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Relationship between Project Managers Personality and Small Public Construction Project Success in Malaysia

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Abstract: In the field of project management, particularly the construction industry in Malaysia, there are two key factors in determining the progress of a project, namely technical and non-technical skills. Accordingly, this study aims to explore the personality (non-technical skills) among Malaysian project managers on the success of small public construction projects. Using the Five Factor Theory (FFT) as a basis, this study uses two sets of measuring instruments for examining project manager's personality and project success, the Big Five Inventory (BFI) and the Project Success Achieved (PSA). The questionnaire was distributed to two major organizations in Malaysia, the Implementation Coordination Unit, Prime Minister's Department (ICU JPM) and Ministry of Rural Development (KPLB), which involved 137 project managers. The obtained data were analyzed using PLS-SEM and results indicate that the project manager's personality has a significant impact on the success of SPCP where Conscientiousness (CT) and Agreeableness (AG) had a more prominent influence compared to other traits. This study provides theoretically meaningful relationships and valuable insights into construction management via personality element to ensure that national development objectives are achieved.

Keywords: Public project management, small construction project, project manager, big five inventory, project success

1. Introduction

Project management in the 21st century is highly dynamic, competitive and needs to be constantly adapted to the environment to achieve its objective of effectiveness. Project Management Institute (2013) defines project management as the application of skills, competencies, tools, and approaches to fulfill project requirements. The emergence of new challenges resulting from the demand of stakeholders has generated an increasingly competitive environment and demand for higher quality public services. This is supported by Machado and Martens (2015), who perceive project management as the primary method for an organization to establish its mission of achieving its goals effectively. Generally, the key recipe for success in project management is based on the planning, coordination and execution of a complete project (Project Management Institute, 2013). In principle, according to Richman (2002), the main formula for effective project management is based on full project preparation, scheduling, and execution. The success factors of the project according to Belassi and Tukel (1996) include the attributes of the project manager, the project dimensions, management assistance, management structure, technical requirements, time, duration and internal environment variables. Therefore, the management of small public construction projects is no exception in contributing to the effective delivery of services, where the project manager's soft skills are a significant factor in evaluating the success of this industry (Cheong & Mustaffa, 2017). However, past research on project management has paid little attention to the psychological factors leading to the project's success (Hassan, Bashir, & Abbas, 2017). Furthermore, according to Esa

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(2015), many of the researchers' findings have shown that soft skills contribute more than technical skills to the project's success, but studies still lack emphasis on these skills, particularly the project manager's personality. This is also supported by Thal and Bedingfield (2010), stressing the value of a comprehensive examination of how personality traits play a key role in project success.

The aim of the study is therefore to fill the gaps by identifying the relationship between the project manager and the success of Small Public Construction Projects (SPCP) in order to further understand the current scenario of the local construction industry. This is supported by Davis (2014), where the project manager is regarded as a determining factor for the achievement of the construction project. Additionally, the ability of the project manager to effectively manage small projects to meet the needs of external/internal stakeholders while at the same time contributing to the efficiency of the current government delivery system are necessary (Unit Penyelarasan Pelaksanaan, 2015).

2. Research Background

This study briefly touches on the background of the Small Public Construction Project (SPCP), project manager, project success dimensions and personality traits theory closely linked to the overall context of the subject under discussion.

2.1 Dimension of Small Public Construction Project

In this study, SPCP is classified as a project worth RM500 thousand and below, which is characterized by a short period of implementation consisting of a small team, low cost and a balance by project managers in order to achieve effective coordination (Kementerian Kewangan Malaysia, 2011; 2014; Unit Penyelarasan Pelaksanaan, 2015). The implementation duration of the SPCP is usually between 1 and 3 months or up to 6 months, depending on the type and complexity of the project (Kementerian Kewangan Malaysia, 2011). Examples of SPCP include maintenance projects, hall construction, drainage, construction of new village roads, streetlights, suspension bridges and public/basic infrastructure upgrades (Kementerian Kewangan Malaysia, 2011). As far as cost details are concerned, the SPCP is classified by Kementerian Kewangan Malaysia (2014) through a government procurement process with a project quote of less than RM500 thousand that can be executed with the appointment of Grade 2 (G2) and Grade 1 (G1) contractors registered under the Construction Industry Development Board (CIDB).

According to Lembaga Pembangunan Industri Pembinaan, (2017) statistic, a total of 84,031 contractors have been registered and of the total, 52,749 (63%) are small contractors with rank G1 and G2 recorded. This large percentage and numerous contractors show that implementation of the SPCP is vital for the well-being of the people and is a contact point especially in rural areas (Kementerian Kemajuan Luar Bandar Dan Wilayah, 2016; Unit Penyelarasan Pelaksanaan, 2017). Statistics also indicate that 107,136,000 SPCP have been initiated over the years of 2016–2017 involving a huge national distribution of RM2.87 billion. However, according to reports by Utusan Malaysia (2014), a total of 1,248 projects worth RM102.5 million were found not to have been implemented despite being approved by the government as a result of non-systematic project planning and execution in the field. The Central Contractors Association (PERKOF) also expressed its disappointment with the SPCP delivery system to contractors who were found to be insufficient and integrative due to the project manager's incompetence (Utusan Borneo, 2014). In fact, there is the issue of non-payment to small project contractors (G1 and G2) even though the project has been completed with an estimated RM7.6 million (Jawing, 2020). This allocation has not yet included YAB Prime Minister's latest announcement of the RM2 billion approval for small project implementations in Malaysia, which will pose numerous obstacles to its progress and need balance from project managers to have better coordination (Bernama, 2020).

2.2 Project Manager and Project Success

In this regard, project managers are housed in the Implementation Coordination Unit in the Prime Minister's Department (ICU JPM) and Ministry of Rural Development (KPLB) involved in managing SPCP nationwide are the main focus. According to Project Management Institute (2013), project manager is responsible for setting realistic project boundaries in accordance with the guidelines that have been issued. This is one of the key tasks that a project manager can take to deal effectively with unforeseen circumstances (Jabar, Ismail, Aziz, & Aziz, 2014). In this respect, project managers must master technical and non-technical (soft) skills to allow development to progress without interrupting the main cycle processes of the project (Esa, 2015). Meanwhile, according to Müller and Jugdev (2012), the success of the project is influenced by personalities, teamwork and organizational interaction. This is also supported by studies carried out by Ali and Chileshe (2009) indicating that the expertise, experience, knowledge and understanding of a project manager affect the success of the whole project. It is therefore clear that there is a need for a project manager with a wide range of skills (technical/soft), integrity, competence, and knowledge in managing public funds entrusted with a more strategic direction.

The public sector today focuses on cost minimization and stakeholder satisfaction while the private sector is centered on increasing productivity and stakeholders satisfaction (Toor & Ogunlana, 2010). Several attempts have been made from the Malaysian perspective to identify appropriate success measures that could be used to improve the

performance of public projects, which includes as per Takim and Adnan (2008) that productivity assessments are related to project results achieved during the construction process based on five main factors: customer satisfaction, goals of stakeholders, learning and exploiting, operating guarantee and user satisfaction. Meanwhile, Maimun (2010), has studied the critical factors of project success for the public sector and discovered four key steps that need to be taken: time, cost, quality and stakeholders. Moreover, project success is a major concern for the government in the public sector, as a significant number of stakeholders are affected if the development target is not met (Ozguler, 2016).

Furthermore, several models were built to assess the success of a project in public sector organizations. In the findings by Irfan and Mazlan Hassan (2017), the success of the project from the public sector perspective in Pakistan has found that the project manager dimension requires integrity, sincerity, stakeholder interest and more accountability with project information being implemented. While, results by Cheong & Mustaffa, (2017) in the context of successful projects in Malaysia mostly refer to time, quality and cost, but very limited research available on human factors (project manager) as well as construction stakeholders. Therefore, in this study, the criteria proposed by Khalid Ahmad Khan, Turner, and Maqsood (2013) has been selected taking into account the factors described above. Researchers have examined the general requirements for the success of the project and produced a new five-dimensional model that includes project efficiency, organizational benefits, project effects, stakeholder satisfaction and potential future projects. Therefore, Project Success Achieved (PSA) instruments were selected in this study and provided a comprehensive overview of the success criteria for small projects. Through the viewpoint of the Malaysian construction industry, specifically SPCP, no previous studies have explicitly used this PSA model based on the insights to date.

2.3 Personality and Underpinning Theory

Essentially, the individual reflects the specific role of human personality in thinking, attitudes, development and lifestyle (Wang, 2009). Meanwhile, personality traits are defined as "dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions" (Mccrae & Costa, 1987). In a wider context, a lot of what psychologists mean by "personality" is summed up by the Five Factor Model (FFM) and by incorporating and systematizing different definitions and measures of the model that is of great value to the field (McCrae & Costa Jr., 2008). Although FFM is not a personality theory, McCrae and John (1992) claimed that it implicitly accepted the fundamental principles of trait theory. Therefore, characteristics of personality are individual variables, the personality itself, the psychological complex structure organizing experience/action, and the "personal model" called Five Factor Theory (FFT) or known as Big Five Theory (McCrae & Costa Jr., 2008). Ideally, FFT has been designed to organize and describe a collection of findings, particularly to describe that longitudinal studies have shown remarkable stabilization of personality and consists of Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism (OCEAN) (John, Naumann, & Soto, 2008). Furthermore, Migliore (2011) also stated the five factor is the strongest theoretically supported model in trait psychology. Three of the most popular FFM instruments are the Big Five Inventory (BFI) (John et al., 2008), the Mini-Markers (Saucier, 1994), and the NEO Personality Inventory–Revised (NEO PIR) (Paul T. Costa & McCrae, 1992). These FFTs are typically evaluated using the Big Five Inventory (BFI) and have high internal reliability at an average of 0.85 Cronbach Alpha (John et al., 2008). In the context of Malaysia, according to Muhamad, Roodenburg, and Moore (2018), with evidence supporting the cross-cultural applicability, the BFI is recommended when a shorter and quicker measure of personality is required. These personality traits are the most acceptable measures of human personality (Gurven, Rueden, Massenkoff, & Kaplan, 2013). This is also supported by Manaf and Marzuki (2017) in their article 'The Roles of Personality in the Context of Knowledge Sharing' that also uses the BFI to assess personality traits of public servants in the Malaysian perspective.

2.4 Bridging Personality and SPCP Success

By linking personality traits and project success, Bhatti, Battour, Ismail, and Sundram (2014) suggest that personality traits have a major impact on job performance that is linked to success. Research also has shown that the personality characteristics can influence individuals' response to different convincing strategies (Oyibo & Vassileva, 2019). Thus, this paper aims to identify relationship between project manager personality traits and project success. They are discussed in terms of five attributes: (i) Openness to Experience (OE) and SPCP success - Project managers with this feature (OE) are often searching for solutions to the demands/expectations of stakeholders, creativity, imagination, ingenuity and diversity in life by "thinking outside the box" (Bernama, 2019; McCrae & John, 1992). Various scholars associate project managers with OE traits as a major indicator of project success among the five main personality factors (Aronson, Reilly, & Lynn, 2008; Hassan et al., 2017; Thal & Bedingfield, 2010). (ii) Conscientiousness (CT) and SPCP success - CT is an indicator of the project manager's ability to plan for the future, accountability, capacity to continue, to pursue goal-oriented actions and to have greater influence over their environment (McCrae & John, 1992; Peterson, Smith, Martorana, & Owens, 2003). With regard to project management, CT managers have recognized and believed that stakeholders impression of the performance attribute as a primary predictor of project success, including creativity (Aronson et al., 2008; Thal & Bedingfield, 2010). (iii) Extraversion (ET) and SPCP success – individuals with ET personality displays great appeal for love, enthusiasm, knowledge, ambition, perseverance, superiority and happiness (McCrae & John, 1992). The ET is the legal indicator of

two roles that require social interactions and often align project managers with team superiority to lead to greater project success (Barrick & Mount, 1991; Bradley & Hebert, 1997). The ET trait indicates also that personality characteristics have a strong association with project success and influence some dimensions of the decision style (Barrick, Mount, & Judge, 2001; Hassan et al., 2017; Ulgen, Saglam, & Tugsal, 2016). (iv) Agreeableness (AG) and SPCP success - AG managers have good cooperation and partnerships allowing them to work together in a harmonious atmosphere that involves comfort, prioritization of competitiveness and acceptance (McCrae & John, 1992; Peterson et al., 2003). This trait predicts success with different parameters and indicates that cooperation has a strong association with project success, like paying attention to workers in the progress of the project (Barrick et al., 2001; Hassan et al., 2017). Finally, (v) Neuroticism (NT) and SPCP success - NT is linked to anxiety, aggression, depression, self-confidence, insensitivity and is a predictor of overall job success, but it does not fulfill other results (Barrick et al., 2001; McCrae & John, 1992). In addition, Deinert, Homan, Boer, Voelpel, and Gutermann (2015); Hassan et al. (2017) indicated a negative association between neuroticism and project success. The overall attributes of these project managers are thus assumed to have a positive/negative impacts on project success and thus, leading to the following hypotheses:

i. *H^1 - There is a significant relationship between OE and SPCP success*
ii. *H^2 - There is a significant relationship between CT and SPCP success*
iii. *H^3 - There is a significant relationship between ET and SPCP success*
iv. *H^4- There is a significant relationship between AG and SPCP success*
v. *H^5- There is no significant relationship between NT and SPCP success*

Hence, measurements of personality traits in this study are based on the Big Five Inventory (BFI) developed by John et al. (2008) with a total of 44 measurement items. It is therefore a good time that the present study is conducted, taking into account the need for a valid personality instrument to measure the personality of Malaysians (Muhamad et al., 2018) and the Project Success Achieved (PSA) model that is appropriate to the public sectors proposed by Khalid Ahmad Khan et al. (2013). The proposed research framework is shown in Fig. 1.

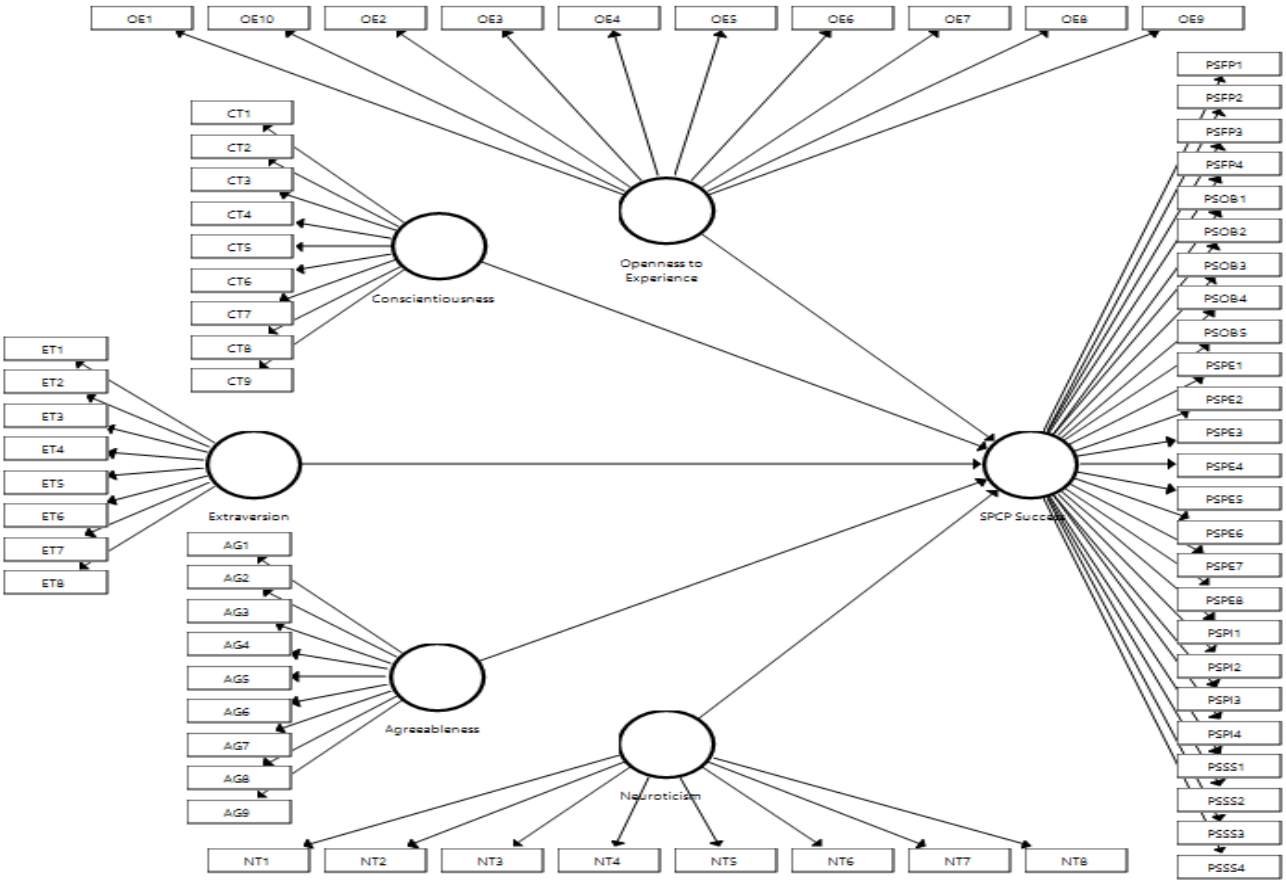

Fig. 1 - Research conceptual framework

3. Research Method and Results

When carrying out this study, quantitative methods were used based on the above description. A total of 137 ICU JPM and KPLB project managers were chosen as respondents for this study in 14 states in Malaysia. In the analysis and interpretation of results, the response rate was 97 percent (133) (see Table 1) and the judgmental sampling technique was used. In this type of sampling, subjects with the specific aim of being directly involved as project manager of the SPCP were selected as samples. They were required to complete the survey, which consisted of three parts, part A related to demographics of the respondents, part B personality-BFI and part C related to the SPCP-PSA. In this study, Part B was measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), while Section C was measured on a five-point Likert scale (1 = unsuccessful to 5 = highly successful). Descriptive analysis was done using the Statistical Package for Social Sciences (SPSS) version 23.0, while analysis of the model/structure analysis used Smart PLS version 3.0 to explore the relationship between the personality of the project manager and the success of SPCP. The respondent demographics are as shown in Table 1.

Table 1 - Respondents profile

Subject		Frequency	Percentage (%)
Gender	Male	79	59.4
	Female	54	40.6
Age	18 - 24	0	0
	25 - 34	30	22.6
	35 - 44	87	65.4
	45 - 54	15	11.3
	55 and above	1	0.7
Ministry	Implementation Coordination Unit (ICU JPM)	106	79.7
	Ministry of Rural Development (KPLB)	27	20.3
State (Zone)	Northern (Perlis, Kedah, Penang)	26	19.6
	Centre (Perak, Selangor, Wilayah Persekutuan)	33	24.8
	Southern (Melaka, N.Sembilan, Johor)	20	15.0
	East (Kelantan, Terengganu, Pahang)	28	21.0
	Borneo (Sabah, Sarawak)	26	19.6
Project Management Field	Yes	57	42.9
	No	76	57.1

3.1 Measurement Assessment Model

Measurement model assessment includes three key criteria, namely internal consistency Composite Reliability (CR), Average Variance Extracted (AVE) Discriminant Validity (DV) (J. F. Hair, Hult, Ringe, & Sarstedt, 2014). Based on Gefen, Straub, and Boudreau (2000), CR is more appropriately applied with a different measure of internal consistency and the acceptable values for CR is ≥0.60 or between 0.70–0.90 can be regarded as satisfactory. In the meantime, items with loads below 0.5 are excluded to increase the reliability (J. Hair, Hult, Ringle, & Sarstedt, 2017). The next step is to ensure the convergence validity of the construct in the analysis with AVE value ≥ 0.5 (Hulland, 1999; Bryne, 2016). Table 2 shows the constructs that meet the set criteria values as suggested by Hair et al. (2014) exceeds the minimum set.

Table 2 - Measurement model assessment

Constructs	Items	*Factor Loading*	CR	AVE
Agreeableness (AG)	AG1	**0.82**	**0.823**	**0.543**
	AG2	**0.845**		
	AG3	**0.671**		
	AG4	**0.577**		
Conscientiousness (CT)	CT1	**0.816**	**0.808**	**0.514**
	CT2	**0.648**		
	CT3	**0.65**		

	CT4	**0.74**		
Extraversion (ET)	ET1	**0.67**	**0.774**	**0.535**
	ET2	**0.815**		
	ET3	**0.702**		
Neuroticism (NT)	NT1	**0.671**	**0.797**	**0.568**
	NT2	**0.841**		
	NT3	**0.74**		
Openness to Experience (OE)	OE1	**0.755**	**0.835**	**0.505**
	OE2	**0.698**		
	OE3	**0.627**		
	OE4	**0.732**		
	OE5	**0.733**		
Small Public Construction Project (SPCP)	PSFP1	**0.712**	**0.962**	**0.508**
	PSFP2	**0.642**		
	PSFP3	**0.766**		
	PSFP4	**0.789**		
	PSOB1	**0.659**		
	PSOB2	**0.735**		
	PSOB3	**0.618**		
	PSOB4	**0.777**		
	PSOB5	**0.719**		
	PSPE1	**0.572**		
	PSPE2	**0.611**		
	PSPE3	**0.555**		
	PSPE4	**0.59**		
	PSPE5	**0.58**		
	PSPE6	**0.757**		
	PSPE7	**0.716**		
	PSPE8	**0.655**		
	PSPI1	**0.752**		
	PSPI2	**0.826**		
	PSPI3	**0.805**		
	PSPI4	**0.719**		
	PSSS1	**0.743**		
	PSSS2	**0.82**		
	PSSS3	**0.745**		
	PSSS4	**0.83**		

Discriminant validity refers to the degree to which indicators differentiate across constructs or measure distinct concepts by examining the correlations between the measures that are potentially overlapping (Ramayah, Cheah, Chuah, Ting, & Memon, 2018). In Smart PLS, three types of criteria are available to access discriminant validity which are cross loading criterion, Fornell Larcker's criterion and Heterotrait-Monotrait ratio of correlation (HTMT). Therefore, in this study, the measurement model's discriminant validity is assessed using these three types of measures. The results of the cross-loading tests are shown in Table 3.

Table 3 - Cross loading criterion

	AG	CT	ET	NT	OE	SPCP Success
AG1	**0.82**	0.576	0.54	-0.369	0.57	0.432
AG2	**0.845**	0.569	0.463	-0.513	0.545	0.498
AG3	**0.671**	0.41	0.422	-0.431	0.496	0.251
AG4	**0.577**	0.274	0.196	-0.216	0.258	0.315
CT1	0.55	**0.816**	0.502	-0.404	0.605	0.571
CT2	0.34	**0.648**	0.272	-0.274	0.287	0.311
CT3	0.427	**0.65**	0.38	-0.304	0.299	0.391
CT4	0.484	**0.74**	0.493	-0.468	0.544	0.384
ET1	0.31	0.277	**0.67**	-0.216	0.498	0.276
ET2	0.503	0.563	**0.815**	-0.52	0.583	0.333
ET3	0.407	0.431	**0.702**	-0.425	0.46	0.223
NT1	-0.301	-0.208	-0.204	**0.671**	-0.138	-0.266
NT2	-0.456	-0.533	-0.531	**0.841**	-0.567	-0.368
NT3	-0.433	-0.361	-0.456	**0.74**	-0.47	-0.184
OE1	0.495	0.433	0.579	-0.373	**0.755**	0.317
OE2	0.384	0.528	0.533	-0.436	**0.698**	0.396
OE3	0.372	0.311	0.519	-0.326	**0.627**	0.232
OE4	0.503	0.404	0.466	-0.332	**0.732**	0.275
OE5	0.518	0.494	0.448	-0.391	**0.733**	0.449
SPCP Success						
PSFP1	0.437	0.475	0.392	-0.356	0.435	**0.712**
PSFP2	0.301	0.368	0.202	-0.232	0.322	**0.642**
PSFP3	0.447	0.473	0.311	-0.402	0.43	**0.766**
PSFP4	0.396	0.416	0.336	-0.231	0.368	**0.789**
PSOB1	0.27	0.394	0.21	-0.232	0.283	**0.659**
PSOB2	0.423	0.552	0.404	-0.307	0.464	**0.735**
PSOB3	0.326	0.338	0.229	-0.144	0.246	**0.618**
PSOB4	0.475	0.455	0.308	-0.235	0.327	**0.777**
PSOB5	0.52	0.441	0.285	-0.307	0.397	**0.719**
PSPE1	0.249	0.395	0.281	-0.337	0.384	**0.572**
PSPE2	0.2	0.36	0.253	-0.176	0.244	**0.611**
PSPE3	0.257	0.258	0.19	-0.343	0.279	**0.555**
PSPE4	0.114	0.304	0.125	-0.149	0.138	**0.59**
PSPE5	0.202	0.319	0.197	-0.239	0.193	**0.58**
PSPE6	0.416	0.384	0.201	-0.301	0.305	**0.757**
PSPE7	0.39	0.395	0.249	-0.214	0.283	**0.716**
PSPE8	0.328	0.328	0.241	-0.332	0.407	**0.655**
PSPI1	0.379	0.43	0.268	-0.16	0.315	**0.752**
PSPI2	0.484	0.517	0.341	-0.326	0.383	**0.826**
PSPI3	0.46	0.482	0.26	-0.219	0.383	**0.805**
PSPI4	0.431	0.462	0.328	-0.384	0.422	**0.719**
PSSS1	0.381	0.422	0.215	-0.241	0.322	**0.743**
PSSS2	0.365	0.478	0.278	-0.329	0.378	**0.82**
PSSS3	0.411	0.516	0.325	-0.273	0.428	**0.745**
PSSS4	0.455	0.516	0.294	-0.295	0.432	**0.83**

Table 4 shows the results of the discriminant validity analysis based on the Fornell-Larcker criteria. According to Table 4, all constructs are compared to the root causes of AVEs where the values have higher correlations between the other constructs which have achieved the required discriminant validity (Fornell & Larcker, 1981).

Table 4 - Fornell and Larcker's Criterion Constructs

	AG	CT	ET	NT	OE	SPCP Success
AG	**0.737**					
CT	0.641	**0.717**				
ET	0.561	0.588	**0.732**			
NT	-0.525	-0.51	-0.534	**0.754**		
OE	0.643	0.631	0.709	-0.532	**0.71**	
SPCP Success	0.53	0.6	0.387	-0.385	0.494	**0.713**

According to Table 5, the evaluation of discriminant validity is seen as a ratio: *Heterotrait-Monotrait* (HTMT). HTMT evaluation refers to the value of the criteria HTMT.90 (Gold, Malhotra, & Segars, 2001) and HTMT.85 (Kline, 2011). Therefore, the designs in this study were considered unique when the correlation values between the constructs did not exceed HTMT.90. Consequently, it does not interfere with the assessment of the validity of discrimination (J. F. Hair et al., 2014).

Table 5 - Heterotrait-Monotrait (HTMT)

	AG	CT	ET	NT	OE
AG					
CT	**0.86**				
ET	0.858	**0.898**			
NT	0.767	0.728	**0.864**		
OE	0.854	0.797	1.077	**0.725**	
SPCP Success	0.596	0.697	0.504	0.459	**0.536**

Overall, the test of reliability and validity of the measurement model is satisfactory and validated. The study concludes, therefore, that it does not interfere with the next structural model assessment process.

3.2 Structural Model Assessment

According to Hair et al., (2017), there are several steps to test the PLS-SEM structural model, starting with the issue of collinearity or better known as Variation Inflation Factor (VIF) value. Although the criteria of discriminatory validity have been met, the issue of collinearity can sometimes be confusing to discover in a hidden way (Kock & Lynn, 2012). Based on the VIF assessment as shown in Table 6 below, the internal values for the variables are less than 5 and 3.3, thus, the issue of collinearity is not a problem (Diamantopoulos & Siquaw, 2006; Hair et al., 2017).

Table 6 - Variation Inflation Factor (VIF)

	SPCP Success
AG	2.116
CT	2.09
ET	2.262
NT	1.623
OE	2.6

The main objective of this study is to explore the relationship between the personality of the project manager towards the SPCP success. Hence, a description of the hypothesis tests to show the degree of path coefficient between exogenous and endogenous structures is given in Table 7.

Table 7 - Path coefficient

No.	Hypotheses	β	*T value*	*P value*	Result
H^1	Openness to Experience (OE) -> SPCP Success	0.154	1.279	0.101	**Not Supported**
H^2	Conscientiousness (CT) -> SPCP Success	0.41	4.299	0	**Supported**
H^3	Extraversion (ET) -> SPCP Success	-0.099	0.941	0.174	**Not Supported**
H^4	Agreeableness (AG) -> SPCP Success	0.203	1.908	0.028	**Supported**
H^5	Neuroticism (NT) -> SPCP Success	-0.04	0.455	0.325	**Supported**

Based on this study, 5 hypotheses were developed directly between each construct that tested the significance level using the Smart PLS version 3.0 software bootstrapping function. Based on the analysis of the path coefficient as shown in Table 7, it shows that there are two personalities that have a significant relationship to the success of the SPCP, namely the Conscientiousness (CT), H^2 - CT ($\beta = 0.41$, $t = 4.299$, $p<0.05$) and Agreeableness (AG), H^4 - AG ($\beta = 0.203$, $t = 1.908$, $p<0.05$), Meanwhile, the three personalities found to be insignificant in the success of the SPCP were Openness to Experience (OE), H^1 - OE ($\beta = 0.154$, $t = 1.279$, $p>0.05$), Extraversion (ET), H^3 - ET ($\beta = -0.099$, $t = 0.941$, $p>0.05$) and Neuroticism (NT), H4 - NT ($\beta = -0.04$, $t = 0.455$, $p> 0.05$). Thus, as summarized in Table 7, the results of the hypothesis analysis indicate that H^2, H^4, H^5 are supported and H^1, H^3 are not supported.

4. Discussion, Implications and Limitations

This study explicitly reflects the academic/practical findings between the personality of the project manager and the success of the small project in the construction industry, particularly in Malaysia's public service context. Interestingly, the results have demonstrated that CT and AG personality have the strongest correlation among other personalities, as individuals with these traits have the ability to prepare for the future, be proactive, be optimistic and have a goal-oriented conduct. This finding shows that almost 90% of respondents say that employers trust that they are an important driver of the success of the SPCP. This element of trust gives project managers the speed to decide when carrying out the intervention should problems occur in the field and try a rapid and effective solution. The results of this analysis are in line with Aronson et al. (2008) and Peterson et al. (2003) that project managers who are trusted by employers have described themselves as the key drivers of project success. This is further supported by Thal and Bedingfield (2010) that indicated managers have a personality of CT that can control and excel their careers. The AG temperament includes comfort, tolerance and preference for cooperation over rivalry (McCrae & John, 1992). This result is consistent with Peterson et al. (2003), where project managers work together in a harmonious environment. Meanwhile, the findings of this study are also supported by Hassan et al. (2017) stipulating that the trait of AG that pays attention to the employee has a strong correlation in making the project a success. Ultimately, the findings of this study can be inferred that the project managers with the AG and CT traits affect the SPCP's success, whereby the dimensions of these personalities are a must for a quality public servant to further boost the government delivery system. The results also indicate, in this sense, that OE, ET and NT statistically were not significantly correlated with SPCP success. That is because the traits of OE, ET and NT tend to dominate work, looking too far ahead/imagination, including social interactions that are inconsistent with stakeholder acceptance in the field to contribute to the success of SPCP. This finding is inconsistent with Jonasson and Ingason (2018), where imagination is a key skill in improving the strategic approach to project management including individual, team and organizational growth, which can be encouraged to achieve project success. The results of this study also showed that project managers with neuroticism had no statistically significant relationship, and this is consistent with the results of Deinert, Homan, Boer, Voelpel, and Gutermann (2015) and Hassan et al. (2017), which negatively attributes this personality trait to project success.

Indeed, the results demonstrate that the present research has several theoretical/practical implications for academics and practitioners. First, this research reflected the theoretical research of the personality traits and impact on the construction industry. There have been limited studies of project success in the relationship with the BFI in the past, especially in the SPCP context in the government sector. The present study provides a basis for researchers interested in this area to further examine the use of BFI and PSA as resources in other industries. Second, it is also thought to be able to provide useful guidelines for study scholars to focus on SPCP success due to lack of attention, particularly in soft skills. Meanwhile, at the managerial level, it enhances top management understanding of the diverse personality traits of workers and provides appropriate training to ensure that they always meet the needs of stakeholders in the most

appropriate way. This study also will assist the Human Resource Department in considering specific personality factors for the placement of personnel in selected agencies particularly engaged in project management.

The findings of this analysis should take into account the three limitations. First, the sample size is limited (133 project managers), while the others were not included in the survey due to various reasons. Second, this analysis was cross-sectional in which data were collected within a short time frame and delivered only to the selected agencies. Lastly, this study is confined to the project manager's personality and success of the SPCP project.

5. Conclusion and Future Research

In conclusion, these findings indicate that the personality of the project manager and the success of SPCP in Malaysia have a significant influence. It was also compelling, in addition to supporting previous research, that AG and CT personality traits had a positive effect on the SPCP success nationally. This study confirms that project managers who are self-disciplined, well-intentioned, goal-oriented, sophisticated, friendly, and prioritized collaboration will have a higher priority in contributing to the success of the project. In this regard, it is important for the Public Service Department (PSD) to concentrate specifically (personality) on the placement of officers in selected ministries in ensuring the success of the project is achieved for the Malaysian people. This research adds support to previous studies, providing a theoretical foundation for understanding that the traits of the project manager influenced project success significantly. Thus, the findings of this study on personality traits and project success in Malaysia give a fresh impetus as well as enhancing public project management knowledge. Besides, the study encourages future research to pursue the four directions below in order to address these limitations that include: i) increasing the sample size of respondents; ii) enhancing various fields as well as time frame; iii) unexplored ministry/agency selection and iv) researching mediators or moderators on personality, such as work experience, project management field, and gender. Finally, this result shows that the personality of the public project manager plays a significant role in ensuring that the expected (project success) growth agenda is accomplished. The bottom line is that every designated project manager should always be able to put his trust and effort into ensuring that the public service delivery system is successful.

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