Volume: 9 Issues: 56 Issue [September, 2024] pp. 110 - 116
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.ijafb.com
DOI: 10.55573/IJAFB.095609

THE RELATIONSHIPS BETWEEN ECONOMIC MOTIVES AND GREEN IT ADOPTION INTENTION IN MALAYSIA

Hartini Abdul Jalil[1]
Noor Haty Nor Azam[2*]
Nur Fauzana Yahya[3]
Mohd Nor Md Deros[4]
Nur Filzah Abdul Razak[5]

[1]Faculty Business & Management, Universiti Teknologi MARA (UiTM), Malaysia,
(E-mail: hartiniabdjalil@gmail.edu.my)
[2]Faculty Business & Management, Universiti Teknologi MARA (UiTM), Malaysia,
(E-mail: noorhaty@uitm.edu.my)
[3]Faculty Business & Accountancy, Universiti Selangor (UNISEL), Malaysia,
(E-mail: nur_fau@unisel.edu.my)
[4]Accounting Research Institute, Universiti Teknologi MARA, Malaysia,
(E-mail: mdnor.chyeaomm@gmail.com)
[5]University College of Aviation Malaysia (UNICAM), Malaysia,
(E-mail: filzah86@gmail.com)
*Correspondence: noorhaty@uitm.edu.my

Article history
Received date : 15-6-2024
Revised date : 16-6-2024
Accepted date : 12-8-2024
Published date : 30-9-2024

To cite this document:
Abdul Jalil, H., Nor Azam, N. H, Yahya, N. F., Md Deros, M. N., & Abdul Razak, N. F. (2024). The relationships between economic motives and green IT adoption intention in Malaysia. *International Journal of Accounting, Finance and Business (IJAFB)*, 9 (56), 110 - 116.

Abstract: *Empirical research on information systems (IS) is now crucial in determining the conditions that will encourage the uptake of green technology. Nonetheless, the majority of published IS research on green IT or green IS focuses on definitions, actions, and educational objectives. Furthermore, under the 2020 Malaysian Public Sector ICT Strategic Plan, green IT has emerged as a national agenda item and is currently serving as a strategy enabler in Malaysia. Still, there is a lack of knowledge on the significance of green IT practices. Thus, the purpose of this study is to investigate the impact of economic factors on the desire to adopt green IT in Malaysian public institutions. Such an endeavor is essential because green IT is a new field and only a tiny number of organizations large firms with significant financial backing, mostly have specific environmental management system certifications, as MS 14001 in Malaysia. The study used a positivist approach to investigate the roles of economic motives by surveying the topic and using public organizations as the respondents. According to the SEM-PLS, there is evidence that eco-efficiency, eco-effectiveness, eco-process, and eco-brand all predict the intention of adopting green IT. The results might be used to create a framework and paradigm for green IT adoption that would protect the environment from needless e-waste. Therefore, by using these insights, policy makers, stakeholders, and government agencies may be able to set better green technology uses benchmarking throughout a range of sectors.*

Keywords: *Green IT, Motivation, Economic Motives*

Volume: 9 Issues: 56 Issue [September, 2024] pp. 110 - 116
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.ijafb.com
DOI: 10.55573/IJAFB.095609

Introduction

Information technology (IT) has two types of effects on the environment, according to Kohler and Erdmann (2004). The impact of IT invention, use, and clearance on the environment can be considered one of the first consequences. The focus for the second effect is on the advantages of utilizing IT in business processes that are environmentally sustainable and have a greater connection to green information (IS).

Grewal and Rahim (2010) state that organizational motive is a useful, albeit mostly underutilized, theoretical perspective in IT research and study for IT adoption. The theory of organization motivation aims to elucidate the pertinent mechanisms that differ between organizations (Eklim and Rahim, 2008, Rahim et al 2007). Understanding the motivations behind an organization's environmental actions and predicting environmental outcomes from behavior are similarly guided by a motivational viewpoint (Bansal and Roth 2000).

Over the past fifty years, numerous companies have encountered economic difficulties due to stricter environmental standards. Before government laws and regulations were implemented, the main costs of pollution were borne by society (Mark, 2019). Furthermore, adopting a motivating viewpoint for green IT adoption will offer insightful perspectives on the degree to which eco-sustainability will be taken into account when making IT decisions. Because the economic benefits cannot be seen immediately or in the short term, the firm can decide whether to be concerned about the environment. IT officers, managers, and practitioners will be better able to identify Green IT practices in their corporate eco-sustainability strategy domains if they have a clear grasp of the motives behind the activities. That being said, the focus of this article will be green IT and the objective of this study is to examine the relationship between green IT motivation and green IT adoption intention in Malaysian public institutions.

Literature Review

Motivation

The heavy demand for electricity from IT operations puts a significant strain on power grid resources (Murugesan, 2008). Enterprises are currently seeking out environmentally friendly IT solutions for a variety of reasons and advantages, such as minimizing energy usage, cutting expenses, reducing carbon emissions and ecological footprint, enhancing system efficiency and utilization, fostering greater collaboration and engagement among stakeholders, saving space, and creating a flexible workforce (Bose & Luo, 2011).The desire to take action toward objectives and desired goals is what drives an organization's movements. The theory of organizational motivation serves as the basis for the motivations behind organizational actions.

According to Rahim (2010), organizational activities might serve as incentives when utilizing permitted information systems and IT for innovation. There are two categories of motives that can be distinguished: locus (source) and types (focus). Motives can be concentrated either inside or outside of an organization. While motives by the external element are started by the intervention of formal and informal organizations, motives by the internal factor are implemented through the organization's value systems, missions, and beliefs (Li, Nicholls, & Roslow, 2003).

DiMaggio and Powell (1983) suggested that institutional forces, such as coercive, normative, and mimetic pressures, can influence or regulate the behavior of organizations. Chen et al. (2008) identified three eco-motivations that stem from these forces, namely eco-effectiveness,

Volume: 9 Issues: 56 Issue [September, 2024] pp. 110 - 116
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.ijafb.com
DOI: 10.55573/IJAFB.095609

eco-efficiency, and eco-equity. Eco-effectiveness involves guiding individual and organizational thinking about environmental issues to reduce pollution and depletion through a fundamental redesign of the system (Ibid: 195). Eco-efficiency refers to a business's ability to offer competitively priced goods and services while systematically reducing environmental impacts.

Economic Motives

The economic motive is the category under which the motivation component falls, building on Molla (2009). Green IT can be evaluated economically using eco-efficiency, eco-effectiveness, eco-brand, and eco-process metrics.

Eco-efficiency drive is centered on economics and has an internal locus. It describes the goal to apply procedures and tools to increase IT's environmental sustainability while also pursuing financial goals like cost containment. Energy expenses are starting to account for a sizeable portion of the overall cost of operating IT infrastructure, as businesses continue to seek greater data processing and storage capacity (Rasmussen, 2006). Some firms may choose to adopt Green IT due to the need to lower expenses associated with power, cooling, and real estate while increasing data center efficiency. Consequently, the majority of IT managers and experts are concentrated on lowering the direct environmental effects of IT through increased energy efficiency in data centers and end user devices (Dedrick, 2010).

The eco-effectiveness drive is centered on society politics and has an internal locus. It happens when businesses launch Green IT projects because they have eco-sustainable values and principles, not just because they want to make quick money. It describes the drive to put policies and procedures in place to make IT more environmentally friendly, either out of care for the environment or to establish a standard and establish oneself as a thought leader. Adopting sustainable practices is a commitment demonstrated by managers and organizations that are ecologically grounded, have a close contact with the natural environment, and are able to learn from it (Corbett, 2010). The way a company interacts with the environment and the environmental values and ideas it has fostered within its

Eco-process refers to the integration of sustainability ideas and practices inside the architecture, operations, and offerings of an IT organization.

An eco-brand refers to an IT firm's capacity to establish, oversee, and strengthen its Green brand at both the organizational and product

Volume: 9 Issues: 56 Issue [September, 2024] pp. 110 - 116
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.ijafb.com
DOI: 10.55573/IJAFB.095609

Propositions and the Research Model

This study focuses on the factors that encourage companies to adopt environmentally friendly policies that directly affect IT. We provide a study paradigm (Figure 1) that combines ecological and operational performance factors, drawing on the notion of organizational motivation.

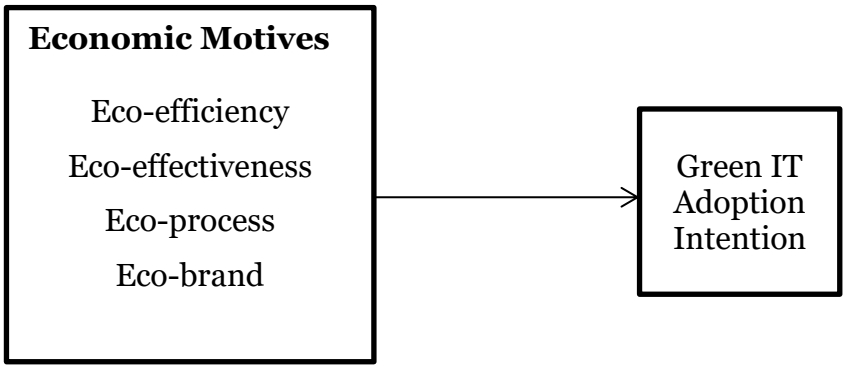

Figure 1. Research Model

Research Methods

The Klang Valley, Malaysia, questionnaires provided the data for this article. One thousand CIOs and IT managers from a variety of government and postsecondary educational establishments made up the sample frame. Potential respondents received an email invitation to participate in the survey along with the questionnaire's Web site. A total of 250 completed responses from a variety of industries were received following two rounds of reminders.

Table 1: The Rate of Return of Questionnaires

Number of questionnaires		Percentage/Reasons
Total questionnaires	300 (250 organizations)	100%
Questionnaires answered	250	75%
Unknown questionnaires	25	2.8% questionnaires were rejected due to serious missing values

Assessing Instrument Reliability

Reliability tests were conducted in this study to evaluate the instrument scales' consistency. Only the internal consistency reliability that is, the coefficient alpha which evaluates the summated scale was employed. The Cronbach's alpha values for each variable are shown in Table 2.

Table 2: Reliability of Instrument Measures

Variable	Measure	No. of items	Cronbach's alpha
Economic motive	Eco efficiency	5	0.731
	Eco effective	4	0.741
	Eco process	5	0.516
	Eco brand	4	0.783
Green IT Intention	Green IT Intention Adoption	3	0.889
Overall items		**21**	**0.930**

Volume: 9 Issues: 56 Issue [September, 2024] pp. 110 - 116
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.ijafb.com
DOI: 10.55573/IJAFB.095609

Every measure in the table has a cronbach's alpha more than 0.70, with the exception of the eco process measure, which had a cronbach's alpha of 0.516. Heir et al. (2003) have proposed that a moderate level of connection is indicated by a coefficient range of 0.6 to 0.7, whilst a value of less than 0.6 indicates a low strength of association. Consequently, it may be said that the transaction use measurement is valid and will be retained for further examination. The green brand measure has the greatest Cronbach's alpha value, measuring 0.783. When considered as a whole, the instrument's Cronbach's alpha was 0.930, indicating great reliability.

Hypotheses Testing – Direct Effect

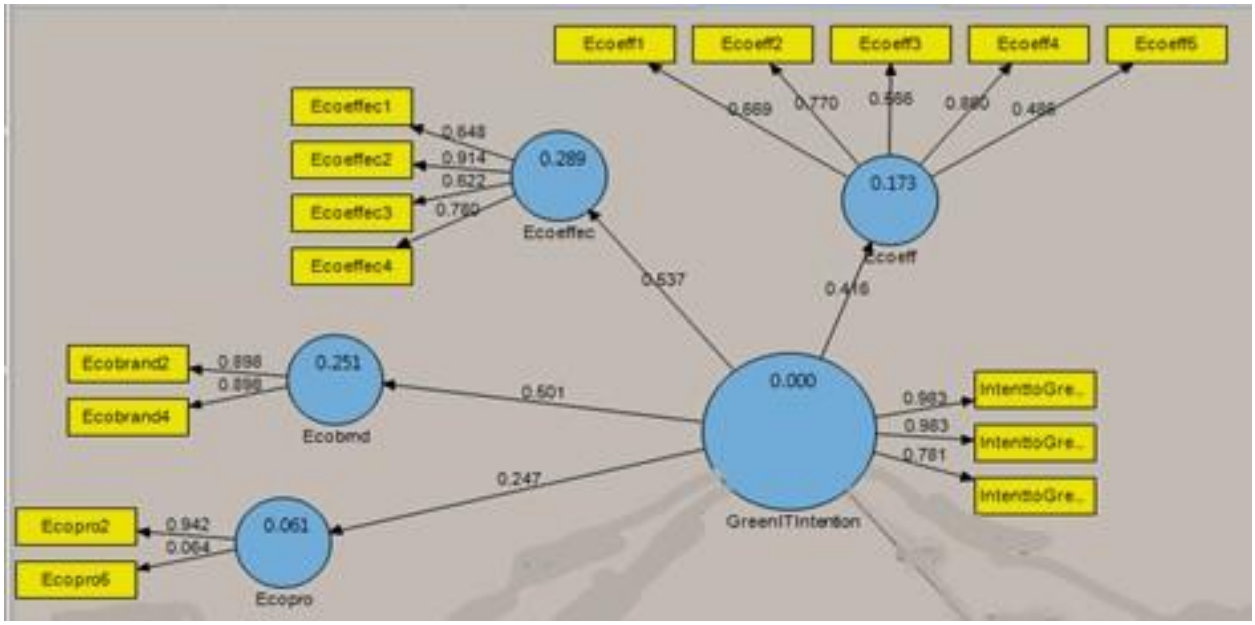

Figure 2: Hypotheses testing

The PLS results in the entire sample group model were examined in Figure 2. The findings (Figure 2) indicated that there was a 17.3% variance for eco efficiency, a 28.9% variance for eco effectiveness, a 25.1% variance for eco brand, and a 0.61 percent variance for eco process.

Table 3: Direct Effect of Hypotheses Testing

Hypotheses	Relationships	Beta	C R	R2	Decision
H1	Ecoefficiency->Green IT intention	0.416	*0.8084*	0.1728	*Accepted*
H2	Ecoeffec -> Green IT Intention	0.537	*0.8342*	0.2889	*Accepted*
H3	Ecoprocess-> Green IT intention	0.247	*0.4454*	0.0608	*Accepted*
H4	Ecobrand -> Green IT intention	0.501	*0.8927*	0.2508	*Accepted*

Volume: 9 Issues: 56 Issue [September, 2024] pp. 110 - 116
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.ijafb.com
DOI: 10.55573/IJAFB.095609

Conclusion

The impact of motivating factors on Green IT adoption is investigated in this study. Four motivations at the junction of emphasis (economic) and motives have been the subject of this study. Four key conclusions from the empirical analysis advance Green IT theory and application.

Firstly, based on the descriptive findings of Green IT adoption, the Green IT practices and policies that are most generally accepted have to do with enhancing IT stewardship and preventing pollution related to IT. Consequently, 66% of respondents are tracking the environmental impact of IT, 50% have policies in place for managing electronic waste, and 85% of all respondents have put in place ecologically friendly IT procurement strategies. These results are in line with Chen et al.'s (2008) conclusion that the most generally used Green IT practices are those that involve policies for buying energy-efficient IT, assessing vendors' green credentials when making IT procurement decisions, and disposing of IT in an environmentally responsible way. However, there is a lack of widespread adoption of technologies that increase the energy efficiency of IT only involves 31 out of 26 and 38% of respondents.

References

Bansal, P & Roth, K (2000). Why Companies Go Green: A Model of Ecological Responsiveness. Academy of Management Journal, 43(4), pp. 717-36.

Bose, R., And Luo, X. 2011. "Integrative Framework For Assessing Firms' Potential To Undertake Green It Initiatives via Virtualization - A Theoretical Perspective," The Journal Of Strategic Information Systems (20:1), pp 38-54.

Chen, A.J.W, Boudreau, M., and Watson, R.T. (2008). Information Systems and Ecological Sustainability, Journal of Systems and Information Technology 10(3), 186-201.

Corbett, J. M. (2010). Unearthing the value of Green IT. *ICIS 2010. Proceedings*.

Dedrick. J (2010). Green IS: Concepts and Issues for Information Systems Research, Communication of the Assocition for Information Systems, 27(1), 11-18

DiMaggio, P. J. and Powell, W. (1983) The iron cage revisited: Institutional isomorphism and collective rationality in organizational behavior, *American Sociological Review*, 48 (April), 147- 160.

Eklim, S., & Rahim, M. M. (2008). A Qualitative Evaluation of an Instrument to Measure Organisational Motivations for Inter-Organisational Systems Adoption. International Journal of Business and Information, 3(1).

Grewal, R., Rahim, M. (2010). An investigation into the antecedents of organizational Journal of Marketing, 65(3), 17-33.

Kohler, A., & Erdmann, L. (2004). Expected environmental impacts of pervasive computing. Human and Ecological Risk Assessment: An International Journal, 10(5), 831-852.

Li, T., Nicholls, J. A. F., & Roslow, S. (2003). Organizational motivation and the global concurrent launch in markets with accelerated technology: A conceptual framework and research propositions. International Business Review, 12(5), 563-579.

Mark, C. (2019). Green IT: An Analysis of Eco-friendly Information Technology Strategies, International Journal of Green Technology 2019,5,84-87.

Molla, A. (2009) Organisational Motivations For Green IT: Exploring Green IT Matrix and Motivation Models, Pacific Asia Conference on Information Systems (PACIS 2009), Hyderabad, India July 10-12, 2009.

Murugesan, Harnessing Green IT: principles and practices, IEEE IT Professional (2008)24–33 January-February.

Volume: 9 Issues: 56 Issue [September, 2024] pp. 110 - 116
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.ijafb.com
DOI: 10.55573/IJAFB.095609

Rahim, M. M., Shanks, G., & Jagielska, I. (2010). The Role of Organizational Motivations in Information Systems Implementation. PACIS 2010 Proceedings, 192.

Rahim, M., Sarkar, P. K., Shanks, G., and R. Johnstone (2007). Organizational Motivation and Interorganizational Systems Adoption Process: Empirical Evaluation in the Australian Automotive Industry, Journal of Electronic Commerce in Organizations (JECO), 5(3) 1-17.

Rasmussen, N. (2006). Implementing Energy Efficient Data Centres, APC White Paper # 114, Accessed May 12, 2008 from www.apc.com.