THE GREEN PREFERENCES OF OFFICE TENANTS IN MALAYSIA

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DEDICATION

To my beloved family

Mother and Father

Brothers and Sister.

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ABSTRACT

Green building concept is growing over the years and has currently turned out to be one of the best business practice for many large companies in the country. As tenants and landlords became more environmentally conscious on the impact of buildings on the natural resources, demand for green buildings will increases continuously. The continuous sustainability on the usage of green buildings requires good understanding on the tenant's needs and preferences. Apart from that, the need and preferences should also be parallel with the green building standard accreditation systems hence maximising the green value. The mainstream sustainability related research in the real estate sector has focused on green buildings in the area of construction, economical and technical approaches. This study concentrates on tenants' considerations in relation to green building criteria. The aim of this study is to find out the green concept preferences among office tenants in relation to their occupied offices. The research methodology consisted a mixed of qualitative and quantitative approaches. Data were collected through semi-structured interviews involving 2 respondents as well as distribution of questionnaire survey to 72 respondents. Analytic hierarchy process (AHP) was used to analyse the data. The study outcome revealed that tenant preferences differ from the property manager's criteria in the context of ranking and considered factors. The Green Building Index (GBI) accreditation system should consider and review the weightage of GBI scoring criteria by putting more emphasis on the criteria of indoor environmental quality as well as sustainable site planning and management. The results are useful to building owners in promoting their green buildings.

ABSTRAK

Konsep bangunan hijau yang semakin berkembang sejak beberapa tahun kebelakangan ini telah bertukar menjadi salah satu amalan perniagaan yang terbaik antara syarikat-syarikat besar di negara ini. Oleh kerana penyewa dan pemilik bangunan semakin peka terhadap kesan bangunan ke atas alam sekitar serta sumber alam, pemintaan ke atas bangunan hijau akan meningkat berterusan. Kelestarian yang berterusan ke atas penggunaan bangunan hijau memerlukan pemahaman yang baik terhadap keperluan dan keutamaan penyewa. Selain itu, keperluan dan keutamaan ini juga perlu selari dengan sistem akriditasi piawaian bangunan hijau bagi memaksimumkan nilai hijau. Penyelidikan kelestarian arus perdana dalam sektor hartanah telah memberi lebih tumpuan kepada bangunan hijau dalam bidang pembinaan serta pendekatan ekonomi dan teknikal. Kajian ini memberi tumpuan ke atas pertimbangan penyewa berhubung dengan kriteria bangunan hijau. Matlamat bagi kajian ini adalah untuk mengenalpasti keutamaan konsep hijau penyewa bangunan pejabat berkaitan dengan pejabat yang dihuni. Metodologi kajian adalah melalui pendekatan campuran kualitatif dan kuantitatif. Data telah dikumpul melalui temubual separa struktur melibatkan 2 responden dan edaran soal selidik kepada 72 responden. Proses hierarki analitik (AHP) telah digunakan dalam menganalisis data. Hasil kajian mendedahkan bahawa keutamaan penyewa adalah berbeza dengan kriteria pengurus harta dari segi kedudukan serta faktor-faktor yang dipertimbangkan. Sistem penilaian indek bangunan hijau (GBI) perlu mengambil kira dan menilai kewajaran pemarkahan dan kriteria GBI dengan penekanan patut diberikan terhadap kriteria kualiti persekitaran dalaman serta pengurusan dan perancangan tapak yang mampan. Penemuan kajian ini adalah berguna kepada pemilik bangunan dalam mempromosikan bangunan hijau mereka.

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GBI	Green Building Index
CSR	Corporate Social Responsibility
LEED	Leadership in Energy and Environmental Design
GSA	U.S. General Services Administration
CIDB	Construction Industry Development Board Malaysia
WWF	World Wildlife Fund
GT	Green Technology
GDP	Gross Domestic Product
KeTTHA	Ministry of Energy, Green Technology and Water
UNFCCC	United Nations Framework Convention on Climate Change
PAM	Pertubuhan Arkitek Malaysia / Malaysian Institute of Architects
ACEM	Association of Consulting Engineers Malaysia
SPSS	Statistical Package for Social Sciences
AHP	Analytic Hierarchy Process

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter is an introduction to the study. It presents an overview of the study briefly describing the background; specifying the objectives; expressing the problem statement; formulating the study process; devising a methodology; setting the report outline and qualifying the scope's limitation.

1.2 Background of the Study

Property investors and developers are continually looking for novel approaches in the supply of ecological buildings that can be appealing to the tenants, hence maximising the "green value". As for the buyers, these buildings with green concept can benefit them in a number of ways such as; increasing the profit margin with higher rental rates and the net value of the property, reducing the risk of depreciation and attracting the potential tenants with reasonable cost of maintenance.

Buyers or occupants tend to prefer the buildings to captivate and preserve the best talent; adapt cooperation and novelty as well as increasing the employee efficiency and welfare. Moreover, they have to explore the possible ways to cut down the operating costs, reduce the use of energy and also the effects on the environment.

All the involved parties such as the property investors, developers, and service providers shall be aware of the ways to fulfill the necessities and expectations of the tenants as such green office buildings are results of good layout and architecture. At present, there is a mass transition in the way of property market is being driven by high demand from occupiers and buyers compared to the conventional method of business controlled by the developers. This is evidence that the occupants affect property market substantially (Rasila, 2010).

The achievement of having quality tenants fully occupying the building would enhance the maximisation of the profit through income streams. Conducting assessments on tenants' expectations or needs on the office buildings in the town center can be a difficult task as there has been divergence in the style of disintegration to the rural areas of Kuala Lumpur lately. (A E Ahmad, Z M Isa, 2008).

Sayce et al. (2007) acclaimed that it is now a bigger responsibility on the owners of the buildings to communicate with their tenants rigorously in order to maximise tenant satisfaction and perseverance that in return yields to property owners' higher return on investment or profit. The office tenants' needs have transcended in this modern age as a result of different ways of their businesses are being done.

This is evidenced by Markland (1998) stating that the identification of tenants' work transformation would be useful for the landlords to discover tenants' particular needs and expectations. By identifying the core determining factors at different stages of the relationship with the tenants, warrant the delivery of quality product and continuous improvement.

Over the last decade, the number of organizations that are steadily increasing exhibited an intense care on the natural and social environment as well as the public's concerns in their operations. A number of developments have motivated these concerns that include the global repercussions as the results of climate change and other environmental damages such as water pollution and contamination, threat to biodiversity, increasing hazard and ambiguity concerning the energy security, new regulations introduced by the government bodies, increased government legislation and also the enticements in energy saving, reduction in the emissions of carbon dioxide (CO2) or any other environmental damages that could possibly cause these issues. The credit goes to the public awareness on the importance of going "green".

All the concerning parties such as the government bodies, financiers, builders, proprietors, occupants or residents and also the public, started to believe strongly in the significance of perseverance lately (Newell & Lee, 2012). The study showed that the environment is greatly affected by the real estate and land market because building constructions are identified as the contributors for almost half of the carbon dioxide (CO2) emissions, to the electricity and water utilisation with records of 71% and 16% each, to 50% of unprocessed resources' usage, 40% each for the disposal area and power demand (Atkinson, 2007; Keeping et al., 2007; UNEP FI, 2007). As a measure to tackle this issue, many countries have come forward to support the perseverance according to the guidelines.

Dr Arab Hoballah (2009), a UNEP expert quoted "it is impossible for any country in the world to have a hope to achieve targeted carbon dioxide reduction unless the building sector is included into their action plans".

Conservation of power in buildings can be an excellent method in the reduction of carbon dioxide (CO2) emission with attractive cost saving. In order to implement this method, an individual has to fully understand the fundamental definition of a green building.

The U.S Environmental Protection Agency, has defined a green building as a building that is ecologically accountable and use Earth's limited resources in the structure and building process starting from the plan, followed by the construction, and then the operation, maintenance or up keeping, face-lift as and when needed, and finally the destruction.

As a support to the shift to sustainability, the Malaysian government had developed some strategies in the year 2009 by introducing the Green Building Index (GBI) towards the progress and assessment of green buildings, to measure the aspects related to energy embedded with other conditions like the interior eco-friendly quality, maintainable site development and supervision, material and means, water-saving and also the novelty.

A green building is commonly known as a building that integrates sustainable development ethics to ensure that the ongoing operation and maintenance of the building reduces the environmental impacts (Sharp & Rives, 2009).

The main objectives to have buildings with green concept are very much related to choosing a maintainable site, for example a site with easy access to mass transit, using high-efficiency fixture and rainwater for water efficiency; choosing alternate renewable energy source such as solar which is eco-friendly as an attempt to reduce the energy usage; opting to preserve environmental quality by recycling and utilising resources that are found locally, considering the interior eco-friendly quality not limited to the full potential usage of the natural light and fresh air, but also the usage of non-toxic materials and finishes; and also being innovative during the initial layout planning.

Sharp and Rives (2009) had specified that the cost of constructing a green building is significantly high. Additional to that, the compliance to the selected external parties' accreditation system is a continuing expense inclusive of reports submissions and approval, similar to the maintenance and management of the high-performance building. In order to reduce the future incurring costs borne by the occupants or the tenants of the office building, it is important to understand their liking, which will assist in providing the best framework as a resolution for this cost related issues.

According to CB Richard Ellis (CBRE) brokerage in San Diego (2012), "Green" is seen as an advantage to lower vacancy rates with higher rentals. CBRE had analysed the buildings with LEED (Leadership in Energy and Environmental Design) certification which is an evaluation program introduced by the U.S. Green Building Council or Energy Star rating that was introduced by the U.S. Energy Department.

He also indicated that the green buildings continue to perform better than the non-green buildings in the San Diego market. This statement is backed by Kopp (2012) who discovered that green buildings save higher lease rates and operating rates compared to non-green buildings. Furthermore, Department of Environment and Conservation NSW (2006) also stated that the indoor environment of green buildings can improve occupants' health and well-being, thus contributes to the profit of the business directly. The advantages gained from healthier workplaces cannot be taken lightly.

Fisk (2000) estimated that in the United States, prospective annual savings and productivity gains are estimated to be US$6 billion to US$14 billion as a result of a decline in the diseases related to respiratory, an estimation of $1 billion to $4 billion saving yielded from reclining allergies and asthma, lowering number of Sick Building Syndrome symptoms resulted $10 billion to $30 billion, and about $20 billion to $60 billion as an outcome from significant progress in staff achievement due to other factors which are unrelated to health.

Fisk (2000) also stated that in the United States, it is recorded that the overall vacancy of green buildings is 11.7% compared to non-green buildings, which is reported as 15.7%. The tenants of green buildings are not only benefiting from energy efficiency but also opting to take advantage of gymnasiums, cafes and other amenities as well as better locations with captivating landscapes or interior finishes.

As reported in CoStar (2009), the oil industry has been very well adapted to offices with green concept. Companies like Shell and Chevron are good examples in renting a considerable fraction of the green buildings office stocks. CoStar Group which is the main player in depository and supplier of marketable property monetary statistics, maintained records on 2.4 million worth from real estate, together with commercial assets trades, existing leasing and tenancy figures, and also from the reasonable features of the of buildings.

Many corporate companies' policies also aim to mitigate the development's impact on the environment. As an example, Shell, which is an oil and gas multinational company, is reported to have exclusively requested Malaysian Resources Corporation Berhad (MRCB) to build Menara Shell, as stated in MRCB's annual report 2013. As a result, Menara Shell was recognised as Gold Rating building for Leadership in Energy and Environmental Design (LEED) besides achieving Gold Certified in Green Building Index (GBI).

This can be considered as a good example among firms that made conscious decisions in choosing eco-friendly buildings. Real estate has been a main component of the Corporate Social Responsibility (CSR) as well as retailing guidelines of several companies. Similar concerns can contribute to deliberate decision-making among other organisations as well.

The result of this trend being an emergence as a stream of environmental thinking and action, has affected virtually all branches of the economy, including the real estate. Many organisations started to set targets as measures to reduce the environmental impacts of their activities in compliance with corporate responsibility targets in order to exhibit their pledge in this area.

In their research, preferences are defined as “concerns for delight and gratification, which are not essential to carry out a duty. Preferences act as add-ons to the consumer or occupants that they can choose to have” (Rothe et al., 2011).

They also defined this as a tri-sectional entity where these three areas, “preferences”, “needs” and “requirement and implementation”, overlap with four categories labeled “must have”, “necessity”, “bliss” and “compromise” (Rothe et al., 2011).

The benefits of leasing in sustainable buildings range from environmental impact mitigation and monetary advantages, up to the betterment of physical health besides the welfare of tenants in different buildings. It is clear that there are lot of researches have shown that by leasing green buildings, there are more advantages than disadvantages to the occupants.

1.3 Statement of the Problem

It is unfortunate that the accessible literature that determines the level of occupants’ preferences for office units with green concept is very much limited. According to Brown & Cole (2009) and Ellison et al. (2007), there is an emphasise on the needs for occupants to be able fit into the evolving customaries at work. The necessity for adjustment or adaptation emerges as an outcome from the changing building environments, in addition to the occupants being aware of the working of ecological building structures.

Similarly, there were also other investigations conducted in the year 2008 by Newell, Myers et al. and Pivo that concentrated on the revenue supposedly attained from maintainable buildings demonstrating how that the stakeholders such as financiers, landlords, account and real estate managers have started to incorporate ecofriendly approaches into respective actions.

To encourage investment in the construction of green buildings, many countries have introduced various initiatives, such as tax incentives, vouchers, rebates and green grants (Choi, 2009). Studies on the benefits derived from green real estate investments have led to the green investment rationale. However, there is still some uncertainty about the returns on such investments.

Meanwhile, according to Yasmin et al. (2013), green building features are the lowest important factors of consideration in tenants' office decision making in the city centre of Kuala Lumpur. This also supported by a statement from KFM Holdings Sdn Bhd in 2013, which stated that the tenants in Malaysia were not concerned about the energy and water efficiency when choosing their office premises. This is due to the current electricity tariff and water charged for domestic, commercial and industry consumers in Malaysia are still low and afforded by them.

There are very limited existing literatures that investigate the counteraction of the green building rating tool to office tenants' preferences. According to Jerry Yudelson (2014), the rating tool was invented for non-residential buildings with the intention to provide both landlords and occupants, with the resiliency in terms of better plan for their respective unit by preserving the originality of the building structure.

Tenants are unable to indicate the ecological and maintainability characteristics of the lot that they are renting. The rating tools were not captivating to the occupants who desire to upgrade their office ecofriendly settings if the landlords are not keen to focus on preferred variations by the occupants at different office space or public area.

According to Green Building Council in Australia in 2010, leading organisations around Australia are choosing to operate in green buildings to improve productivity, reduce costs, attract staff and increase their competitive advantage which are the benefits provides by the criteria of Indoor Environmental Quality in GBI criteria.

Green office building investments provides social benefits, amongst which are; better air circulation that leads to improved health, productivity and safety. On the other hand, this feature will provide a positive impact on its occupants' well-being and employee productivity. These will be achieved through ventilation, quality, natural light, and occupant's capability to control the indoor quality (T. Heb et al., 2010).

Tenants are willing to pay more to rent green office buildings because of the benefits they offer. It has been shown that green buildings do not only save energy and operating costs, but also give a positive effect on the physical and psychological well-being of its occupants and productivity, after moving to LEED office buildings (A. Singh, et al., 2011).

Unquestionably, these led to the reduction of health risk to occupants. Green office buildings were designed to achieve energy efficiency, provide thermal comfort, promote healthy living, and lower heating costs, to the satisfaction of its users (N. Zainordin, et al., 2012).

However, Malaysian developers are still weighing the costs and benefits to build a green building since many of them are very concerned with the extra construction cost as well as there is not enough demand for these types of office in Malaysia. Besides, the additional cost during green construction is recognized among ten (10) main barriers in green building development. Thus, these issues were more crucial due to as reported that the unstable office rental in Malaysia.

There are numbers of studies on climate change impacts on diverse aspects of human life, such as energy consumption, water resources, health, public awareness, politics; government incentives and agriculture have been conducted. Besides, the discussion about the importance of sustainability issues in housing and the interrelation between people attitudes concerning the environmental protection and residential market in other countries are widely referred (Lorenz, D. & Lutzkendoft, T., 2005).

In Malaysia, green building is certified by six main criteria. They are energy efficiency (EE), water efficiency (WE), indoor environmental quality (IEQ), sustainable site management and planning (SM), material and resources (MR) as well as innovation (IN) (GBI Malaysia, 2014). Indoor Environmental Quality (IEQ) is located at the second position for new non-residential building and third for residential types of building.

The green rating tools of GBI Malaysia keen to focus on criteria of energy and water efficiency while tenants' preferences more towards the aspect of indoor environmental quality (Asmma' et. al., 2015). This is also supported by a statement from KFM Holdings Sdn Bhd in 2013, which stated that the tenants in Malaysia were not concerned about the energy and water efficiency when choosing their office premises.

Besides, according to Alan Soo, the managing director of Savills (Malaysia) Sdn Bhd in 2015 stated that it is indeed that energy and water efficiency are important in green building criteria, however the end users preference shall not ignored. Alan Soo also added that the way GBI rating tool operates more towards developers' benefits in green building investment on maximasing the profit rather than occupants' satisfaction.

Since there are literatures showing an increased awareness that tenant are concerned on green buildings, hence the green building rating system should match with tenants' preferences. Certification offers tenants and owners with the insight objectives to the environmental features of a building and if it is used properly, rating systems that can give visibility and prominence to the buildings with greater energy performance.

Every country has its criteria for a green building rating system to certify whether a building is green or not. This rating system, or Green Assessment Tool, is the calibrating mechanism that measures whether a building fulfils the green criteria that has been determined by the authority.

Among the green rating systems recognised in Malaysia are: Green Building Index (GBI), Leadership in Energy and Environmental Design (known as LEED, USA) and GreenMark (Singapore). CASBEE (Japan) will be adopted to evaluate Iskandar Malaysia Low Carbon Society (LCS) Blueprint (Bernama, 2012). The Construction Industry Development Board Malaysia (CIBD) is now progressing with a Construction Industry Standard Green Performance Assessment System in Construction (GreenPASS) for green rating accreditation (CIBD, 2012) as an alternative to developers and contractors to obtain green accreditation for green technologies and to measure actual carbon emissions that are produced by the buildings and released, into the environment.

In Malaysia, there are two green rating tools were offer measurement criteria for green building, which are Green Building Index (GBI) and GreenRE. GBI was launched on 29 May 2009 whilst GreenRE was just recently launched in the year 2013. Green Building Index (GBI) is a benchmarking rating system that incorporates internationally recognised best practices in environmental design and performance.

Eichholtz et al. (2009); Fuerst & McAllister (2010); Harrison & Seiler (2011); Miller, Spivey, & Florance (2008) has shown that buildings with established green certification such as LEED, Green Star and Energy Star have positive effects on occupancy rate, rental and market value.

However, problems arise when a building that has initially been certified green by a green accredited agency fails to fulfil the green criteria upon its completion. Apart from that, each element appearing green on buildings should be analysed carefully because not all rating systems have the same standard as some rating systems focused only on energy efficiency (Runde & Thoyre, 2010).

The inconsistency of weight distribution of green criteria has been pointed out by Reed et al. (2009). From comparative rating tools available around the world, it is noted that energy efficiency is the main criterion in each tool, followed by cost-saving due to effective use of resources and indoor environmental site quality, in addition to other criteria, such as technology, transportation, innovation, management and economy.

Generally, most countries apply the same equation in defining green office buildings, i.e. green accreditation according to green features applied on the buildings in which it is measured by the green criteria laid down by green accreditation bodies. The buildings will then be certified according to the green ratings of each green assessment systems. Findings by Rahardjati, Khamidi, & Idrus (2010) show energy efficiency and indoor environmental quality are the most important GBI criteria.

Research on buildings with green eco-labelling such as LEED and Green Star, found that it had a positive impact on the rental and market value. However, it is yet to be proven in the context of Malaysia (Ting, 2009). Generally in Malaysia, the importance of green buildings have has obtained recognition as early the year 2007; however, its importance was not given due acknowledgement by investors and occupiers.

Currently, green properties are being sold at a price higher than non-green properties due to the price positioning strategy used by the developer (LaSalle, 2011). However, the price differences that show that these green properties are better than the non-green properties are yet to be proven.

In Malaysia, the effect of these differences can be seen from the price positioning of the product, although there has been limited research to show that green certification has a positive impact on the property value. Therefore, the impact on rents and capital appreciation as a result of these green features is still uncertain.

In 2010, Green Building Council of Australia revealed that the tenants of green building consider the certified buildings are living up to their expectations which are include environmentally friendly and also have the potential to be a financial success as well as are enjoyable to own, rent and work in.

The survey also indicate the strengths of green buildings that tenants consider most are includes the factor of fewer complaints from staff, having both staff and clients who are impressed with the office as well as easier to attract and retain employees. Hence, whilst the owners of the green buildings rely on high energy and water efficiency as the strengths of green buildings. The facts show that the current green rating tools which are focusing on green and water efficiency as their main criterion of the rating systems whereas the tenants more focus on healthy environmental aspect.

Thus, this research will focus more on the tenants' preferences on the building combined with the current green building standards to attract higher number of tenants and real estate investors.

Although the existing writings have acknowledged the tenants' preferences and requirements in recent years, there were not many attempts made to reduce the gap between the tenants' preferences in green buildings standards. This study aims to harmonise tenants' preferences on green buildings and the current green buildings standards in addition to disclose the relevant parties whom are attracted to the business to take advantage from the benefits yielded from it.

1.4 Research Questions

Based on the problem statements discussed earlier, there are four (4) research questions developed for this research which are includes:

1. What are the attributes of green office tenants' preferences;
2. What are the level of importance for each of the green office tenants' preference;
3. What are the relation between the tenant preferences and existing green building standards; and
4. What recommendations on the attributes of green office tenants' can be included in green building standards.

1.5 Objectives of the Study

The main aim of this study is to identify the office tenant's preferences when leasing green office space. To achieve the main aim, the following objectives have been deliberated for this study, which are comprises:

1. To identify the attributes of green office tenants' preferences;
2. To rank the level of importance of each preference;
3. To relate the tenant preferences with existing green building standards; and
4. To make recommendations on attributes to be included in green building standards.

1.6 Scope of the Study

This study will focus on tenants in office buildings that have received a Green Building Index (GBI) certification. The study areas of this research covered Kuala Lumpur and Putrajaya locality only.

1.7 Brief Methodology

This study involved in five stages, i.e. identification of the study, literature review, data collection, data analysis and wrapped up with the conclusion and recommendation.

The study began with the issue and objectives identification. The issue is identified from the journals and articles in relevance to tenants' preference and green building standard.

Primary data obtained from the semi-structure inverview and questionnaire. The abovementioned objectives met from the collected data information via semi-structure inverview and questionnaire. These primary data were necessary for author to access their preferences attributes in the selection process.

Secondary data gathered through reading the printed material books with relevant information. Among the sources for secondary data are books, articles, journals, newspaper, reports, conference papers and websites which relate to the issue. Data and the informations obtained and used as a reference to meet the objectives and served as a basis in semi-structure inverview and questionnaire design.

The informations obtained from semi-structure inverview and questionnaire analysed by using using statistical approach such as frequency analysis, descriptive statistics via computer aided program Statistical Package for Social Sciences (SPSS) as well as analytic hierarchy process (AHP).

1.8 Report Outline

The report was laid out in five chapters. This chapter, the first, introduced the report outlining aim and objectives as well as presenting a general overview of the study.

Subsequently, the second chapter examined the literature of the tenant's preference in order to develop the framework of the study. Chapter Two reviewed on the tenant's renting behaviour especially the complex decision-making process involved in renting or leasing an office as well as the green attributes that influence an individual's or organisation's decision.

Chapter Three dwelled into the procedure used in the study. This Chapter described the implementation of analytic hierarchy process (AHP) in accessing the tenant preferences towards green office attributes in renting a green office building against the GBI rating tool. The selected of study approach, data collection method and the adopted quantitative technique to analysed the collected data to be discuss in this chapter.

Chapter Four was the discussion on the data analysis and interpretation. The outcome of the survey namely, respondents profile and the respondent's preference in choosing green office buildings were presented. This Chapter discussed further on the implications of survey findings in related to tenants' preference and green rating tool criteria.

Findings of the study were concluded in Chapter Five. The last chapter evaluated the attainment of each objectives. It reviewed the limitations of the study. Finally, suggestions and recommendations for further research are forwarded.

1.9 Significance of the Study

The study outcomes are anticipated to make a significant contribution to relevant stakeholders namely the management of occupying organisations, the real estate investors and the marketers who could attain deep knowledge on the preferences of corporate occupants.

As for the organisations, the results of this investigation will reveal that the choices made collectively on the rental can ease the execution of a communally accountable approach. A noticeable component of a corporate social responsibility guideline is provided by real estate to the stakeholders.

Last but not least, the findings from this study have imperative implications. A big amount of preliminary expenses that may be required for a newly constructed sustainable office building, or the cost incurred in renovating the current office lots, can be retrieved via measures such as conservation of energy and payments with lesser risk, or else through a bigger final rental amount.

At present, the key players in the business and non-profit organisations (chiefly the government bodies) are agreeable for a higher leasing payment. Nonetheless, a detailed understanding on such strategy is needed in order for the serious group to participate in the leasing of green buildings and take advantage from the expected and unexpected gains efficiently. This study acts as a gateway to all parties involved.

1.10 Study Flow Chart

The study process summarised by the flow chart below:

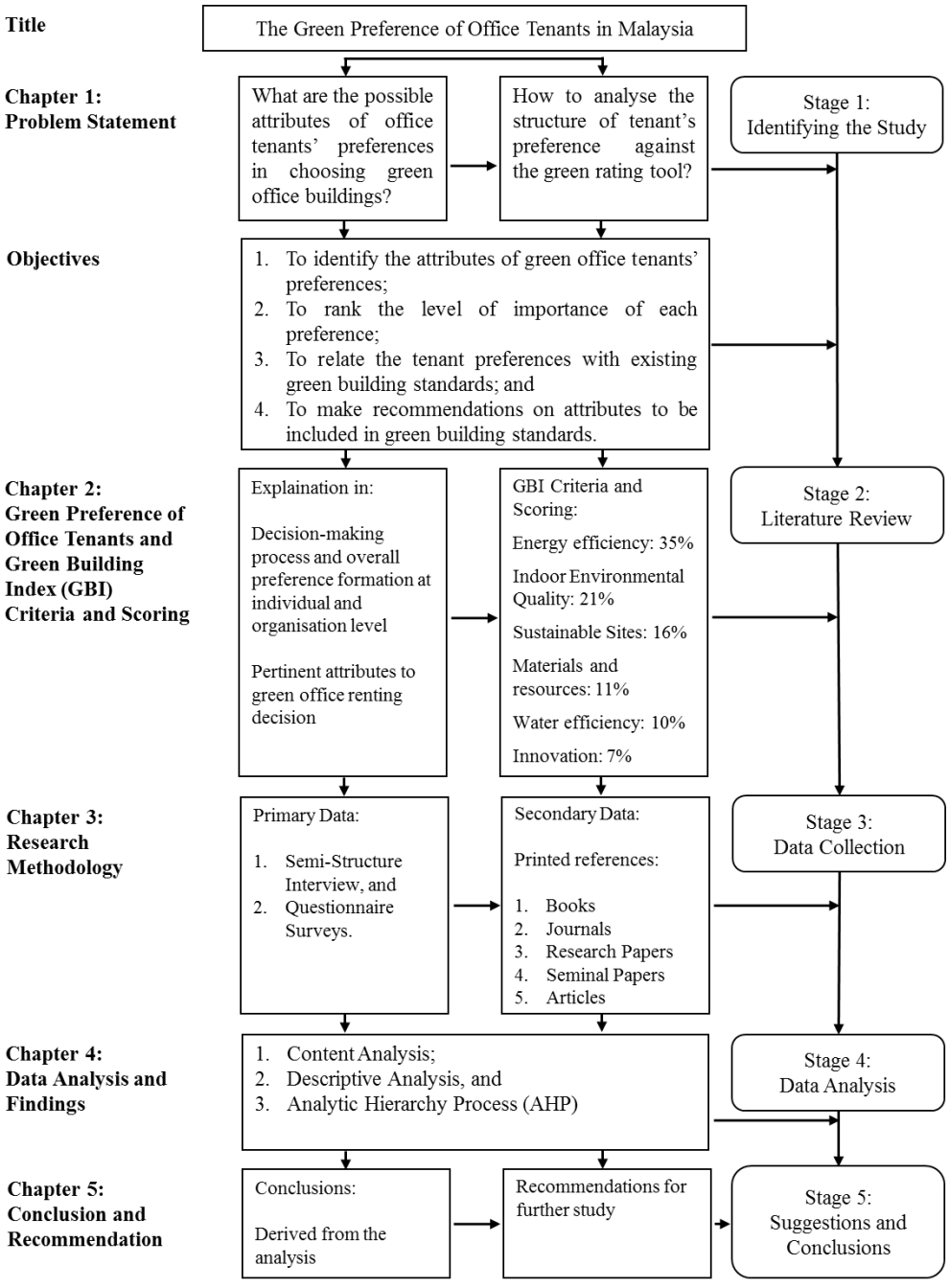

Figure 1.1: The Study Flowchart

1.10 Conclusion / Summary

To clarify the aim, methodology and conclusions of this research, it is important to define the concept of office tenants' green preferences. Rothe et al. (2011) studied end-users' perspectives and made a distinction between "preferences", "needs" and "requirement and implementation".

The most efficient way to increase demands in the green buildings' market is by placing the tenants' preferences as part of the considerations in the green building criteria. However, it is wise to minimise the gap between tenants' preferences and green building standards in order to maximising the benefits and environmental impact of green building.

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