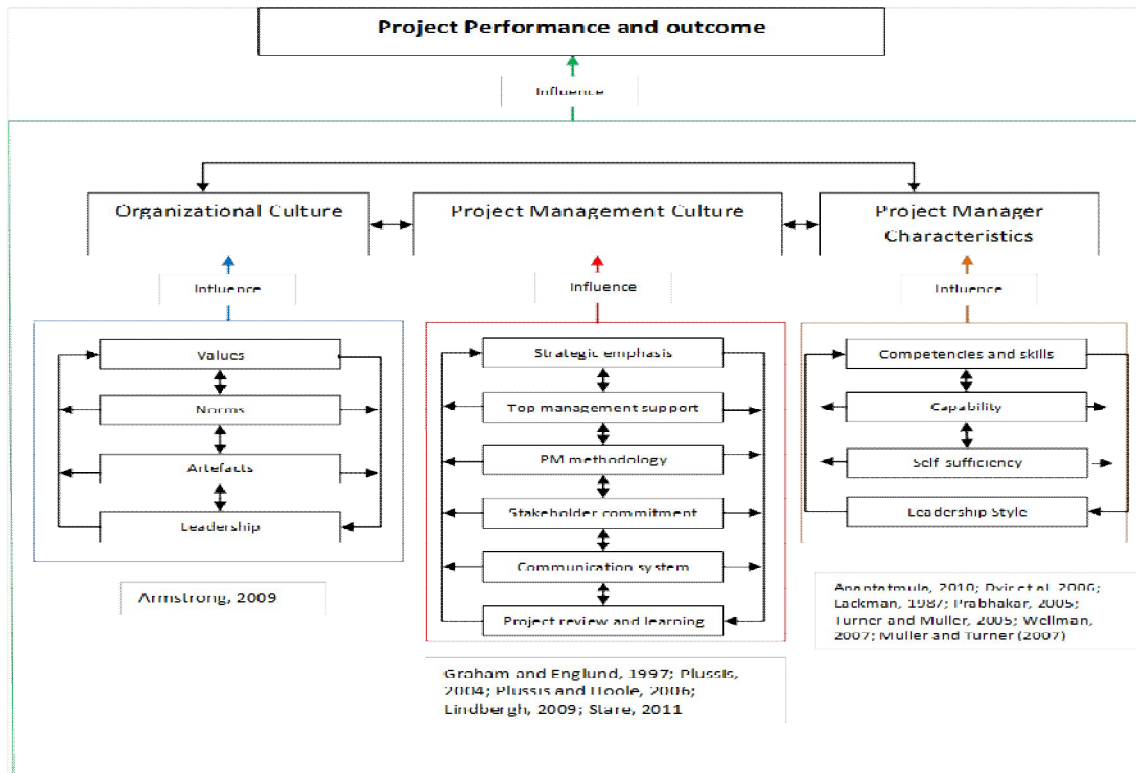


Figure 1: Factors affecting project performance and outcomes (Source: Alqhtani et al, 2015)

Literature review

Previous studies have identified attributes and factors which affect the performance and outcome of projects and these can be grouped into three streams. The first stream focuses on the project manager's characteristics [Anantamula, 2010; Dvir et al., 2006; Lackman, 1987; Prabhakar, 2005; Turner and Müller, 2005; Wellman, 2007; Muller and Turner, 2007]. The second stream emphasizes organizational culture [Armstrong, 2009]. The third stream focuses on project management culture [Graham and Englund, 1997; Plussis, 2004; Plussis and Hoole, 2006; Lindbergh, 2009; Stare, 2011]. The possible connection between these three streams is shown in Figure 1.

Values and project managers' competencies

Values are beliefs in what is good for the organization and what should, or is expected to, happen (Hofstede, 1998). Values can be expressed in e.g.: care of others, competence, competitiveness, teamwork, customer services, and performance (Hofstede, 2010). According to Armstrong (2009) values are beliefs in what is good that should happen in the organization. Values should be recognized at the top level, and the stronger the values the more they influence behaviour in the organization. Hofstede (2010) considered values as the core of the organizational culture, which could be expressed as the attitude toward choosing between good and evil. Currently the 5 values of ADP are (Abu-Dhabi Police, 2014):

1. Integrity and honesty
2. Justice
3. Recognizing achievements
4. Effective Communication
5. Excellence

Competencies refer to a “combination of skills, attributes and behaviours that are directly related to successful performance on the job” (United Nation, 2013). Scott (1996) stated that competency is a group of needed knowledge, skills, attitudes and other characteristics that affects employees' job, and these can be measured by using well designed standards and used for training and development. According to Conference Board of Canada (2013), competence is a collection of experience, skills, knowledge and abilities that employees bring to their jobs. In addition, project manager's competencies are divided into two dimensions:

1. Business Environment Competencies: such as understanding the business vision and translating it to the project vision; the ability to understand the policies and procedures of an organisation and applying them in project activities; and, the ability to understand the organization culture and its impact on project culture.
2. Management Competencies, such as: the ability to communicate with the project stockholders, the ability to manage external issues, the ability to manage the financial resources in the project and how decisions impact on project cost, leadership skills, decision making, ability to learn from previous lessons, and time management.

One of the factors that influence project success is either hiring or having competent project managers (Omidvar *et al*, 2011). Competencies that are required from ADP's project managers are (Abu-Dhabi Police GHQ, 2014):

1. Integration management
2. Scope management
3. Time management
4. Cost management
5. Quality management
6. Human resource management
7. Communication management
8. Risk management
9. Procurement management
10. Achieving and action
11. Stakeholder management
12. Conflict management
13. Leadership
14. Problem solving
15. Personal Effectiveness

The possible link between ADP's values and the competencies of their project managers was studied with the intention of identifying potential areas for improvement in the attainment of these two constructs. This paper will discuss how ADP's values are impacting on their project managers' competencies and which values have more significant impact than others.

Research Method

A mixed-method approach was used in the study involving quantitative and qualitative inquiries. Initially a quantitative study was carried out involving the use of questionnaire. ADP project managers were surveyed on the current attainment of both the 5 values of the organisation and the level of competency of their project managers. Subsequent analysis of the survey data then sought to link the attainment of values with the competencies. Descriptive and inferential statistics were used to assess the rating of ADP's values and project managers' competencies by the respondents.

The questionnaire had 5 Sections: Section 1 asked for demographic data, Section 2 asked for the achievement level of ADP's values, Section 3 asked for the skilfulness level of ADP's project managers, Section 4 asked for the effect of ADP's five values on their project managers' competencies, and section 5 asked for challenges related to ADP's values and project managers' competencies. The questionnaire was sent to general managers and project managers working with ADP via email, internet link, and mail. Questionnaires were sent to all the 71 project managers and 86 managers of ADP.

Out of the total of 157 questionnaires sent out, 74 responses were received over a period of 5 weeks. 71 respondents completed the questionnaire fully and thus met the requirements for inclusion in the data analysis. The 3 partially filled questionnaires were not considered. Thus the response rate is effectively 45%. The respondents included 43 of project managers and 28 managers, as displayed in Table 1.

Table 1: Response rate in the questionnaire survey

	project managers	managers	Total
Sent	71	86	157
Received	43	28	71
Response rate	61%	33%	45%

Although focus group meetings were subsequently used in the course of the research, this paper reports the results of the quantitative study only. The second phase involved: 1) the confirmation of the results from the questionnaire survey; and 2) the teasing out of ideas on how the levels of achievement of ADP's values and competencies could be improved. The second element of these focus group meetings involved the generation of qualitative data which was recorded, transcribed and analyzed where 18 senior project managers were consulted on what to consider for improving the achievement of ADP's values and competencies. Their suggestion for training was later validated with 12 senior project managers and Officers of ADP. The qualitative aspect of the research and its findings will be reported in due course. Suffice to discuss the quantitative results in this paper.

Data Analysis and Results

Demographic data

Descriptive statistics were initially used to interpret the responses to the questionnaire survey. 97% of the respondents were current employees of ADP. This means that the respondents fully know ADP and its culture and on face value can provide reliable data. Moreover the respondents are also aware of the current construction projects going on in ADP. 92% of the respondents were males while only 8% were females. Professionally the respondents are engineers and Police officers. 27% are Civil engineers, 7% are electrical engineers, 5% are mechanical engineers, 22% are architectural engineers and 39% are police officers. Currently they are either working as managers (39%) or project managers (61%) with Abu Dhabi Police. 95% of the respondents indicated that they were familiar with the values of ADP and 88% were familiar with the competencies.

The achievement of Abu Dhabi Police's values

The achievement of ADP's values was rated on a 5-point Likert scale which was calibrated as: 1 = not being achieved; 2 = not being achieved much; 3 = being achieved moderately; 4 = high achievement and 5 = highest level of achievement. The assessments of the project managers, managers and both groups are shown on Table 2.

Table 2: The level of achievement of ADP's values

ADP's Value	Mean rating		
	Project managers	Managers	Both managers and PMs
Integrity and honesty	4.302	4.448	4.361
Justice	4.205	4.414	4.288
Recognizing achievements	3.909	4.379	4.096
Effective Communication	3.977	4.207	4.068
Excellence	4.091	4.103	4.096

The managers rated all the five values slightly higher than the project managers. If the relatively lower ratings are to suggest areas for improvement, then effective communication, recognizing achievements and excellence are areas which ADP should address.

'Is there any significant difference between project managers and managers' responses regarding the level of achievement of ADP's values?' In order to address this question, the Mann Whitney U test was conducted, since the data was ordinal. Table 3 shows the outcome of this analysis.

Table 3: Mann Whitney U test of ADP values question:

ADP Values	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Integrity and honesty	Project Managers Responses	42	35.17	1477.00	574.000	-.186	.853
	Managers Responses	28	36.00	1008.00			
	Total	70					
Justice	Project Managers Responses	43	33.77	1452.00	506.000	-1.270	.204
	Managers Responses	28	39.43	1104.00			
	Total	71					
Recognizing Achievements	Project Managers Responses	43	32.29	1388.50	442.500	-2.022	.043
	Managers Responses	28	41.70	1167.50			
	Total	71					
Effective Communication	Project Managers Responses	43	33.59	1444.50	498.500	-1.372	.170
	Managers Responses	28	39.70	1111.50			
	Total	71					
Excellence	Project Managers Responses	43	35.94	1545.50	599.500	-.033	.973
	Managers Responses	28	36.09	1010.50			
	Total	71					

Referring to Table 3; both project managers and managers' responses regarding the level of achievement of Integrity and Honesty, Justice, Effective communication, and Excellence, do not show any statistical difference ($p > 0.05$). On the other hand, there is a statistical significant difference between project managers' responses and managers' responses regarding the achievement level of recognizing achievement ($p = 0.043$; < 0.05). This result indicates that according to managers, the achievement of 'recognizing achievements' is higher compared with the project managers' responses.

Correlation between the responses of Managers and PMs

A correlation test was applied to check the strength and direction between the responses of the project managers and Managers. This involved using the *Pearson Correlation* as shown in Table 4. Since $r = 0.421$, that means there is some positive relationship between the Project Managers and Managers' responses i.e. both of them move in the same direction.

Table 4: Correlations between Managers and PMs Responses

Correlation analysis			
		Project managers' Responses	Managers' Responses
Project managers' Responses	Pearson Correlation	1	.421
Managers' Responses	Pearson Correlation	.421	1

Suggestion of additional values for ADP

The respondents were asked to indicate if further values were needed by ADP. A total of 25 project managers suggested some additional values which were:

- 1- Continuous improvement.
- 2- Safety and security.
- 3- Loyalty.
- 4- Knowledge management.
- 5- Teamwork.
- 6- Creativity.
- 7- Innovation.
- 8- Diversification of financial resources.
- 9- Workplace equality.

Some of these suggestions are already reflected in the current values, e.g.: continuous improvement, safety and security, creativity, and innovation are part of Excellence; Knowledge management and teamwork are part of Effective Communication; workplace equality is part of Justice, and loyalty could be part of Integrity and Honesty. The remaining one additional suggestion of 'diversification of financial resources' is part of project management culture under top management support. It is important to note that all the suggestions of additional values were made by project managers only and most of their suggestions are part of the existing values. This suggests that some project managers in ADP may not be fully aware of what the current values of their organizations mean. On the other hand; since none of their suggestions was effectively an additional value, it can be assumed that the current values of ADP are sufficient.

The competencies of ADP's Project Managers

Table 4 depicts the rating of the level of achievement of ADP's competencies.

Table 4: Level of skilfulness of ADP project managers

Competencies	Mean rating		
	Project managers	Managers	Both managers and PMs
Integration management	3.591	3.621	3.603
Scope management	3.591	3.517	3.562
Time management	3.205	3.448	3.301
Cost management	3.318	3.357	3.333
Quality management	3.455	3.379	3.425
Human resource management	3.318	3.393	3.347
Communication management	3.500	3.483	3.493
Risk management	3.163	3.655	3.361
Procurement management	3.295	3.345	3.315
Achieving and action	3.698	3.310	3.542
Stakeholder management	3.591	3.345	3.493
Conflict management	3.386	3.414	3.397
leadership	3.864	3.414	3.685
Problem solving	3.750	3.552	3.671
Personal Effectiveness	3.591	3.483	3.548

Competencies rated by project managers as being achieved at a mean level of 3.5 and above were integration management, scope management, risk management, and problem solving. Comparatively those similarly rated by the project managers were integration management, scope management, communication management, achieving and action, stakeholder management, leadership, and personal effectiveness.

On an average both managers and project managers agree that 6 of the competencies were being achieved at a mean level of 3.5 and above, while 9 of the total competencies are being achieved below this level. The Mann Whitney U test was again used to check for significant difference between project managers' and managers' responses regarding the level of achievement of ADP's competencies. The analysis showed that there was a statistical significant difference between the responses of project managers and managers regarding the competencies of Risk management and Leadership, as their p-values were less than 0.05. This result indicates that the skilfulness level of risk management of the managers is higher than the project managers. However the skilfulness of leadership of the project managers is higher than the mangers (see Figure 3).

Correlation between the responses of Managers and PMs

A Pearson correlation test was applied to assess the strength and direction of responses between the project managers and Mangers. R was found to be -0.044, which means there is a negative relationship between the two sets of responses, i.e. both of them move in different directions. So if the project managers' response increases, the managers' response tends to decrease.

The influences of ADP's Values on Project Managers' Competencies

Each of the five values of the ADP was analyzed to see how it linked with the fifteen competencies. For example respondents were asked to rate the effect of integrity and honesty on the 15 competencies of ADP's project managers. Likewise, the effects of the other four values on the competencies were examined and these are all discussed below.

Influence of Integrity and Honesty on the Competencies

According to Table 5, both managers and project managers rated the impact of integrity and honesty on the competencies above average on the five item Likert scale. Especially Integrity and Honesty was strongly linked to the achievement of Integration Management, Cost Management, Quality Management, and Problem solving.

Table 5: The influence of Integrity and Honesty on Project managers' competencies

Influence of "Integrity and honesty" on:		Average rating of respondents		
		Project managers	Managers	Both managers and PMs
1	Integration management	4.07	4.00	3.96
2	Scope management	3.84	3.66	3.74
3	Time management	3.93	3.79	3.84
4	Cost management	4.09	3.93	4.00
5	Quality management	4.04	3.76	3.91
6	Human resource management	3.82	3.76	3.80
7	Communication management	3.67	3.66	3.64
8	Risk management	3.71	3.69	3.68
9	Procurement management	3.82	3.79	3.81
10	Achieving and action	3.73	3.69	3.68
11	Stakeholder management	3.76	3.83	3.74
12	Conflict management	3.76	3.83	3.74
13	leadership	3.91	3.76	3.81
14	Problem solving	3.91	4.07	3.93
15	Personal Effectiveness	3.80	3.79	3.74

Project managers responded that Integrity and Honesty have a strong relationship with competencies like Integration Management, Cost Management and Quality Management. The managers' responses in this regard were relatively low. However the managers identified problem solving as the most affected competency by Integrity and Honesty.

The Mann Whitney U test for difference between project managers' and managers' responses regarding the effect of integrity and honesty on ADP project managers' competencies is shown on Table 6. The p-values are all greater than 0.05, suggesting no significant difference between the responses of the project managers and managers.

Table 6: Mann Whitney U test of Integrity and Honesty and Project managers' competencies

Competency	Responses: Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Integration Management	Project Managers	43	37.60	1617.00	533.000	-.874	.382
	Managers	28	33.54	939.00			
	Total	71					
Scope Management	Project Managers	43	36.43	1566.50	583.500	-.232	.816
	Managers	28	35.34	989.50			
	Total	71					
Time Management	Project Managers	43	36.19	1556.00	594.000	-.101	.920
	Managers	28	35.71	1000.00			
	Total	71					
Cost Management	Project Managers	43	38.69	1663.50	486.500	-1.453	.146
	Managers	28	31.88	892.50			
	Total	71					
Quality Management	Project Managers	43	37.01	1591.50	515.500	-.828	.407
	Managers	27	33.09	893.50			
	Total	70					
Human Resource Management	Project Managers	43	36.70	1578.00	572.000	-.378	.705
	Managers	28	34.93	978.00			
	Total	71					
Communication Management	Project Managers	43	36.24	1558.50	591.500	-.133	.894
	Managers	28	35.63	997.50			
	Total	71					
Risk Management	Project Managers	43	35.80	1539.50	593.500	-.107	.915
	Managers	28	36.30	1016.50			
	Total	71					
Procurement Management	Project Managers	43	36.28	1560.00	590.000	-.150	.880
	Managers	28	35.57	996.00			
	Total	71					
Achieving and Action	Project Managers	42	37.33	1568.00	511.000	-.977	.329
	Managers	28	32.75	917.00			
	Total	70					
Stakeholder Management	Project Managers	42	38.36	1611.00	468.000	-1.531	.126
	Managers	28	31.21	874.00			
	Total	70					
Conflict Management	Project Managers	43	36.52	1570.50	579.500	-.281	.778
	Managers	28	35.20	985.50			
	Total	71					
Leadership	Project Managers	42	35.64	1497.00	582.000	-.076	.940
	Managers	28	35.29	988.00			
	Total	70					
Problem Solving	Project Managers	43	38.03	1635.50	514.500	-1.088	.277
	Managers	28	32.88	920.50			
	Total	71					
Personal Effectiveness	Project Managers	43	37.33	1605.00	545.000	-.704	.481
	Managers	28	33.96	951.00			
	Total	71					

Correlation between the responses of the Managers and Project Managers

A correlation test of the project managers' (PMs) and Managers' responses is shown in Table 7. Since $r = 0.601$, that means there is a positive relationship between the PMs and Managers' responses.

Both responses move in the same direction, so if project managers' response increases, the managers' response tends to increase. And if one decreased the other one tends to decrease also.

Table 7: Correlation between the responses of Managers and PMs

		PM responses	Managers responses
PM responses	Pearson Correlation	1	.601*
Managers responses	Pearson Correlation	.601*	1

*. Correlation is significant at the 0.05 level (2-tailed).

Influence of Justice on the Competencies of Project Managers

Table 8 is showing averages and percentages of effect of justice on competencies and most of the effects are relatively strong by the managers' responses while relatively lesser by the project managers.

Table 8: Influence of Justice on ADP project managers' competencies

Effect of Justice on competencies of project managers	Project managers' responses	Managers' Responses	Both managers and PMs' responses
Integration management	3.98	3.97	3.93
Scope management	3.89	4.03	3.91
Time management	3.82	4.07	3.88
Cost management	3.93	4.07	3.95
Quality management	3.93	3.97	3.89
Human resource management	3.78	4.17	3.84
Communication management	3.87	4.10	3.93
Risk management	3.84	3.90	3.81
Procurement management	3.89	4.17	3.93
Achieving and action	3.93	4.14	3.92
Stakeholder management	3.91	3.90	3.88
Conflict management	3.76	3.93	3.78
leadership	3.82	4.14	3.88
Problem solving	3.73	4.14	3.84
Personal Effectiveness	3.67	4.03	3.76

The managers thought human resource management is the most affected competency by the value of Justice, while project managers thought that integration management is the most affected competency. The Mann Whitney U test for difference between the project managers' and managers' responses indicated that there was no significant difference between the project manager's and managers' responses as the p-values were greater than 0.05.

A correlation test was applied to check the strength and the direction of link between the responses of project managers and Managers where R was found to be -0.160, which means there is a negative relationship between the two set of responses. As a result both of them move in different directions, so if the project managers' response increases, the managers' response tends to decrease.

Influence of Recognizing Achievements on the Competencies of Project Managers

Table 9 shows the effect of Recognizing Achievements on the competencies. It depicts a strong relationship between this value and most of the competencies according to the project managers but lesser according to managers.

Table 9: Recognizing Achievements Influence on ADP project managers' competencies

Effect of Recognizing achievements on competencies of project managers	Mean Responses		
	Project managers'	Managers'	Both managers and PMs'
Integration management	3.93	3.75	3.84
Scope management	3.87	3.79	3.83
Time management	3.71	3.75	3.73
Cost management	3.89	3.82	3.86
Quality management	3.89	3.79	3.84
Human resource management	3.87	3.71	3.79
Communication management	3.87	3.75	3.81
Risk management	3.57	3.71	3.64
Procurement management	3.58	3.79	3.69
Achieving and action	3.93	3.64	3.79
Stakeholder management	3.84	3.79	3.82
Conflict management	3.69	3.79	3.74
leadership	4.04	3.82	3.93
Problem solving	3.91	3.82	3.87
Personal Effectiveness	3.84	3.79	3.82

Competencies like personal effectiveness, problem solving, communication management and integration management have a startling difference with respect to the responses of the managers and project managers: the managers assume a strong relationship between recognizing achievements and these competencies, while the project managers suggest that recognizing their achievements does not very much influence their competencies.

The Mann Whitney U test for difference between project managers' and managers' responses regarding the effect of Recognizing Achievement on ADP project managers' competencies indicated no significant difference as the p-values were greater than 0.05. A correlation test was applied to describe the strength and the direction of the link between the responses of project managers and Managers. R was found to be 0.127, which means there is a positive but low relationship between PM responses and Managers' responses.

Influence of Effective Communication on the Competencies of Project Managers

Table 10 shows the influence of Effective Communication on competencies. It depicts strong relationships between Effective Communication and most of the competencies according to the managers but lesser connections according to project managers. Both managers and project managers agree that effective communication impacts highly on communication management, integration management and stakeholder management, while it least effects procurement management of the project managers.

Table 10: Influence of Effective Communication on the Competencies of Project Managers

Effective communication Research Question: "Please rate how ADP value " Effective communication" influences the following competencies and skills of its project managers"	Mean Responses		
	Project managers	Managers'	Both managers and PMs
Integration management	3.91	3.93	3.84
Scope management	3.71	3.93	3.76
Time management	3.82	3.90	3.81
Cost management	3.84	4.03	3.84
Quality management	3.71	3.90	3.73
Human resource management	3.87	3.97	3.85
Communication management	3.98	4.00	3.92
Risk management	3.73	3.86	3.76
Procurement management	3.67	3.76	3.68
Achieving and action	3.71	3.90	3.73
Stakeholder management	3.87	3.86	3.80
Conflict management	3.80	3.72	3.70
leadership	3.96	4.00	3.92
Problem solving	3.91	4.10	3.95
Personal Effectiveness	3.80	4.00	3.81

The Mann Whitney U test for difference between project managers' and managers' responses indicated that there is a statistical significant difference between project manager's and managers responses when the competencies are Integration Management, Scope Management, Quality Management, Human Resource Management, Communication Management, Achieving and Action, Stakeholder Management, Conflict Management, Leadership, Problem Solving, and Personal Effectiveness as the p-values for these competencies with respect to Effective Communication are less than 0.05. A correlation test was applied to describe the strength and the direction between the responses of the project managers' responses and Managers. R was found to be 0.568, which means there is a positive relationship between their responses.

Influence of Excellence on the competencies of Project Managers

According to Table 11, both managers and project managers rated Excellence as being strongly related to most competencies while, managers rated Excellence as having less impact on the PM competencies. Cost management is one of the competencies that has been rated the highest according to managers while the same competency has been rated pretty low by project managers themselves.

Table 11: Influence of Excellence on Competencies of Project Managers

Effect of Excellence on:	Mean responses		
	Project managers	Managers	Both managers and PMs
Integration management	4.33	3.61	3.97
Scope management	4.24	3.68	3.96
Time management	4.09	3.64	3.87
Cost management	4.22	3.75	3.99
Quality management	4.09	3.71	3.90
Human resource management	4.00	3.79	3.90
Communication management	4.00	3.75	3.88
Risk management	4.00	3.75	3.88
Procurement management	3.91	3.71	3.81
Achieving and action	4.16	3.75	3.96
Stakeholder management	4.16	3.68	3.92
Conflict management	3.98	3.68	3.83
leadership	4.25	3.75	4.00
Problem solving	4.16	3.71	3.94
Personal Effectiveness	4.07	3.71	3.89

The Mann Whitney U test indicated a statistical significant difference between project manager's and managers' responses when the competencies are Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Achieving and Action, Stakeholder Management, Leadership, and Problem Solving as the p-values for these competencies with respect to Effective Communication were less than 0.05.

A correlation test was used to check the strength and the direction of the link between the responses of project managers and Managers. R was found to be -0.346, which means there is a negative relationship between both sets of responses.

Discussion of results

The respondents felt that ADP's values were being achieved highly. However their attainment levels are not yet optimum, signalling room for improvement. The result for skilfulness levels of ADP's project managers indicated that 6 of the PM's competencies were being achieved at a mean level of 3.5 and above. The competencies which are affected most by ADP's values are indicated on Table 12.

Table 12: Impact of ADP's values on their PM's competencies

Value	competencies majorly influenced
Integrity and Honesty	Integration Management, Cost Management, Quality Management, and Problem solving
Justice	HR management and integration management
Recognizing achievement	personal effectiveness, problem solving, communication management and integration management
Effective communication	communication management, integration management and stakeholder management
Excellence	problem solving

Referring to Table 12, Integrity and Honesty highly affects four of the project managers' competencies, Justice highly affects two competencies, Recognizing achievement highly affects four competencies, Effective communication highly affects three competencies, and Excellence highly affects one competency. From these findings, it can be surmised that the performance of project managers may be affected by ADP's values and this may in turn be affecting the performance of their projects. Thus ADP should give attention to the attainment of its values. To help ADP understand the full interrelationship between its values and the competencies of its project managers, further research is recommended. This recommendation is for a 'causal study' that will use a different research strategy to the one employed in the foregoing discussion.

Conclusions

The analysis indicated that ADP's values are impacting on their project managers' competencies differently. This gives a very useful insight to ADP regarding the management of their values. In order to attain the higher levels of competency and values, ADP must work on developing their project managers' competencies. The skill level of certain competencies can be improved in order to improve the achievement of values in the Force. Ways of improving the competencies of the PMs can be sought through e.g. training. A regular assessment, such as the one carried out in this research, is recommended for ADP, as it will enable the organisation to track the attainment of their values and competencies, both at the organisational and individual level. This will provide a basis for evolving both individual and group solutions for improving the achievement levels of their competencies.

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