PROFESSIONAL PERSONALITY PROFILING FOR PURPOSE OF PROJECT SUCCESS IN JABATAN KERJA RAYA

NURMAWADDAH BINTI MOHD IDRIS

UNIVERSITI TEKNOLOGI MALAYSIA

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NURMAWADDAH BINTI MOHD IDRIS

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> Faculty of Civil Engineering Universiti Teknologi Malaysia

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To my beloved husband, family, lecturers and friends

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I hope my findings in the study will expand the knowledge in this field and contribute to all of us in future.

ABSTRACT

The purpose of this study is to identify personality type of project director which will contribute to the project success. The aim of the study is to determine and give a suggestion to top management JKR the suitable personality type of project director which can contribute the project success. The objectives of this paper are to identify the personality type in list of project success in JKR, to assess the project success based on manager's perception, to determine correlation between personality type and project success and to determine the influence between personality type and project success. The survey method is used in this study and was distributed to 90 respondents and 73 respondents required in this study. The respondents are selected among the professional and management category ranging from grade J54 to J41 of project team which won the Project Management Best Practice Award in JKR in each categories of award. Data gathered from questionnaire will be analyses using descriptive statistic method (mean, median, percentage and standard deviation) and inferential statistics (Pearson Correlation and Multiple Regressions). From the analysis, it showed that current personality among Project Director are conscientiousness personality, agreeableness personality and openness personality. Project success definition in JKR can be determine as a project completed by managing project risks efficiently, by proper and conducive project plan, with minimum or agreed upon scope changes, at the proper performance or specification level and with acceptance by the customer/user. The correlation between personality and project success showed relationship with openness personality, extroversion personality, and emotional stability personality. In determining the influence between personality and project success it showed less influence with personality. But openness personality showed influence in project success.

ABSTRAK

Tujuan kajian ini dilaksanakan adalah untuk mengenalpasti jenis personaliti pengurus projek yang dapat menyumbang kepada kejayaan projek. Kajian ini diperlukan untuk disyorkan kepada pihak pengursan tertinggi JKR berkenaan personaliti yang sesuai sebagai pengurus projek. Objektif kajian ini adalah untuk mengenal pasti jenis personaliti pengurus projek yang berjaya dalam melaksanakan projek pada masa kini, mengetahui definasi kejayaan projek dikalangan pengurus projek yang berjaya, mendapatkan korelasi diantara jenis personaliti dan kejayaan projek dan mengenalpasti jenis personaliti yang mempengaruhi kejayaan projek. Kajian ini telah dikemukakan kepada 90 responden dan hanya 73 orang responden yang diperlukan untuk analisis kajian. Responden adalah dikalangan pegawai digred J54 ke J41 yang mana mereka telah memenangi Anugerah Pengurusan Pembinaan Terbaik JKR dalam setiap kategori projek yang dipertandingkan dari tahun 2012, 2013 dan 2014. Data yang diperolehi dari set soalan yang diberikan kepada responden akan di analisa mengunakan kaedah 'descriptive statistic method' (mean, median, peratus dan standard deviation) dan kaedah 'inferential statistics' ('Pearson Correlation' dan 'Multiple Regression'). Analisa yang diperolehi menunjukkan jenis personaliti di JKR sekarang adalah personaliti 'conscientiousness', 'agreeableness' dan 'openness'. Manakala definasi projek berdasarkan persepsi pengurus projek adalah projek yang disiapkan dengan pengurusan risiko yang efisian, dengan pelan projek yang berkesan, dengan perubahan skop yang sedikit, mengikut piawai yang ditetapkan, dan penerimaan projek yang memuaskan oleh pelanggan. Berdasarkan analisa kolerasi pula, personaliti jenis 'openness', 'extroversion' dan 'emotional stability' telah menunjukkan terdapat perhubungan. Walau bagaimanapun bagi analisa pengaruh antara personaliti dan kejayaan projek, hanya personaliti 'openness' menunjukkan kesan kepada kejayaan projek.

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LIST OF ABREVIATION

JKR	-	Jabatan Kerja Raya
Е	-	Extroversion Personality
А	-	Agreeableness Personality
С	-	Conscientiousness Personality
ES	-	Emotional Stability Personality
0	-	Openness Personality

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Jabatan Kerja Raya (JKR) is a government technical agency in Malaysia and existed since 1872. Since then, the department was responsible to construct and maintain all government building and road in Malaysia including others infrastructure such as airport and jetty. The service of department also was expanding year by year to become technical consultancy services and asset management services. JKR aspires to be the center of excellence for infrastructure development by harnessing creative and innovative human capital and state-of-the-art technology. To achieve that, JKR need to develop highly capable workforce and solid workforce management. This will ensure that JKR has their right talent to derive future business. JKR develop Competency Model as a guide to build human capital to achieve JKR business aspiration. Competency Model is design for JKR's human capital with set of knowledge, skill and behavior. This competency model may lead the organization success beside to satisfy human capital to achieve high performance and work satisfaction.

Competency is about the ability of an employee to accomplish tasks adequately with determining problems and find solution to resolve the problem. The components competency are consisting of trainable and behavior. The trainable can be determined as knowledge and skill. While behavior is the conduct of employee which influence by their personality, values, traits, motives and social roles. Behavior element in JKR's Competency Model requires determining competency on achievement orientation, adaptive thinking, desire for knowledge, holding people accountable, impact & influence, professional mastery and visionary leadership.

Beside the competency, the personality type required to determine for derive the successful of project implementation. This will drive for long-term outstanding performance in a job. Each personality categories have different leadership style, motivation, decision making and communication. This is important elements required in drive successful project management team. The same attribute in personality trait of project team will have same objective and desire among the team to achieve a successful project delivery. A project can be success with efforts and contributions from each members of team.

1.2 Problem Statement

In recent years, JKR received a lot of complaints from the agencies against delivery of the projects by the JKR. The unsuccessful project delivery has raised concerns among top management. The credibility of JKR is depends on project completed and delivered by fulfilling three elements of time, cost and quality. To fulfill these elements, it was related to competency of human capital. The failure to deliver the project is related to behavior of project director which is responsible to the related project. The fulfilling of job position in JKR right now is depending on availability of employee to hold the post.

With new Human Resource Development Plan in JKR, the empty post required to put the right person for the right job. It is required for JKR to determine their employee's strengths, needs and experience, and the requirements of a particular job and work environment. All these factors must be match. The right job fit will encourage an employee happiness and success as he deserves at work beside to achieve his true potential.

According to Sayles and Chandler, (1971); Ashley et al., (1987); Gharehbaghi and McManus, (2003); Nguyen et al., (2004), the success of a construction project depends on several factors, one of the factors related to project success is the competencies of project managers. Competencies of project managers are related to personality, characteristics, skills and leadership styles. Project Management Institute (PMI) stated that Project Manager is responsible for coordinating and integrating task across multiple and functional lines. The integration activities included in project manager task are to develop a project plan, to execute the plan and to make changes to the plan. Finding by Pettersen (1991) after reviewed over 60 journal articles and he was proposed five categories of project manager skills contribute in project success are problem solving, administration, supervision and team management, interpersonal relationships and personal qualities.

The post as a project director required a suitable personality of employee to match with jobs requirement. Personality profiling among good project director which success in deliver project required to examine in JKR. We can determine this personality profiling of project manager from the success project delivered. From this study, JKR's management can select the best candidate to hold the position as project director in future beside to develop comprehensive training programed for being good project director in JKR.

1.3 Objectives

The aim of the study is to determine and give a suggestion to top management JKR the suitable personality type of project director which can contribute the project success. Followings are the objectives proposed for this study;

- To identify the current personality type in JKR among Project Directors.
- To assess the project success definition based on project director's perception.
- iii) To determine correlation between personality type and project success.
- iv) To find the influence of personality type towards project success

1.4 Hypothesis

The hypothesis that need to determine in this study are stated as below:

- i) H1: There is correlation between overall personality types to project success
- ii) H2a: Extroversion personality has relationship with project success.
- iii) H2b: Agreeableness personality has relationship with project success.

- iv) H2c: Conscientiousness personality has relationship with project success.
- v) H2d: Emotional Stability personality has relationship with project success.
- vi) H2e: Openness personality has relationship with project success.
- vii) H3: There is an influence of personality and project success

1.5 Scope of Study

The most important team in derive successful project handing over to client are project team at project site. Proper planning and determination among project director and team contributed most to ensure the project success. Due to that factor, this study required to conduct personality test among project team in construction phase which won at first, second and third place in Project Management Best Practice Award which identified by Cawangan Pengurusan Projek Kompleks (PROKOM) which completed their construction and successful handing over to client in last 3 years (2012, 2013 and 2014). Type of project determines as project success includes building, road, airport, maritime and all project implement by the JKR.

This study involves the project director in gred J54 to J41 from a team. The type of project involved in this award is Conventional Project with building project, infrastructure project or mechanical/electrical project (NSC excluded) with range cost of project from RM 500 thousand and up to more than RM 20 million. While Design & Build Project or Turnkey by building, infrastructure or maintenance

1.6 Significant of Study

This study can give benefit to JKR in determine suitable person to hold a positon as a project director and leads towards successful project. Others benefits to JKR are:

- i) To enhance project director personality in JKR, this related to job performance.
- ii) To help JKR in recruit highly motivated project director in JKR.
- iii) To assist JKR in selecting and assigning project leaders to project.
- iv) To help JKR in develop training and development for project director to maximise their potential

1.7 Definition

1.7.1 Project

Pinto & Slevin, (1988) define projects are endeavors that have a limited life span and are, therefore, conducive to description in terms of a life-cycle process. While Turner (1993) determine, a project as a goal-oriented, budget-driven, and time bounded temporary organisational system that engages in unique and usually, nonrepetitive set of activities.

1.7.2 Project Success

Project Management Institute, PMI (2007) determine project success as a collective assessment by project stakeholder (e.g. client/customer, stakeholder) of the degree to which the project has achieved each of its objectives. Tukel and Rom, (2001); Xiao and Proverbs, (2003) define that project success is usually to meet three criteria of completion within time, within budget and with desire quality of work.

1.7.3 Personality

Mayer (2007) determines personality is the organized, developing system within the individual that represents the collective action of that individual's major psychological subsystems. Definition by Funder (2004), personality refers to an individual's characteristic patterns of thought, emotion, and behavior, together with the psychological mechanisms (hidden or not) behind those patterns

REFERENCES

- A Guide to the Project Management Body of Knowledge (PMBOK® Guide) Fifth Edition. *Project Management Institute*.
- Amir Hossein Fazel Bakhsheshi and Safoora Rashidi Nejad (2011). Impact of Project Manager's Personalities on Project Success in Four Type of Project. 2nd International Conference on Construction and Project Management IPEDR 15, IACSIT Press, Singapore
- Ashley, D.B., Lurie, C.S. and Jaselskis, E.J. (1987). Determinants of construction project success. *Project Management Journal*, 18(2): 69–79.
- Baker, N., D. Murphy, and D. Fisher. 1988. Factors affecting project success. In Handbook of Project Management, ed. D.I. Clelan andW.R. King. NewYork: Van Nostrand Reinhold.
- Fryer, B. (1979). Management development in the construction industry. *Building Technology and Management* 17, no. 5:16–18.
- Gharehbaghi, K. and McManus, K. (2003). Effective construction management. *Leadership and Management in Engineering*, 3: 54–55.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4,* 26-42
- H. Kerzner Project Management: A Systems Approach to Planning, Scheduling, and Controlling. New York: John Wiley & Sons, 2001
- Katz, R.L. (1974). Skills of an effective administrator. *Harvard Business Review* 52, no. 5: 90–102.
- Krejcie, R. V and Morgan D.W. (1970). Determining sample size for research activities. *Educational and Physchological Measurement* 30, 207-610.
- Mayer, J. D. (2007). Personality: A systems approach. Boston: Allyn & Bacon.

- Nguyen, L.D., Ogunlana, S.O. and Lan, D.T.X. (2004). A study on project success factors in large construction projects in Vietnam. *Engineering, Construction and Architectural Management*, 11(6): 404–413.
- Nicholas, J.M. 1989. Successful project management: A force-field analysis. *Journal* of Systems Management 40, no. 1: 24–30.
- Pettersen, N. (1991). Selecting project managers: An integrated list of predictors. *Project Management Journal* 22, no. 2: 21–25
- Pinto, Jeffrey K., and Dennis P. Slevin (1988), Project Success: Definitions and Measurement Techniques, ProjectManagement Journal, vol. xix, No. 1, Project Management Institute, Upper Darby, PA, pp. 70-71.
- Posner, B.Z. (1987). What it takes to be a good project manager. *Project Management Journal* 18, no. 1: 51–4.
- Sayles, L.R. and Chandler, M.K. (1971). Managing Large Systems: Organizations for the Future. *New York: Harper& Row*.
- Susan E. Wyse. (2012). Advantages and Disadvantages of Surveys. http://www.snapsurveys.com/blog/advantages-disadvantages-surveys/
- Thal Jr., A.E. and Bedingfield, J.D. (2010). Successful project managers: an exploratory into the impact of personality. *Technology Analysis & Strategic Management* 22, No. 2, 243-259
- Thamhain, H.J. (1991). Developing project management skills. *Project Management Journal* 22, no. 3: 39–44.
- Verma, V. (1995). Human Resource Skills for the Project Manager: The Human Aspects of Project Management, *Project Management Institute* 2, p61.
- Yuval Cohen, Hana Ornoy and Baruch Karen. (2013). MBTI personality types of project managers and their success: a field survey. *Project Management Journal* 44, no. 3: 78-87.