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THE 13TH INTERNATIONAL INNOVATION, INVENTION & DESIGN COMPETITION 2024

EXTENDED ABSTRACTS

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KNOWLEDGE SHARING MODEL FOR PERFORMANCE IMPROVEMENT OF OUTSOURCED FACILITIES MANAGEMENT IN GOVERNMENT BUILDINGS

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ABSTRACT

Outsourcing FM services was introduced in Malaysia in 1996 to lessen the government's burden. By transferring the resource management of non-core activities such as housekeeping, service equipment maintenance, and security services, the government can focus on increasing public service delivery. Government buildings and facilities represent a significant financial investment of public money; thus, a more strategic and effective approach is needed through knowledge-sharing activities. Among the problems resulting from outsourced FM are a lack of communication, weak performance management, and poor service delivery. The objectives of the study are to identify the determinant factors of knowledge sharing (KS) for the performance improvement of outsourced FM in government buildings and examine the relationship between KS determinant factors and the performance improvement of outsourced FM in government buildings. The research employed a quantitative approach, where a set of questionnaires was developed based on prior findings on KS and the Theory of Planned Behavior (TPB). 112 outsourced FM personnel participated in the self-administered online survey. Analysis was done in two stages, using exploratory factor analysis through SPSS version 28 and structural equation modelling (SEM) through Smart PLS 4.0. The results confirm five group factors: self-attitude (SA), nature of knowledge (NK), motivation to share (MS), organisational culture (OC), and opportunity to share (OS). From the hypothesis testing, the finding discloses only individual dimensions; SA and NK have a significant impact on improving the performance of outsourced FM in government buildings.

Keyword: government buildings, knowledge sharing, performance improvement, outsourced facilities management, Theory of Planned Behaviour

1.   INTRODUCTION

Facilities management (FM) incorporates multiple disciplines, integrates people, places, and processes, and brings together the interests of a diverse group of stakeholders, including end users, service procurement and delivery teams, subcontracted and outsourced employees, and a variety of supply chain partners (Campbell, 2017). FM has established itself for a few decades in developed countries such as the USA, UK, Europe, and Australia. Unlike other developed markets, the involvement of FM in Malaysia was driven by the government sector through the Public Works Department (PWD) in 1974 (Myeda & Pitt, 2014; Abdullah et al., 2017). Since then, with various government initiatives, FM has gradually expanded, followed by major private organisations through outsourcing of non-core activities. Outsourcing is the method of managing public assets by transferring the resources to service providers. The trend of outsourcing benefited both service providers and the government. It is a way to reduce the

government's burden from spending on non-core activities and improve overall service performance. On the other hand, outsourced FM opens more profitable opportunities for service provider operators.

Public buildings and facilities represent significant financial investment as they involve public money, and the services are more expensive than private sector services (Hopland et al., 2019). Therefore, effective knowledge management (KM) efforts and programmes need to be adopted to manage the assets, besides ongoing cost reduction exercises in the public sector (Haile et al., 2020). Sadat (2021) defines KM as a strategy to improve the performance of local government services in managing their intellectual assets, such as existing knowledge and expertise. As the main part of KM, KS is the process where individuals reciprocally exchange their knowledge and together create new knowledge voluntarily (Fullwood & Rowley, 2017). It is shared beliefs or behavioural practices related to exchanging worker knowledge, experiences, and skills all over a department or organisation (Farooq, 2018). Previous studies have highlighted that KS can significantly affect organisational performance.

Ahmad and Karim (2019) claim that KS has several beyond-convention work-related impacts. It improves socialisation, promotes trust, encourages reciprocity, and aids in the realisation and enjoyment of diversity as an interaction-intensive activity. It also enhances job and life happiness. However, the evidence is weak, and further research is needed. This notion is supported by Mutalib et al. (2018), who added that the relationship between knowledge and FM organisational performance is yet to be discovered. Outsourcing FM involves customer feedback on FM service delivery and the ability of FM organisations to share knowledge on customer performance. Failure to outsource leads to in-house staff resistance, poor communication, cultural clashes, conflicts of interest, and poor mutual understanding (Sridarran & Fernando, 2016). This study aimed to identify the determinant factors of KS for the performance improvement of outsourced FM in government buildings and to investigate the relationship between KS determinant factors and the performance improvement of outsourced FM in government buildings.

2.   METHODOLOGY

2.1 Data Collection

The research used a quantitative method through a close-ended, self-administered online survey questionnaire. The data for this research was obtained from 112 outsourced FM personnel of Facilities Management and Maintenance Contract (FMMC) and Services Contract (Housekeeping and Pest Control) from 101 federal government sites across Malaysia. These contracts are under the administration of the Public Works Department (PWD). The participants were recruited through non-probability, convenient sampling.

2.2 Measures

The dimension scales employed were developed based on previous research on knowledge sharing and the Theory of Planned Behaviour (TPB). There were 33 independent construct items of knowledge-sharing determinant factors, which were grouped under five group factors and five dependent constructs. Variables were measured using a five-point Likert scale that ranged from 'strongly agree' for 5 to 'strongly disagree' for 1.

2.3 Data Analysis

Two stages of data analysis were conducted to achieve each of the research objectives. For the first objective, to identify the determinant factors of KS for performance improvement of outsourced FM in government buildings, exploratory factor analysis (EFA) was conducted through SPSS version 28. For the second objective, to examine the relationship between knowledge-sharing determinant factors and

the performance improvement of outsourced FM in government buildings, the analysis was conducted using the structural equation modelling (SEM) approach via Smart PLS 4.0.

3. CONCLUSION

Findings from the EFA have confirmed five group determinant factors, with 30 variables or sub-factors. The group factors are self-attitude (SA), nature of knowledge (NK), motivation to share (MS), organisation culture (OC), and opportunity to share (OS). Three sub-factors were eliminated, namely training and development, organisation structure, and explicit knowledge, due to their low extraction value. Five research hypotheses were formulated based on the group factors of individual beliefs on KS towards performance improvement of outsourced FM in government buildings. Through SEM, the significant influence of KS determinants in improving the performance of outsourced FM in government buildings has been recognised. The finding reveals only two hypotheses: both SA and NK are significant for improving the performance of outsourced FM in government buildings. Both of these are individual dimensions that are also the attitude or behavioural belief based on TPB. On the contrary, the hypothesis for MS, which is another individual dimension factor alongside MS from the organisation dimension and OS from the technical dimension, is not accepted and is found to have no significant impact on outsourced FM performance in government buildings. It can be concluded that, in the context of FMMC and service contract provider personnel, individual intention to share knowledge matters most. It is also an indicator that KS is not well understood and practiced within organisations. Hence, holistic KS awareness and approaches shall be introduced to create effective FM in managing government assets. However, the study is limited to a cross-sectional study with limited samples and only within the context of FMMC and services contracts in government buildings. Further research is suggested to accommodate diverse participation in different contexts for a holistic finding.

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