

THE DEVELOPMENT OF PROPERTY MANAGEMENT CAPABILITY INDEX (PMCI) FOR EFFECTIVE SERVICE DELIVERY IN STRATIFIED RESIDENTIAL PROPERTY

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Abstract

Despite the increasing challenges and rising expectation towards effective residential property management services, there is limited studies and lack of evidences of the utilization of internal capabilities that are crucial for residential property management. Therefore, the identification and evaluation of residential property management capabilities is become important. The research aim was to develop Property Management Capabilities Index (PMCI) to provides property managers with a tool to evaluates their management capabilities. Data were collected through a Focus Group Discussion (FGD) and survey with a sample of 428 practitioners drawn from the stratified residential property management industry in Peninsular Malaysia. Property manager's self-assessment on key drivers of management capability was the basis in developing the PMCI. Than, the assessment of key drivers was converted into an index by calculating scores for each drivers with defined weightings. The research identifies five specific key drivers and relevant subcategories which were segregated into 1)Property Asset Data Management, 2) Integrated Maintenance Management, 3) Responsive PM, 4) Effective Financial Management and 5) Organisation Result and Performance. As a result, the overall PMCI is 71.7 (of a potential 100 capacity). Therefore, there is scope to lift current performance levels. The PMCI presents Malaysian residential property management organisations with the opportunity to benchmark themselves against organisations of a similar type and size. In highlighting areas of strength and weakness, the PMCI will help organisations to direct their attention to priority areas for improvement.

Keywords: property management capabilities, stratified residential property

1.0 Introduction

A review of property management literature highlighted the critical role that property managers play in managing the stratified residential properties. According to Tsang (2009), the integration of value added service into traditional property management as result of the increasing customer's expectations and desire to improve the standard of property management. Property management evolved not only as an operational discipline to ensure that provided services are effectively managed but also capable of analyzing and responding to the changing needs of organizations, (Ling, 1997; Job, 2012). Therefore, the identification and evaluation of residential property management capabilities is become important. As in Malaysia, management of residential properties is the largest segment of the real estate management business. According to Wong (2013), currently there are about 14,998 strata development areas occupied by approximately 5.9 million citizens or 26% of the population in peninsular Malaysia. Adding with this increasing awareness, the management of stratified residential property management became more difficult due to characteristics of the property itself which distinguished by individual ownership of a unit, shared ownership of common property, and collective membership in a corporate body that

assumes responsibility for the management of the development, (Christudason, 2004). Tawil et. al.(2011) added that the different background of owners of stratified residential properties also contributes to need for proper and systematic management. Job (2012) quoted in their study that the success factors of a residential investment hinges in the effective management i.e. both the property and the residents.

Thus, this research aims was to evaluate the capabilities of property management activities then translating them into the property management capabilities index (PMCI) to provide a well-structured capabilities index of property management service delivery. The PMCI is based on a property managers self-assessment of key drivers of management capability that contribute to effectiveness of service delivery. Assessment is based on an organisation's current performance against the key drivers or categories that make up the PMCI. Each category is comprised of several statements or subcategories against which an assessment on a scale of 100 is made. The PMCI converts the evaluation of management performance into an index.

1.1 Problem Statement

Although there is more public awareness about the substantial positive effects of property management, the effectiveness and efficiency of its implementation is still very much questionable, especially in Malaysia. As discovered through the literature review, numerous problems had occurred particularly in management of stratified residential property (Tawil et al., 2011; Isma et al., 2011). As highlighted by Che Ani et. Al. (2010), the current issues raised in stratified residential management in Malaysia were centered on three aspects necessary to effectively manage a facility, namely, finances, maintenance, and people, that is, the residents themselves. Tiun (2009) also identified several factors which contributed to the weaknesses of property management in Malaysia as compared to other countries. The factors found are lack of early planning, ignorance of buyers, lack of regulation on property manager, insufficient legislation and ineffective management practices.

The rapid increase of compact and tall buildings results for the need to have a well-develop property management sector, as these building demands more attention in maintenance of building and also its facilities. Ultimately, the provision of a satisfactory property management service would extend the economic life of a building, and thus limit the recourse to the more expensive alternatives of redevelopment, or refurbishment to a minimum (Baldwin, 1994). The reality however is that this effort has often led to problems of efficacy, due to inadequate information for informed decision making. It is this and other shortcomings that must be addressed if property asset management is to be fully utilized to its utmost and effective best (Singh, 1996).

What is actually being an issue is the ability to meet the service level requirements for users of the property management services. The people, process, and tools are simply a means to acquire this capability. In order to meet users requirements and expectations, organizations have to recognise their own capabilities. Excellence in management capability is an integral marker of strong organisational performance. When organisations are unable to develop required capabilities in transforming resources into valuable services, the acquired resources are likely to become overhead, rather than assets to the organisations (Amit and Schoemaker, 1993).

Extant literature in strategy suggests that to improve an organisation's performance, there is a need to focus on factors internal to the organisation in addition to the industry structure. For example, Ravichandran and Lertwongsatien (2005) argued that the focus on organisation resources and capabilities can provide the appropriate theoretical lens to examine how factors internal to an organisation can be a source of competitive advantage. An organisation can only gain advantage and achieve superior performance when it has the right capabilities (Smallwood and Panowyk, 2005). Capabilities represent the ability of the organisation to combine efficiently a number of resources to engage in productive activity and attain a certain objective (Amit and Schoemaker, 1993). Hence, the strategy and processes must be supplemented with the right capabilities to execute them before value can be created.

As the property management organizations move towards proactive and integration value added services, the property manager are faced with the strategic decision on the right capabilities that they should invest in. In other words, how should property management organisations allocate their resources to develop the right capabilities? This research will develop an index to investigate how property management organisations can create competitive advantage and sustains their performance by examining the capabilities needed for effective management of their management process. The measurement of management capability is important in monitoring the application of management skills and abilities, management practice and competencies that reflects in business/organisational performance.

1.2 Research Objectives

The objectives of this research are as follows:

- 1.2.1 To identify the key drivers of property management capability for stratified residential property that contribute to sustainable performance
- 1.2.2 To assess the key drivers of PMC based on organisation's current performance
- 1.2.3 To develop Property Management Capability Index (PMCI) in evaluating the performances of property management service industry

2.0 Literature Review

This section reviews literature on residential property management services and capabilities. The section begins with a detail discussion on capability and management capability followed by the importance of Management Capabilities Index (MCI). Further, the discussion on MCI developed in other countries was also being highlighted. The review of key drivers of property management capability also have been included in this section.

2.1 Residential Property Management Practices in Malaysia

A review of property management literature highlighted the critical role that property managers play in managing the residential properties, (Terence, 2008; Thompson, 2015). According to Tsang (2009), the integrated of value added service into traditional property management as result of increasing of customer's expectations and desire to improve standard of property management. Property management evolved not only as an operational discipline to ensure that provided services are effectively managed but also capable of analyzing and responding to the changing needs of organizations, (Ling, 1997; Job, 2012). Therefore, the identification of residential property management capabilities index are become important index to measure and establish a baseline of management capability, to identify where improvements in management performance could be made and to track performance over time.

The Board of Valuers, Appraisers and Estate Agents Malaysia (BOVAEA) has launched the Malaysian Property Management Standards (MPMS), a set of practice standards for professional property managers to carry out their practices in Malaysia. The scope of work in the services of PM outlined in the Standard are divided into chapters (Standards) such as building management, maintenance management, financial management, administrative management, insurance management, health, safety and emergency management and tenancy or lease management. This standard is necessary to ensure practitioners provide an accepted standard of professional service and forms a basis for best practice in property management services. The Standards can also be used as a measure of performance to benchmark and also to judge whether a Property Manager has performed his task professionally.

Mustafa et. al (2015) has developed Property Management Capability Model that can help support the design and development of an effective performance evaluation system to successfully evaluate the property managers and organisations. The proposed research will apply the model in developing the index. There were many past studies concentrating in development of management index for the purpose of performance evaluation in other areas, (Degraavel, 2011; Ogunsemi,2009; Pim et. al, 2010 and Yonggui, 2012). However, there are no studies previously being conducted focusing on stratified residential property management capabilities.

By referring to this standard and other related literature and also feedback from the focus group discussion (FGD) session, a framework of stratified residential PM services was developed as shown in Figure 1 below. The framework consists of 3 stages of process that is formulation, implementation and control & monitoring. The MPMS and other literature review provided key activities and attributes for stratified residential PM services. The framework was developed from the literature review and emergent themes extracted from the focus group discussion (FGD). The literature review and FGD provided stratified residential PM activities as well as major attributes for each activity. Recognizing the importance of strategic planning as suggested by several authors, the researcher developed a process-based framework that links all stages required to plan-implement-monitor the management process in strategic approach by considering the critical attributes that would affect the capabilities and thereafter the performance.

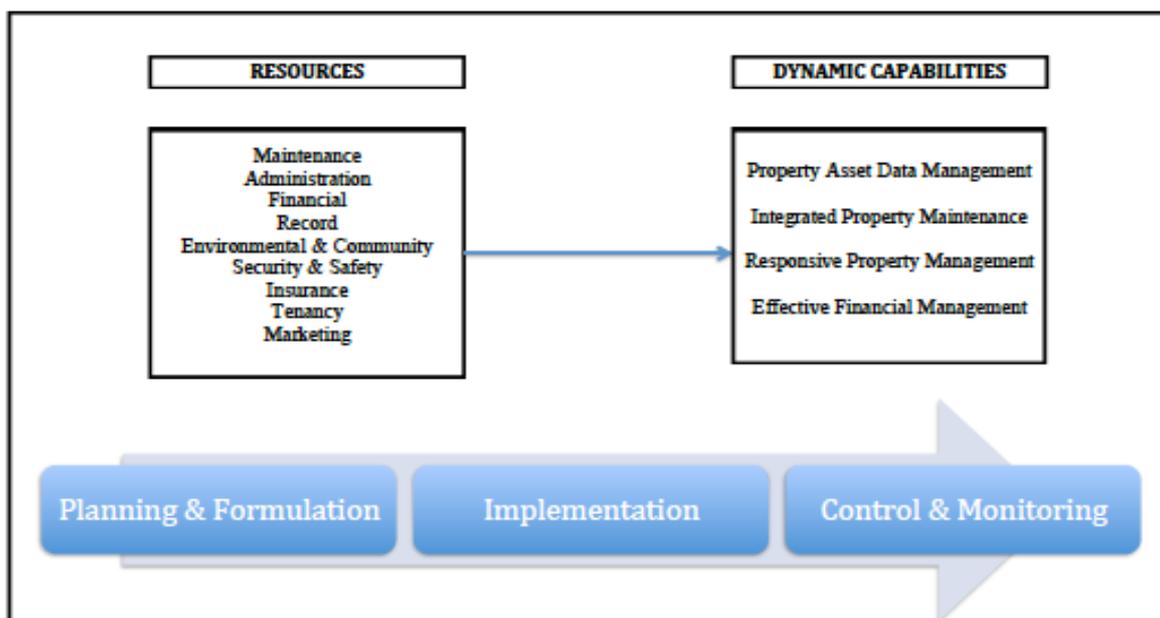


Figure 1: Conceptual Framework For Stratified Residential PM Capabilities

2.1.1 Stratified Residential Property Management Key Drivers

The research followed the findings outlined in Property Management Capabilities Model (PMCM) developed by Mustafa et al. (2015). The model was developed by examining the effects of eleven activities and their attributes on four capabilities:

i. Property Asset Data Management

This capability involves the integration of professional and administrative skill on improving coordination by sharing property information with other Departments/Offices by making property data visible; streamlining legal and valuation issues; and harmonising policies and strategies on acquisitions, disposals and standards. This capability works as tools and methodologies aimed at enhancing property management by emphasizing good business practices. It incorporates elements of various diverse disciplines such as establishment of goals and policies, data collection and development of asset inventory, establishment of performance measures leading to condition assessment and performance modeling, development of management systems to evaluate alternatives and control optimization, decision making regarding short- and long-term, continuous self development and relationship with customers/tenants.

ii. Integrated Property Maintenance

The organisation should have a structured and systematic maintenance program in place in respect of their property and related assets. A formal program can play an important part in ensuring that property continues to efficiently and effectively support the organisation's service delivery requirements. Maintenance activities must be aligned to the achievement of strategic objectives, and are undertaken in accordance with a predefined plan. Its continued effectiveness is actively monitored. Policies and procedures associated

with the creation of a safe and healthy living place and the management of associated health and safety issues are closely integrated with property maintenance functions.

iii. Responsive Property Management

Capturing and reporting the details of property faults is an important component in the management of property. For example, in addition to being a key customer service mechanism, a fault-reporting process (e.g. complaint) can be a valuable source of intelligence about the condition of assets, contribute to assessments of the effectiveness and improve the information available to manage service contracts. Other than that, the active consideration of issues relevant to the environmental issues should be an integral part of all property-related activity.

iv. Effective Financial Management

Management should practices sound and effective management of the organisation including financial planning, accounting, cash flow management, investment, financial reporting, and liaison with financial institutions.

This research includes constructs that have proven critical activities that must be effectively delivered to be a successful property management services specifically for stratified residential properties. There were 11 activities and each of them consists of attributes that played as measurement variables. These variables will be a basis in order to develop the property management key drivers specifically for stratified residential properties.

2.2 Management Capabilities

Management capabilities refers to the application of management competencies within an organisation to achieve desired outcomes. Management capability is the application of management to the total organisation and the organisational performance achieved as a result of that management capability. As opposed to management competencies which are what management brings to the organisation. Management capability is demonstrated in business / organisational performance, and is the result of management leadership and competence in the key management practices that lead to sustainable performance and business growth.

In other words, Management capabilities is the approach to the management of an organization, typically a business organization or firm, based on the "theory of the firm" as a collection of capabilities that may be exercised to earn revenues in the marketplace and compete with other firms in the industry. Management capability refers to the potency of an organisation's collective management competencies as they can be applied to achieve desired outcomes. Management capability, therefore, does not simply reflect the total sum of a management team's competencies or required abilities. Rather, management capability describes how effectively the management team puts into practice its combined competencies to deliver business results. Management capabilities combine greater technical, human, and conceptual abilities (Katz, 1974) to construct, integrate, and

reconfigure the organization's resources and competences (Adner and Helfat, 2003). In this way, capabilities can achieve greater profits (Castanias & Helfat, 2001) and competitive advantages for their organizations (Carmeli & Tishler, 2004). Accordingly, effective management capabilities:

- Assists organizations to better understand, and effectively integrate the total organization ability or capacity to achieve strategic and current operational objectives; and
- Develops and provides solutions that focus on the management of the interlinking functions and activities in the organization's strategic and current operational contexts.

The organizational management literature includes attempts to analyze and determine whether and how management capabilities is accomplished by organizations. Some studies considered a key indicator of an organization's capabilities and it's potential towards effectiveness. More organizations increasingly are focusing on enhancing organizational capability to improve performances. For example, Eric (2010) has developed a conceptual framework that can be used to identify capabilities needed in the management of infrastructure assets. Figure 2 below shows the proposed conceptual framework showing the relationship between asset management processes and capabilities. The premise is that if an organisation is able to develop capabilities to effectively support each stage of the asset management process, it will contribute to the achievement of asset management goals and hence better asset performance.

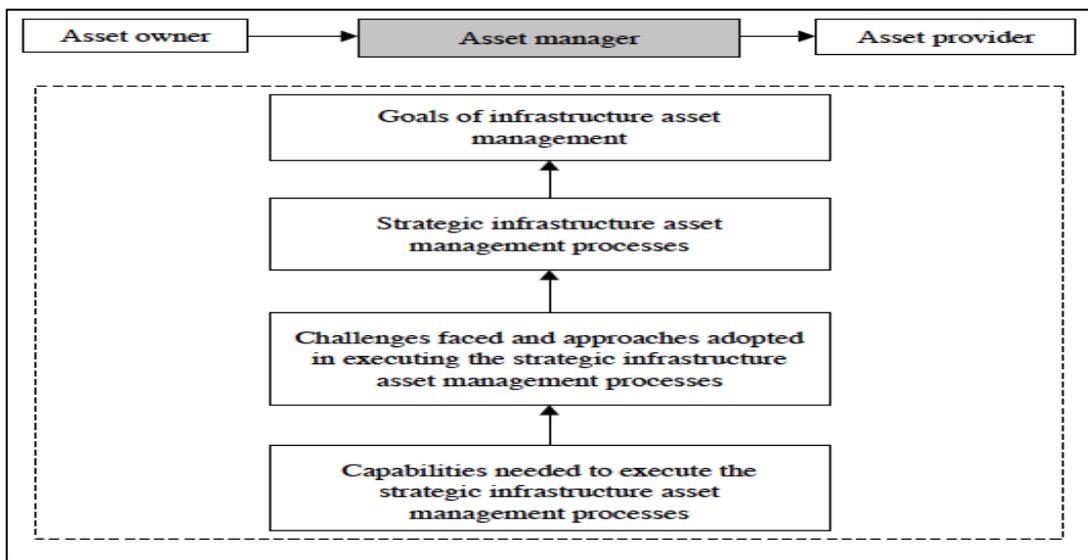


Figure 2: A conceptual framework to identify capabilities for Strategic Infrastructure Asset Management

Eric (2012) also has recently developed the maintenance management capability for infrastructure asset management to enhance the effectiveness of their maintenance management process. This study identified those as the core capability needed in the maintenance management process. The author stressed out that there is a need for infrastructure organisations to develop their technology absorptive capability, i.e. the ability to embrace and capitalise on new technologies to enhance their maintenance management process. Figure 3 below illustrates the capability for maintenance management:

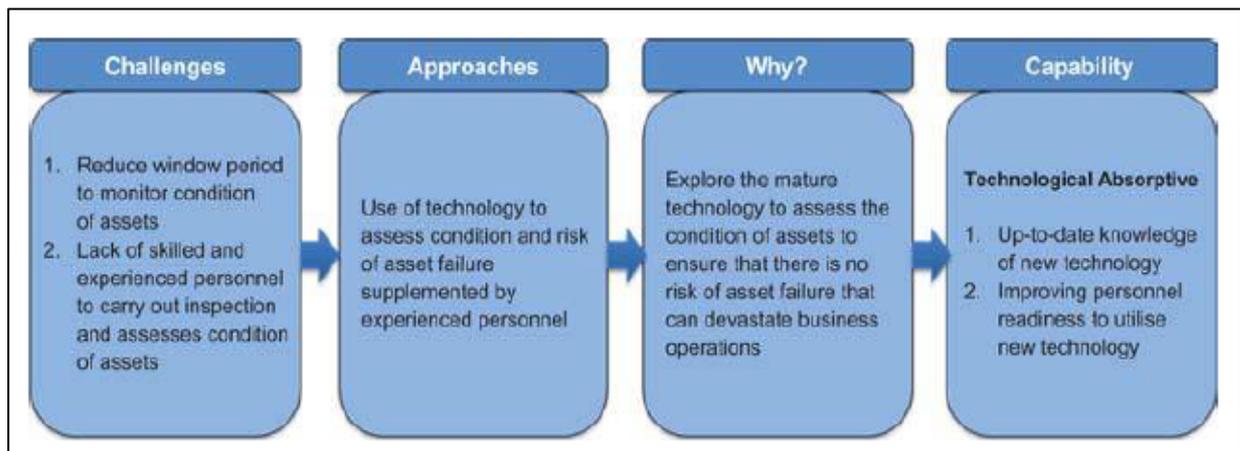


Figure 3: Capability for The Maintenance Management Process

2.3. Management Capability Index (MCI)

Management Capability has been an important indicator of performance in management (MMCI, 2010; Blayney, 2009). In recent years, researches on management capability index have received substantial attention in the management literature. Most studies have examined the relationship between capabilities and organizational performances, (Fernandez & Sabherwal, 2001; Gold et al., 2001; Simonin, 1997). Many countries such as Australia, New Zealand, Malaysia, India, Sri Lanka and Hong Kong has developed their own Management Capability Index (MCI) report to measures and evaluates management capability across sectors, geographies, and organisation types. The findings of this report will help organisations benchmark their management practises and effectiveness against similar organisations. The MCI is based on a chief executive officer's (or a senior business decision maker's) self assessment of ten key drivers of management capability that contribute to profitable business growth. Assessment is based on an organisation's current performance against the ten drivers or categories that make up the MCI.

To assist organisations to develop and improve their performance in management practices and competencies underpinning the ten categories of the MCI, a comprehensive list of training and development programs is provided for each country. The MCI provides some valuable insights into the current status of management capability in particular country and establishes a baseline against which to monitor that capability in the future. In highlighting areas of strength and weakness, the Management Capabilities Index will help organisations to direct their attention to priority areas for improvement, (AMCI, 2012). It also to provide insight into current management capability trends and to establish a baseline of management capability for monitoring progress. The academic literature argues that firms whose managers have higher management capabilities can adapt better to the environment, create competitive advantage, and generate greater benefits (Helfat and Martin, 2015). A management capabilities index can help to monitor organisation's management process. It will highlight which ones are most important given the organisation's history and strategy, measure how well the organisation delivers on these capabilities, and lead to an action plan for improvement. Table 1 below shows the most recent overall MCIs recorded in New Zealand, Malaysia, India, Singapore and Australia.

Table 1: Comparison of MCI in New Zealand, Malaysia, India, Singapore and Australia

Category	Australia (2012) N = 252	New Zealand (2010) N = 123	Malaysia (2010) N = 222	India (2010) N = 203	Singapore (2010) N = 136
1 Visionary and strategic leadership	68.0	70.7	72.4	71.3	70.2
2 Performance leadership	70.5	71.9	73.1	75.4	72.7
3 People leadership	69.1	70.4	70.5	71.8	68.8
4 Financial management	76.8	77.5	75.1	74.1	72.4
5 Organisation capability	66.2	68.2	69.1	72.0	68.8
6 Application of technology and knowledge	70.4	67.5	71.8	73.5	69.1
7 External relationships	74.1	74.3	71.0	76.5	69.3
8 Innovation – products and services	67.3	65.9	70.0	74.5	67.3
9 Integrity and corporate governance	85.7	N/A	80.0	80.8	84.0
10 Results and comparative performance	70.9	67.3	70.5	76.7	64.0
MCI (overall)*	71.1	69.9	72.0	74.6	69.2

3.0 Methodology

The purpose of this section is to describe the research design and methods. The methodology towards this research involves the intensive reading and review of various literatures on the title subject; group discussions; and a survey conducted through questionnaire. The responses from the surveys were analysed, evaluated and interpreted.

3.1 Research Design

This research applies the mixed methods design, involving the independent collection and analysis of two strands of data, from two theoretical paradigms: (i) qualitative data derived from focus group discussion (FGD) to assess what key drivers should be measured to best understand and measure the capabilities (ii) from exploration qualitative through FGD, quantitative data derived from development of an survey instrument that is than tested with sample. The quantitative data collection phases included a survey measuring property manager's perceptions of various key drivers that contribute to the impact of the capabilities that have been developed.

3.2 Data Collection

A drop-off and collect method has been applied in this research. The participants of the research and details of their buildings were identified through data provided by Commissioner of Building (COB) of local authorities in Klang Valley, Johor Bahru, Malacca, Port Dickson, Kuantan and Penang. The data for the research was collected through a well structured questionnaire administered on the respondents within the residential property management industry. The questionnaire was developed through review of literature in property management capability and performances. The review is also complemented by

discussing with professionals in property management. The respondents for this research were the property managers in stratified residential properties divided into three types of management; Joint Management Body, Management Corporation and Property Management Company. Because the population is large and very time consuming to attempt a survey of all the managers, a smaller sample was carefully chosen to reflect the stratum criteria of the population. The aim of the sample size was approximately 500 respondents. To represent the research population, the characteristics of the sample consisted of property managers who: (a) are available and willing to participate; (b) are located in different sub-area across Peninsular Malaysia and different types of residential; (c) are familiar with the organization's structure and management activities. The researcher was responsible for distributing the instruments and collecting data from the selected sample. A random sampling method was used to select a sufficient number of test subjects who meet the stratum criteria. Due to limited of time and not fulfilled the characteristics, the total number of respondents for this research was 428.

4.0 Data Analysis

This section will discuss the analysis of data that were collected from the survey which involved Descriptive Analysis and PLS-SEM Analysis. This research employed the Statistical Package for Social Science (SPSS) version 22.0 and SmartPLS 3.0 to analyse data.

4.1 Analysis of Questionnaire

In order to conduct Descriptive Analysis and index development, a survey was conducted to 428 organizations in stratified residential property management in the Peninsular Malaysia. First section of the survey instrument was focused on the profile of the respondents and their buildings. Frequency Analysis was used to determine the overall profile.

4.1.1 Analysis Of Section 1 - Survey Participant Profile

The PMCI survey was conducted in February to May 2017. The questionnaire was completed by 428 organisations throughout Peninsular Malaysia (Klang Valley, Penang, Kuantan, Port Dickson, Melacca and Johor Bahru) representing a range of organisation sizes and locations. This section details the profile of survey participants as presented below. Backgrounds of respondents for this research were shown in Table 2. The highest frequency for location of the building was situated in Selangor area with 161 respondents out of 428, followed by Kuala Lumpur (103) and Johor Bahru (74) and Penang (63). For the analysis of total number of units for respondent's building, the highest score came from building that accommodate 101 to 500 units with 255 respondents or 59.6% and followed by total units of 501 to 1000 (26.6%). Only 7.9% of respondents came from less than 100 units per building and 5.8% for more than 1000 units. In addition, it can be seen that close to half of the stratified properties involved in this survey were apartment with 201 recorded frequencies or 47% while second highest were condominium with 31.5%, followed by medium cost flat with 91 buildings or 21.3% and the lowest were landed property with only 1 building or 0.2%. As for the types of management, 219 respondents or 51.2% were from Joint Management Body (JMB), 182 respondents or 42.5% for Management Corporation

(MC) and the lowest were was developer's period with only 27 respondents or 6.3%. It can be concluded that majority of the stratified residential properties in study area were managed by Joint Management Body (JMB). For average price per unit, the results demonstrated that most of the respondents answered average unit price between RM251,000 to RM500,000 (67.8%). The second highest was average unit price for less than RM250,000 (37.1%) and followed by price between RM501,000 to RM1,000,000 (12.9%) and the lowest was for unit price more than RM1,000,000 (0.4%). Next, in response to the facilities provided in the buildings, generally most buildings provide all the facilities listed except for mini market, kindergarten, laundry, sport club and cafeteria. With regards to professional bodies, result shows that majority of the respondents were not a member for any professional bodies with percentage of 79.7 compared to only 17.5% respondents who became a member of professional bodies. Out of 17.5% respondents who became a member, majority of them were registered under Malaysian Institute of Professional Property Managers and Board of Valuers, Appraisers and Estate.

Table 2: Survey Participant Profile

Profile	Respondents	Category	Frequency	Percentage
Area	428	Selangor	161	37.6
		Kuala Lumpur	103	24.1
		Johor Bahru	74	17.3
		Penang	63	14.7
		Melacca	11	2.6
		Kuantan	10	2.3
		Port Dickson	6	1.4
Total Number of Units	428	101 to 500	255	59.6
		501 to 1000	114	26.6
		<100	34	7.9
		More than 1000	25	5.8
Types of Property	428	Apartment	201	47.0
		Condominium	135	31.5
		Medium Cost Flat	91	21.3
		Landed Property	1	0.2
Types of Management	428	Joint Management Body (JMB)	219	51.2
		Management Corporation (MC)	182	42.5
		Developer's Period	27	6.3
Approach of Management	428	In-house	270	62.4
		Outsourced	158	37.6
Experience in PM (In-house)	270	2 to 6 years	107	39.6
		<2 years	89	33.0
		6 to 10 years	50	18.5
Experience in PM (Outsourced)	168	More than 10 years	24	8.9
		< 5 years	80	19.6
		11 to 15 years	52	13.1
		5 to 10 years	20	4.9
Average Price Per Unit	428	> 10 years	6	1.4
		RM251,000 to RM500,000	210	49.1
		< RM250,000	159	37.1
Range of Service Charge	428	RM501,000 to RM1,000,000	55	12.9
		More than RM1,000,000	4	0.9
		< RM0.25 psf	290	67.8
		RM0.26 psf to RM0.30 psf	64	15.0
		RM0.31 psf to RM0.50 psf	40	9.3
Facilities Provided	428	> RM0.50 psf	34	7.9
		Motorcycle Park	427	99.8
		Car Park	412	96.3
		Management Office	400	93.5
		Playground	351	82
		Guard House	344	80.4
		CCTV	310	72.4
		Multi-purpose Hall	295	68.9
		Praying Room	229	53.5
		Praying Room	229	53.5
		Swimming Pool	216	50.5
		Swimming Pool	216	50.5
		Mini Market	183	42.8
		Sport Club/Facilities	174	40.7
Kindergarten	135	31.5		
Cafeteria	107	25		
Laundry	100	23.4		
Member of Professional Bodies	428	No	341	79.7
		Yes	75	17.5
		NA	12	2.8

4.1.2 Analysis of Section B - The Importance of Property Management Capabilities

For this part, respondents were asked to rank their answers on the Importance of PM core capabilities for stratified residential property management in Malaysia. There

were 4 core capabilities included in this section. The answers from this question were analyzed and recorded in the Table 4.2 below. To assess the importance of each identified capabilities in the PM, five point likert-scale of 1-5 was used, where scale of 1= not important, 2= slightly important, 3 = moderately important, 4= important and 5 = very important. All the respondents were asked to rank each capability as per degree of importance. Table 3 shows the results obtained by using Importance Relative Index (RII) Analysis:

Table 3: The Ranking of PM Core Capability

Rank	Capability	Relative Importance Index (RII) %
1	Effective Financial Management	93.27%
2	Property Asset Data Management	90.28%
3	Responsive Property Management	89.72%
4	Integrated Property Maintenance	89.39%

From the RII analysis, Effective Financial Management was ranked at first followed by Property Asset Data Management. Responsive Property Management was at third place and the least importance capability was Integrated Property Maintenance. The result was further investigated by using IPMA analysis to calculate the weightings for each capabilities. To calculate the weightings using IPMA, the measurement model was developed. Figure 4 below illustrated the proposed Structural Equation Model (SEM) for further examination using SmartPLS 3 software.

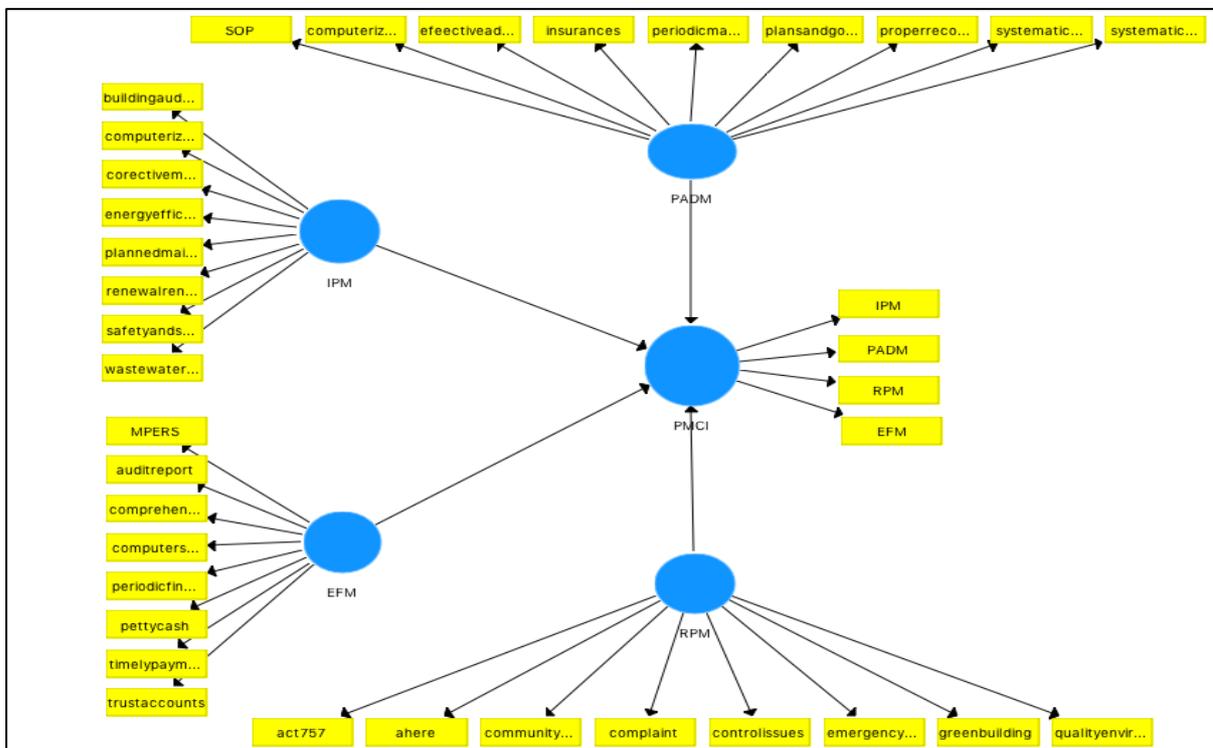


Figure 4: Measurement model

From the SEM model, the IPMA was conducted and the weightings of the core capabilities were measured and represented by rescaled outer weight value. The results are illustrated in the Table 4 below.

Table 4: Weightings for PM Core Capabilities

CAPABILITIES	WEIGHTINGS
Effective Financial Management	0.21
Property Asset Data Management	0.19
Responsive Property Management	0.18
Integrated Property Maintenance	0.17
Total	0.75

The statistical result from RII and IPMA produce similar outcomes for the ranking of the capabilities. The ranking showing the level of importance of the PM capabilities also have been discussed in previous study conducted by Mustafa et al. (2015) and was supported and agreed by most participant in FGD conducted for the validation of the findings for the research.

4.1.3. Analysis of Section C - Key Drivers of Stratified Residential Property Management Capabilities

Analysis of key drivers of stratified residential property management capabilities was the most important and crucial in order to determine the PMCI. The evaluation of management performance on individual dimensions has been converted into an index by calculating and averaging the survey responses with prescribed weightages which reflect the relative importance of the 5 dimensions. The PMCI consists of four categories of core capabilities and one final category (Organisation Results and Comparative Performance) as included in Management Capability Index (MCI) in other countries. According to the MCI, the final category was weighted at 25%. Based on the Relative Importance Index (RII) Analysis, IPMA and MCI, the weighting percentage for each category were as follows:

Table 5: Weightings for PMCI Categories

NO	DIMENSION OF PMCI	WEIGHTAGE
1	Effective Financial Management	21%
2	Property Asset Data Management	19%
3	Responsive Property Management	18%
4	Integrated Property Maintenance	17%
5	Organisation Results and Comparative Performance	25%

4.2 Overall PMCI Results

To determine the index, the average score for each categories were calculated than multiple by weightage for each of them. Table 6 below shows the calculation of overall PMCI:

Table 6: Calculation of Overall PMCI

Capability	Assessed	Weight	Weighted Score
Effective Financial Management	79.0	21%	16.6
Property Asset Data Management	75.6	19%	14.4
Responsive Property Management	74.1	18%	13.3
Integrated Property Maintenance	71.9	17%	12.2
Organisation Results and Comparative Performance	60.7	25%	15.2
Weighted Mean		100%	71.7

The result suggests that, on average, stratified residential property management organisations in Peninsular Malaysia are performing at slightly less than three-quarters of their potential 100 percent capacity and have plenty of opportunity for improvement in a number of areas. Table 4.4 shows that the highest individual PMCI category result was recorded for Effective Financial Management (79.0), followed by Property Asset Data Management (75.6) and Responsive PM (74.1). The second lowest index was recorded for the Integrated Property Maintenance (71.9) and the lowest index for Organisation Results and Comparative Performance (60.7).

Table 7: Overall PMCI Results

NO	DIMENSION OF PMCI	PMCI
1	Effective Financial Management	79.0
2	Property Asset Data Management	75.6
3	Responsive Property Management	74.1
4	Integrated Property Maintenance	71.9
5	Organisation Results and Performance	60.7
	PMCI (overall)*	71.7

**Weighted (refer to Table 5 for weightings applied)*

4.2.1 Overview by Area

Figure 5 indicates Port Dickson scored the highest for four categories and overall PMCI with 77.1. Surprisingly, organisations in Port Dickson recorded a lowest in Organisation Results and Comparative Performance which is taken by Penang at first place with score of 71.9. Furthermore, Port Dickson, Penang, Johor Bahru and Klang Valley scored same and above the overall PMCI with the lowest score (72.0) for Klang Valley. The remaining two areas, Malacca and Kuantan scored below the overall PMCI, with the lowest score (67.0) for Kuantan. Kuantan scored the lowest across four main PMCI categories. The greatest variation in results occurred in the category Integrated Property Maintenance ranging from 68.8 for Kuantan to 85.4 for Port Dickson.

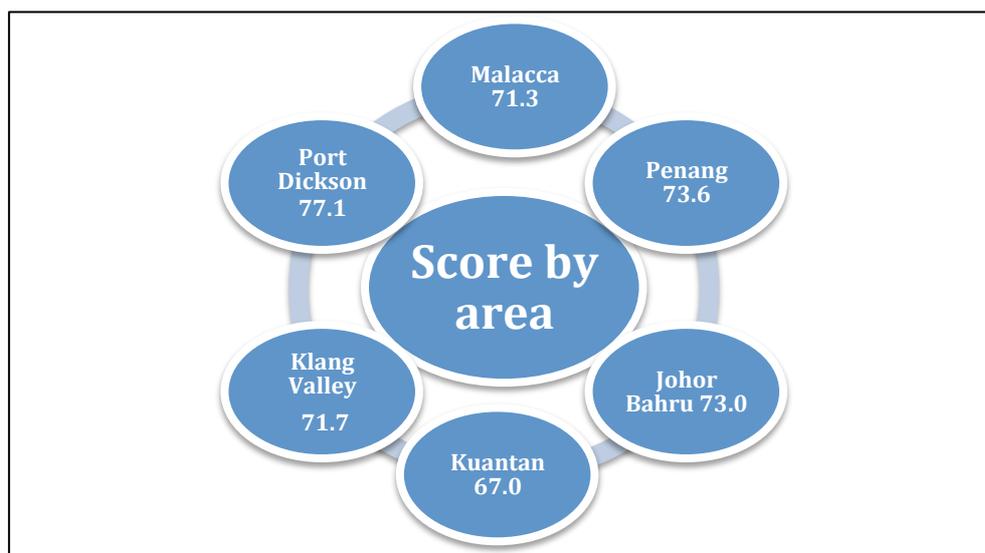


Figure 5: Score by Area

4.2.2 Overview By Types of Residential

Table 8 indicates condominium recorded the highest overall PMCI (77.9), when compared to other types of residential which is medium cost flat recorded lowest overall PMCI with 67.1. Condominium also indicated the strongest performance for any one category, recording 85.1 (of its potential 100 capability) for the Effective Financial Management category. The greatest variation in performance results occurred within the Results and performance category, with PMCI results ranging from 53.8 (medium cost flat) to 69.3 (condominium); a variation of 15.5. The next highest variation in performance results was in the Integrated Property Maintenance category with PMCI results ranging from 63.4 (medium cost flat) to 77.2 (condominium); a variation of 13.8. The result clearly shows the large differences of the performance by referring to the types of stratified residential property.

Table 8: Overview By Types of Residential

CATEGORY	MEDIUM COST	CONDOMINIUM	APARTMENT
	21.3%	31.5%	47%
Effective Financial Management	77.9	85.2	82.7
Property Asset Data Management	70.2	80.4	74.6
Responsive Property Management	73.3	79.3	78.5
Integrated Property Maintenance	63.4	77.2	73.1
Organisation Results and Performance	53.8	69.3	57.2
PMCI (OVERALL)*	67.5	78.2	72.6

4.2.3 Overview By Types of Management

Table 9 indicates organisational scores by types of management and compares them to the overall PMCI. The scores on the PMCI do not seem to be related to the type of management the respondent belongs to. The largest differences arise in the Developer's Period which scores higher against Joint Management Body (JMB) and Management Corporation (MC) across 'Responsive Property Management' and 'Organisation Results and Performance' categories. On the other side, MC has highest score for 'Effective Financial Management' and Property Asset Data Management which were ranked at number 1 and 2 respectively by respondents. The lowest performance amongst the three types of management was indicated by JMB with overall PMCI 70.8 only .

Table 9: Overview By Types of Management

CATEGORY	DEVELOPER'S PERIOD		
	6.3%	JMB 51.2%	MC 42.5%
Effective Financial Management	76.3	78.6	79.9
Property Asset Data Management	74.5	74.6	76.9
Responsive Property Management	76.0	73.6	74.4
Integrated Property Maintenance	73.9	70.3	73.5
Organisation Results and Performance	68.7	59.9	62.4
PMCI (OVERALL)*	73.6	70.8	72.9

4.2.4 Overview by Approach of Management

Table 10 shows organisational score by approach of management and compares them to the overall PMCI. Organisations that practice outsourced management recorded the highest overall PMCI (at 74.7), when compared to organisations practice in-house management (70.1). Outsourced management also indicated the strongest performance for any one category, recording 82.6 (of its potential 100 capability) for the Effective Financial Management category.

Table 10: Overview By Approach of Management

CATEGORY	IN-HOUSE	OUTSOURCED
	62.4%	37.6
Effective Financial Management	76.9	82.6
Property Asset Data Management	73.9	77.4
Responsive Property Management	72.6	76.5
Integrated Property Maintenance	70.8	73.7
Organisation Results and Comparative Performance	59.2	65.5
PMCI (OVERALL)*	70.1	74.7

The overall PMCI is 71.7 (of a potential 100 capacity). This indicates that residential property management organisations in Peninsular Malaysia are sitting at under three-quarters of their capability and performing at 71.7% of its potential capability. In other words, most managers assessed their organisations being most capable. By referring to MCI created and adopted in many countries, it can be concluded that organisations with overall index score above 70% are considered most capable and with below 70% are least capable. This overall rating is similar to results obtained from Management Capability Index (MCI) surveys in New Zealand (69.9), Malaysia (72.0), India (74.6) and Singapore (69.2). While this is satisfactory, there clearly is an opportunity for improvements. This being the first time PMCI was created to measure the capability, there are no trends to consider. The PMCI should be reviewed and updated annually in order to make a comparison and show the trend of performances.

5.0 Conclusion

Although there could be sub-categories other than those incorporated in this index, this project includes sub-categories that have proven critical activities that must be effectively delivered to be a successful property management services provider specifically for stratified residential properties. In particular, this project has expanded the studies on property management by assessing the impacts of various activities on management capabilities.

It was believed no studies have been previously conducted focusing on residential property management capabilities. A closer examination of the index reveals that Effective Financial Management (EFM) and Property Asset Data Management (PADM) received highest score compared to the other two capabilities. From the perception of the majority of property managers, the systematic and integrated approaches of the activities under EFM and PADM are important to increase the effectiveness of service delivery in stratified residential property management services.

The PMCI provides an opportunity for organisations and industries across countries to take stock of current performance and identify and target areas for improvement. The PMCI is applicable to a variety of activities that are focused on improving management capability. Its main value as being a communication tool allows an organization to clearly describe both its current and desired states of management readiness. It also serves to help identify targets for short term and long term management. In conclusion, PMCI is a dynamic instrument of property management. Hence, it could be reviewed regularly and enhanced from time to time in response to the dynamic and rapid growth of technology in the property management industry. Having a clear understanding of management capability enables managers to accurately focus attention and resources in order to lift areas of management under-performance.

With the successful completion of the first PMCI, researchers envisage greater participation in future surveys. It is anticipated that this will allow for additional areas of data profiling — in particular, —as well as the capacity to provide more in depth data analysis. This research has been conducted in a limited period of time and it is suggested that for the better results and more covering areas in a future research and survey, it must be completed in a longer period. Future research should replicate the research's findings with larger samples and in different contexts. The study should also be replicated in other countries.

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