



**Department of Accounting
Faculty of Management Studies and Commerce
University of Sri Jayewardenepura, Sri Lanka**

A STUDY ON DETERMINANT FACTORS OF INTRODUCING A GREEN OFFICE ENVIRONMENT IN SRI LANKAN AUDIT FIRMS

Polgampola D, Gunawardana KD 

Department of Accounting, University of Sri Jayewardenepura

Abstract

Purpose:

This study aims to identify the factors affecting the establishment of a green office environment in Sri Lankan audit firms. It examines how occupiers (management) perceive the existing workplace environment and subsequently factors contributing towards developing a green workplace environment.

Design/ methodology/ approach:

The data set was derived from a survey of 84 audit firms which were located in the Colombo district. The collected data were analyzed by using different statistical techniques.

Findings:

It was found that the currently existing workplace environment in Sri Lankan audit firms was not much interested in applying the green concept. The findings of the study suggest that occupants' awareness, stakeholder pressure, environmental proactivity are factors affecting the establishment of a green office environment. However, it was found that health benefits have no significant impact on the establishment of a green office environment.

Practical implications:

Since audit firms are working in a traditional working environment, the auditors can rethink applying the green concept.

Originality/ value:

Factors affecting the application of the green concept in audit firms are a contribution to the literature. Moreover, the focus is on the Sri Lankan context.

Keywords: Audit Firms, Green Concept, Green Office

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 kennedy@sjp.ac.lk

1 INTRODUCTION

In recent years the sustainability concept has become a major concept of each country to develop the economy in line with the environment-friendly background. Nowadays, Sri Lanka is going through several developments in infrastructure and the green concept is the most leading concept in developing each area. Therefore, people expect companies to demonstrate environmental responsibility in doing the companies' operations and to use resources efficiently throughout the building's life-cycle. As a result, the green concept has taken the initiative to go green and bring the movement into the economy. Under the green concept, the most important area is "Green Building" which concerns three principles: "Energy Efficiency", "Environmental Stewardship" and "Occupant comfort and well-being". Several government bodies in Sri Lanka are facilitating these concepts and the main authority in Sri Lanka is the Green Building Council of Sri Lanka (GBCSL) which represents the World Green Building Council.

The green building concept enables different organizations and industries to get more benefits by using it as a method of cost and waste reduction at every stage in the building lifecycle such as construction and operation of the building. Green buildings are designed to reduce the overall impact of the organizational environment on human health and the natural environment. This can be achieved by protecting the employees' health and improving their productivity, efficiently using energy, water, and other resources, and reducing wastage, pollution, and environmental degradation. Moreover, the green office environment concept is resulted in reducing the working stress of employees and increasing their productivity.

Nowadays most organizations are considering their employees and natural environment in addition to considering only the profit. It has become a global trend and organizations apply it as a strategy to gain competitive advantages over its' rivals. The green office environment concept is one of the concepts that organizations are using to treat their employees and the natural environment as a way of fulfilling their social responsibilities. As a result, the green office concept helps to enhance the healthiness of employees and their productivity while protecting the natural environment.

In the Sri Lankan context, many organizations and industries are implementing this green office concept to gain competitive advantages. But Sri Lankan audit firms are not much familiar with the green office concept. Mainly, the audit firms provide their services relate to the areas such as auditing, accounting, and taxation. The majority of audit firms always concern about improving the quality of their services by complying only with accounting and auditing standards. Audit firms should concern moreover about building up a green office environment as a way of providing more benefits to workers and the natural environment while providing quality service to outsiders. Moreover, audit firms provide many training opportunities for people who conduct their studies relate to the accounting field. But workplace stress of occupants who are working within the audit firms is noticeably very high compared to other organizations in different industries. Therefore, introducing a green office environment will be important to reduce the workplace stress of auditors, reduce wastage and pollution and economize the natural environmental resources. Therefore, this study focuses on the determinant factors of introducing a green workplace environment in Sri Lankan Audit firms' context and how the factors affecting the green workplace environment are leading to the effectiveness of the green workplace environment.

2 THEORETICAL FOUNDATION AND LITERATURE REVIEW

This section mainly focuses on the origin of currently trending concepts such as green concept, green building, and green workplace environment and the application of these concepts. Moreover, this section emphasizes what sort of variables has been considered in identifying the green workplace environment and the relationships which have been identified in prior research papers.

2.1 Application of Green Concept to Office Environment and Green Innovation Performance

Green building can be defined as a type of building that is organized to minimize the energy usage in daily operational activities and pollution that results from its operations to protect the environment while keeping its occupants healthier and also it ensures the maximum usage of space exist throughout the building lifecycle (Hong & Minfang 2011). Green building can be identified as a major element of sustainable development and as a process that is designed to encourage and motivate occupants to protect and preserve the life support system of the earth (Wu & Low 2010). Bauer, Mosle and Schwarz (2010) have identified good reasoning for the trending green building concept in the Guidebook for Sustainable Architecture. As per these researchers, there are few reasons available to explain why the green building concept has become a trending concept throughout the world. The first reason is economic factors and the second reason is social factors. The global warming issue has become a major problem that results from continuous improvement in peoples' living standards. For instance, constructing more new buildings and increase in usage of motor vehicles on roads can be identified. Because of this temperature rises, people are faced with more environmental catastrophe. The catastrophe has been able to cause relatively big economic damage to society as a whole. The third reason that the researchers explain is a continuous increment in the costs of energy. The final reason that researchers explain is identifying green building as a method to preserve energy. Most of the investors, as well as operators, believe that new technology and resources will make them self-sufficient as energy is an essential thing for people in the world. According to the Mirror Citizen website (www.mirrorcitizen.lk 2015), more concerns have been built up regarding the tug-o-war relationship which explains the interaction between the environment and man-made constructions. As a result, the most trending concept of buildings was identified as 'Green Building' which is being recommended by most of the professionals in the construction field. Further, it explains the 'Green Building' concept as one of the concepts which can create and maintain a steady balance between conserving nature and building profitable constructions. As a result, the Green building is concerned with "Energy Efficiency", "Environmental Stewardship" and "Occupant Comfort and Well-being". However, since the application of the green concept to building construction is now moving beyond the establishment stage, now the focus is on benefits that can be gained through working in a green office environment. The most of existing researchers argue that the green building concept makes happier, productive, and more efficient workers in business organizations (Fisk 2000). According to Kim, Rengarajan and Ying (2013), from the consumer perspective, increasing environmental awareness has led to an increment in the individual's as well as business's interest in investing in a sustainable asset. As a result of this environmental awareness, it has contributed to more application of the green concept to the assets and to a considerable increase in the number of "green" buildings which have been developed on important principles such as human-centeredness and the human sensitiveness to the nature. The strong demand created by various strong players in the society and the government's interest in pushing for "greenness" to build the environment, will lead to the growth and development of a more sustainable and "greener" industry (Kim, Rengarajan, & Ying 2013). Kats and Capital (2003)

have explained various kinds of important financial benefits that “green” buildings can provide when compared to the other conventional buildings. As per the researchers, these financial benefits are consisting of lower operational costs and lower maintenance costs, increase in productivity, and enhanced health benefits to its occupants. Moreover, a similar finding was explained by Eichholtz, Kok and Quigley (2010), where the “green” buildings can contribute effectively to an improvement in the indoor environment quality that can be resulted in increased employee productivity.

Green innovation refers to innovations comprising with both hardware innovations and software innovations that are related to green products and/or processes including the innovations in technology that are developed to save energy, prevent pollution, recycle wastage, design green products or corporate environmental management (Chen, Lai, & Wen 2006). According to Chen, Lai and Wen (2006), for enhancing the environmental performance to satisfy the world accepted requirement of environmental performance, organizations apply the green innovation concept within their companies. To stimulate innovations, organizations combine existing knowledge with new ideas that are useful and practical (Ancona & Caldwell 1987). The organizational identity in the innovation process positively affects and enhances innovation performance (Sethi 2000). Furthermore, Waters (2000) explained that organizational commitment also has a positive influence on the green innovation performance of the organization.

2.2 Stakeholder Pressure

Stakeholders can be defined as parties who can affect a company’s performance and who can be affected by the company’s operation (Freeman 1984). In explaining the above definition Freeman (1984) emphasized that companies produce externalities to both internal as well as external parties. These externalities always make an impact on the stakeholders to make pressure on the company’s performance. Responding to these pressures of stakeholders may require capabilities relating to organizational learning and especially when there are pressures that are conflicting and derived from a variety of stakeholders (Roome & Wijen 2006). As per Clarkson (1995), Stakeholders can be categorized into two groups such as primary stakeholders and secondary stakeholders. Accordingly, primary stakeholders can be defined as the parties without whose contribution or participation or support, the company is unable to survive. The secondary stakeholders can be defined as the parties who affect and affected by the company’s operations but whose support is not essential to the survival of the company. Stakeholders can also be distinguished as internal and external stakeholders.

Internal Stakeholders are the party who can be identified often as the recipients and initiators of proactive environmental activities of the organizations (Daily & Huang 2001). Moreover, the employees need support from the managers to act as initiators in this context. In particular researches, the researchers have identified that managerial attitudes and managers’ views (Cordano & Frieze 2000), interpretations of the management, environmental values as well as leaders influence the management decisions relating to their organizational environmental activities (Sharma 2000). Therefore, all the employees who consider as internal stakeholders play a major role in the adaptation of environmental practices in an organization.

External Stakeholders are with the ability to regulate or mobilize the public opinion in favor of, or opposition to, the environmental practices of the organization (Freeman 1984). Accordingly, there are several groups of external stakeholders including clients or customers, shareholders, government regulatory authorities, society, and non-government organizations. According to Freeman (1984), when considering the environmental issues, the regulatory

authorities and the government can be identified as the most obvious external stakeholders who may affect the operations of business organizations. Therefore, businesses should be complied with regulations that are related to the protection of the environment to minimize the threat of penalties, fines, and regulators levying legal action. The failure to adhere with regulatory stakeholders may make the companies vulnerable to individual or class action lawsuits. Accordingly, such sort of threats and pressures would result in ruining the public image of the organization, business relationships, and organization's customer relations. Therefore, as per the prior researches, the external stakeholders also have a significant role in the adoption of green environmental practices.

2.3 Environmental Proactivity

As per Hunt and Auster (1990), Roome (1992) and Winsemius and Guntram (1992), they have established various kinds of progressive stages which are having from the reactivity and until the highest proactivity. In this case, they are assuming that a single as well as the linear path which companies are following when taking actions to develop their commitment for adhering with the natural environment. That means an additional step in the method of the proactivity is related to various kinds of implementations of the voluntary as well as participatory environmental and natural management practices. Environmental proactivity can be defined as the voluntary and participatory implementation process of practices as well as initiatives that are designed to improve environmental performance and which will be able to be manifest through various kinds of strategies. Not only that each strategy is characterized using a set of environmental practices (Hart 1995, Vastag, Kereks & Rondinelli 1996, Aragon-Correa 1998, Henriques & Sadosky 1999, Buysse & Verbeke 2003). Bansal and Roth (2000), has been identified different kind of motivations which are leading for a higher level of the environmental proactivity and it has been identified that various motivational factors induce to the implementation of the portfolio of environmental practices. The researchers have revealed that environmental proactivity has not the meaning that it necessarily shows the idea of the generalized implementation process of various environmental management processes and practices. Therefore, the researchers have identified that environmental proactivity can be demonstrated in different ways and through various kinds of practices.

2.4 Occupants' Awareness

In recent years many organizations are implementing environmentally friendly business practices regardless of the size of the organization and that is because even the small and medium size of organizations can generate a significant impact of environmental contamination (Berends et al. 2000, Brio & Junquera 2003). A building can be defined as a very important part of environmental strategies that are implementing in organizations because it can be considered a major environmental pollutant. When focuses on the building which is constructed in the way of environmental-friendly, those environmental-friendly buildings can provide a competitive advantage over rivals in the industry because it helps to build up a sound organizational image (Kato, Too & Rask 2009). The commitment relating to environmental sustainability has become one of the valuable assets that an organization has while considering the increasing public awareness and researchers have identified that the organizations which are maintaining sound environmental recording system would not only have a higher standing with the public, but also more developed positive relationships with the environmental regulators (Makower 1994). Human resources in an organization can be viewed as another very important part in the process of environmental strategy formulation and implementation process in an organization because the success of the environmental strategies would be depending on general problems which are rising with environmental changes and benefits and

costs associated with these environmental issues (Hart 1995, Klassen & Angell 1998). It has been identified that despite the owners of the business or managers of the business having strong and sound “green” attitudes, the implementation level of environmental-friendly practices may be at a low level in most of the organizations because employees are usually working with having a very low level of Environmental Awareness, and generally, the lower level of Environmental Awareness of the employees will lead to a lower level of environmental involvement in an organization (Azzone, Bertele & Noci 1997, Azzone & Noci 1998, Gadenne, Kennedy & McKeiver 2009).

2.5 Health Benefits

Several studies have highlighted the benefits which are rising with the concept of green buildings and which are relating to employees’ productivity, comfort, health, and satisfaction issues (Romm & Browning 1994, Paul & Taylor 2008, Miller et al. 2009). As per Eichholtz, Kok and Quigley (2010), higher employee productivity can be generated through sound indoor environmental quality maintaining in green buildings. Since the cost of poor indoor environmental quality is hidden, the financial effect of a healthier and more comfortable green building is difficult to measure. For instance, a lower level of productivity and a higher level of absenteeism can be taken. The researcher has indicated that there is a famous discussion on health and the level of productivity costs that are created through the poor environmental quality of a commercial building. In a famous study on the green building concept, Kats and Capital (2003) have estimated a huge level of net present value benefits for designing and building for attaining the Leadership in Energy and Environmental Design (LEED) certification. However, the researcher has found that a large portion of the positive type of benefits is in the form of increased worker productivity and healthier condition. Kats and Capital (2003) have revealed that the cost of building green will decline gradually over time because the organizations can gain more experience designing as well as building environmentally sustainable structures. According to the U.S. Environmental Protection Agency (EPA) (2008), a green building focuses on maximizing the efficiency in usage of building resources such as water, energy, and other materials while attempting to minimize the effects of the building on occupants’ health conditions and the environmental condition throughout the building process of siting, design, construction, operation, renovation, and reuse. As per the researchers, the practice relating to green building consists of two elements in the process of building. The first element is the efficient usage of resources and the second element is the impact of buildings on the environment. The researcher has identified that in practice, the adaption of green building has been driven by realized and potential costs savings, employee productivity, employees’ improved morale, and Corporate Social Responsibility (CSR) objectives. Therefore, these elements can be identified as people, planet, and profit in the context of a triple bottom line (Elkington 1997). According to Ragheb, El-Shimy and Ragheb (2015) amount of waste has made an impact in the form of negative influence on health and environment since the design, construction, maintaining building energy, new materials, and water are used. To minimize these negative effects “green building systems” must be introduced, implemented, understood, and practiced because those are designing environmentally friendly and resource efficiently. The buildings where people live, work and play protect people from nature’s extremes. As a result, still, these buildings also affect health and the environment in different ways. Since the environmental effect of buildings becomes more important, the “green building” concept has become more famous. The practice of making and utilizing healthier, as well as more resource-efficient models of construction, operation, renovation, demolition, and maintenance, can be identified as green or sustainable building (Roy 2008). Furthermore, he has explained that green design or green architecture can be used as an approach to building that decreases the

negative effects on human health and the environment. The "green" designer or architect focuses on water, safeguard air, and earth through selecting eco-friendly construction practices and building materials.

2.6 Environmental Commitment

Environmental Commitment can be defined as what are the actions the organizations are taking for the well-being of the environment and what are the actions the organizations have taken concerning the following environmentally friendly organizational behavior (McAllister & Studlar 1999). Most of the managers in organizations are nowadays more focusing on environmental commitment because of increasing awareness for environment protection (Keogh & Polonsky 1998). On the other hand, Environmental Commitment is explained as a set of resources and various efforts that an organization uses for the best of environmental protection and environmental management (Henriques & Sadorsky 1999). Moreover, some of the researchers have identified Environmental Commitment as a kind of organizational action that is often motivated by a strong sense of the urgency of environmental consideration (McAllister & Studlar 1999). As per Keogh and Polonsky (1998), environmental commitment has been identified as a necessary attribute for organizations to get social support.

2.7 Theoretical Gap

This study has highlighted the effect of occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity on the green innovation performance of Sri Lankan audit firms. There are past research findings on how occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity can relate with green innovation performance. Though studies have addressed this research issue in various industries, the extant literature reveals mixed results in terms of the said association. Further, the researcher noted that there are limited published studies in the area of audit firms in Sri Lanka. In the Sri Lankan context, there are so many studies that have provided a high contribution to the application of green office environments in other industries. But to the researchers' knowledge, there exists a notable lack of published studies that examine the factors affecting introducing a green office environment in Sri Lankan audit firms. Therefore firstly, the theoretical contribution of this study is its contribution to the extant knowledge by bringing the above-mentioned gap as it provides a wider perspective of the concept and analyses the relationship between influence factors and green innovation performance in audit firms in the Sri Lankan context. Thus, it is hoped that this study will contribute to the local literature and fill the gaps observed.

3 RESEARCH METHODOLOGY

This section presents the research approach, the data and sample selection process followed by the conceptual model of the study and the definitions and measurements of the variables. Finally, the paper explains the analytical strategies deployed in the study.

3.1 Research Approach

The research approach can be either deductive or inductive. Since this research study uses a positivistic paradigm, a quantitative research approach is used. The researcher has developed hypotheses based on extant theories and literature.

3.2 Population and Study Sample

The population of this study is audit firms in the Colombo district. From that population, the researcher collects the data from executive personnel in each audit firm which is located in the Colombo district. As the sampling technique, the researcher uses a simple random sampling technique under the probability sampling method where the researcher randomly selected a sample of 105 audit firms out of the total population of 131 audit firms which are located in the Colombo district. The sample was selected using the “Required sample size table”. The table shows the required sample according to the size of the population.

3.2 Conceptual Diagram

The following conceptual diagram (Figure 1) is developed based on the literature survey performed under section 2 of this study.

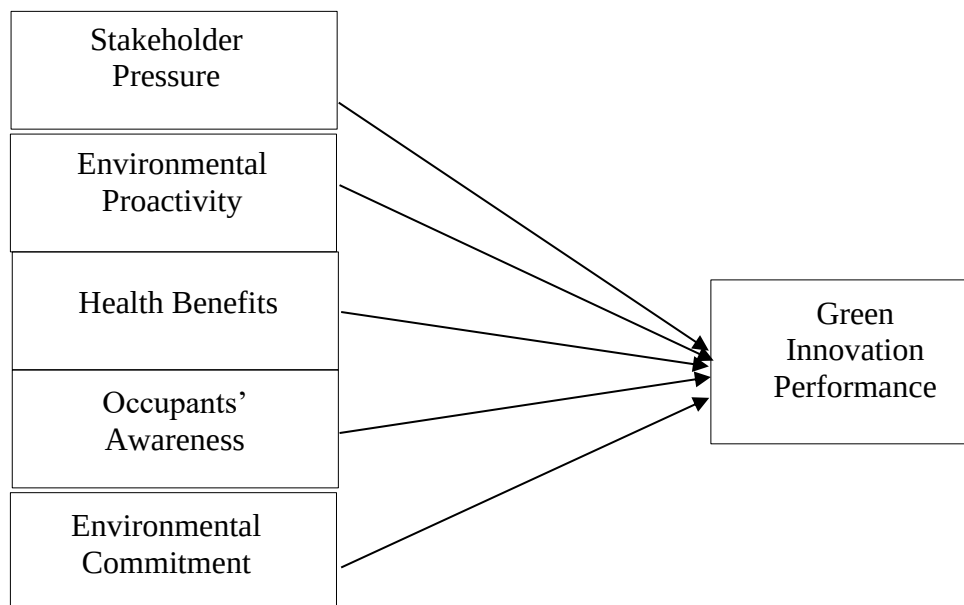


Figure 1: Conceptual diagram

3.4 Operationalization

The questionnaire which was used for collecting data has been prepared according to the five-point Likert scale from strongly disagree to strongly agree (1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree) (Table 1). Respondents were asked to indicate the extent of their agreement or disagreement with the statement.

Table 1: Operationalization

Variable	Definition	Statements	Scale	Type of Data
Green innovation performance (AV_Green Innovation)	Green innovation refers to innovations comprising both hardware innovations and software innovations that are related to green products and/or processes including the innovations in technology that are developed to save energy, prevent pollution, recycle wastage, design green products or corporate environmental management	1. I am usually reluctant to learn new eco-friendly practices in order to introduce green concept to my organization. 2. I encourage my employees for introducing nature-friendly policies in order to gain high level of resource conservation. 3. I feel that my organization is not interested in introducing eco-friendly practices. 4. I know that my organization has supportive office environment for applying the green concept throughout the building life-cycle. 5. My organization use green innovations as unique resources for gaining competitive advantage.	Likert Scale (1-5) 1-Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5-Strongly Agree	Interval Data
Stakeholder pressure (AV_Stakeholder)	Stakeholder pressure can be defined as pressure from the parties who can affect a company's performance and who can be affected by the company's operation	6. Stakeholders of the organization have positive influence towards the organization's green practices. 7. Stakeholders of the organization have not much interest regarding the green office environment exist within the organization. 8. I feel that the top management of the organization introduces eco-friendly policies which strengthen company's day-to-day operations. 9. There is a major impact from government towards implication of Green concept in our industry. 10. I know that there is a competition within the industry to adhere with green concept.	Likert Scale (1-5) 1-Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5-Strongly Agree	Interval Data
Environmental proactivity (AV_Proactivity)	Environmental proactivity can be defined as the voluntary and participatory implementation process of practices as well as initiatives that are designed to improve environmental performance, and which will be manifest through various	11. I know that there is a sound waste management process within my organization. 12. I usually encourage recyclability within my organization. 13. I voluntary contribute to save electricity in my office by switching off lights, fans, AC, etc. 14. I voluntary contribute to save water in day to day operations to enhance water conservation.	Likert Scale (1-5) 1-Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5-Strongly Agree	Interval Data

	kinds of strategies.	15. I feel that my organization implementing green office background to the working place.		
Health benefits (AV_Health)	The benefits of green buildings relating to worker productivity, health, comfort, and satisfaction issues.	16. I think that the green office environment has not much positive impact on employees' productivity. 17. I am willing to create comfortable working environment to my employees through introducing environmentally friendly practices. 18. I think that the green office environment can reduce the work stress of the employees to considerably lower level. 19. I know that the application of environmentally friendly practices enhances the workers' safety when working within the organization. 20. I believe that green office environment positively impacts to satisfaction in my career.	Likert Scale (1-5) 1-Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5-Strongly Agree	Interval Data
Occupants' awareness (AV_Occupant)	Employees' awareness on general problems which are rising with environmental changes and benefits and costs associated with the environmental issues	21. I feel that I have a sound knowledge regarding application of green concept to company office background. 22. I usually share my knowledge with lower level employees to reduce wastage. 23. I am willing to learn about implementing green office environment to enhance the green innovation performance. 24. My organization is aware to organize the green innovation program. 25. My company has a wastage reduction program to enhance the employees' awareness.	Likert Scale (1-5) 1-Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5-Strongly Agree	Interval Data
Environmental Commitment (AV_Commitment)	Environmental Commitment refers to the actions the organizations are taking for the well-being of the environment and actions the organizations have taken concerning following	26. I am committed to protect natural environment through implementing green practices. 27. I am willing to follow green practices in order to enhance quality of internal office environment. 28. I usually direct my employees towards the environmental commitment.	Likert Scale (1-5) 1-Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5-Strongly Agree	Interval Data

	environmentally friendly organizational behavior.	29. I usually participate for environmental protection programs organized by my company. 30. I have delegated responsibilities to lower level employees to encourage their commitment towards the elimination of wastage (water, electricity and air).		
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3.5 Hypotheses

Reviewing the past literature related to this study, the researcher selected five independent variables such as stakeholder pressure, environmental proactivity, health benefits, occupants' awareness, and environmental commitment, and green innovation performance as the dependent variable. Based on the above variables, the researcher developed a conceptual diagram and the following hypotheses.

H₁: There is a significant relationship between occupants' awareness and green innovation performance

H₂: There is a significant relationship between environmental commitment and green innovation performance

H₃: There is a significant relationship between stakeholder pressure and green innovation performance

H₄: There is a significant relationship between health benefits and green innovation performance

H₅: There is a significant relationship between environmental proactivity and green innovation performance

3.6 Data Analysis Strategies

After obtaining data from 84 respondents, Statistical Package for Social Sciences (SPSS) version 23.3 for windows is used for statistical analysis. First of all, the researcher finds out all the missing data in the questionnaires, and data editing, as well as data transformation, are used to enhance the completeness and consistency of the data. Data need to code and enter into the SPSS software for analysis. The researcher commenced the analyzing process by running a basic univariate frequency test and checking whether the data is entered properly or not. It helps to examine wrong entries and provide basic knowledge about the sample and the variables. Under the univariate analysis, the researcher examined the frequency distribution, visual presentation of data using bar graphs, pie charts, and line graphs, measures of central tendency by measuring mean, median, and mode, and measures of dispersion.

After that, the researcher performed a multivariate regression analysis to get an understanding of the relationship between multiple independent variables and the selected dependent variable. Using this multivariate analysis, the relationship between green innovation performance and the other five independent variables could be analyzed simultaneously, and the researcher tested the hypotheses developed. The findings and discussion are given in the following section.

4 FINDINGS AND DISCUSSION

This section presents the findings based on the analytical strategies referred to in the preceding section and a discussion of those findings.

4.1 Findings: Descriptive Analysis

4.1.1 Frequency distribution analysis of demographic characteristics

Frequency distribution describes the basic features of the study. Under this section, the researchers expect to analyze the demographic factors of the respondents includes establishment year (In Sri Lanka), Number of Employees, Number of Branches, Number of Partners and Number of Services.

Table 2: Composition of the sample according to establishment year

Established Year	Frequency	Percent
1900-1920	1	1.2
1921-1940	2	2.4
1941-1960	14	16.8
1961-1980	5	6
1981-2000	38	45.5
2001-2020	24	28.8
Total	84	100

Source: Survey data

According to Table 2, among the 84 respondents, 60 responded firms are established before 2001 and 24 firms are located after 2000 as per the analysis. When it comes to the population, most of the firms are established before 2001. Therefore, the selected sample reflects that characteristic of the population where out of 84 responded firms 71.9% being established before 2001 and 28.8% being established after 2000.

Table 3: Composition of the sample according to number of employees

Employees	Frequency	Percent
1-20	6	7.2
21-40	25	29.9
41-60	12	14.4
61-80	17	20.3
81-100	4	4.8
101-120	4	4.8
121-140	4	4.8
141-160	3	3.6
161-180	0	0
181-200	2	2.4
201-220	0	0
221-240	0	0
241-260	1	1.2
261-280	2	2.4
281-300	0	0
More than 300	4	4.8
Total	84	100

Source: Survey data

Above Table 3 shows the composition of the responded firms according to the number of employees who work at each firm. Among the 84 responded firms, most of the firms have employees between 1 - 100 employees and it is 76.2%. On the other hand, only a few responded firms have employees between 100-3000 employees, which is 23.8%.

Table 4: Composition of the sample according to number of branches

No. of Branches	Frequency	Percent
1	45	53.6
2	27	32.1
3	8	9.5
4	2	2.4
5	1	1.2
6	1	1.2
Total	84	100.0

Source: Survey data

Considering the number of branches from the responded firms, the frequency can be identified as above (Table 4). Out of the 84 respondents, 53.6% of the responded firms have only one branch and 32.1% of firms have 2 branches. Moreover, 9.5% of the responded firms have 3 branches, 2.4% firms have 4 branches and 2.4% firms have more than 4 branches. Hence, most of the firms in the sample have only one branch out of 84 firms that responded.

Table 5: Composition of sample according to number of partners

No. of Partners	Frequency	Percent
1	25	29.8
2	26	31.0
3	14	16.7
4	7	8.3
5	6	7.1
6	1	1.2
8	2	2.4
10	2	2.4
15	1	1.2
Total	84	100.0

Source: Survey data

Above Table 5 shows the number of partners in responded audit firms. Out of the 84 responded firms, 31% of firms have two partners in their audit firms and 29.8% of firms have only one partner. Moreover, 16.7% of firms from the responded firms have three partners and 22.6% of firms have more than three partners. Accordingly, most of the responded firms have two partners in the firm.

Table 6: Composition of the sample according to number of services

No. of Services	Frequency	Percent
1	6	7.1
2	14	16.7
3	22	26.2

4	16	19.0
5	20	23.8
6	6	7.1
Total	84	100.0

Source: Survey Data

As per Table 6, 26.2% of the responded firms are providing 3 services such as Audit, Tax, and Advisory. On the other hand, 7.1% of the responded firms provide 1 service, and 7.1% of firms supply 6 services. 23.8% of the responded firms provide 5 services. Accordingly, the selected sample reflects that characteristic of the population where out of 84 responded firms the majority of the firms are providing 3 services to their clients.

In summary, in this descriptive analysis of demographic profile, the researcher has analyzed the demographic characteristics of respondents such as establishment year, number of employees, number of branches, number of partners, and number of services using frequency analyses. When considering the establishment year of the audit firms, most of the firms are established before 2001 and it shows by 71.9% as a frequency. Furthermore, most of the firms have 1-100 employees in their audit firms and it is around 76.2% as a frequency. According to the number of branches that each firm has, most of the firms have only one branch and is 53.6%. Moreover, the researcher conducted a descriptive analysis for the number of partners of the audit firms and has identified most of the audit firms have two partners. It is 31% of the total number of responded audit firms. When it considering the number of services provided by the responded firms, 26.2% of the responded firms are providing 3 services as Audit, Tax, and Advisory.

Furthermore, the researcher conducted descriptive analysis on the construct items and this has measured using the mean values and the standard deviation values of the variables. This study has developed based on five independent variables that included occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity, and a dependent variable, green innovation performance. According to the findings of descriptive analysis, the mean value of the occupants' awareness score ranges between 3.71 ($\pm .1082$) and 4.40 ($\pm .494$). Also, all the mean values of occupants' awareness ranged around the agreed point. When it comes to the environmental commitment, the mean values of this variable ranged from 4.12 ($\pm .884$) to 4.45 ($\pm .666$) and all the mean values are around the agreed point. When considering the stakeholder pressure and health benefits, mean values of those variables are ranged from 2.21 ($\pm .808$) to 4.05 ($\pm .579$) and from 3.64 ($\pm .652$) to 4.55 ($\pm .501$) respectively. All those means values are around the agreed point. When it comes to the environmental proactivity, the mean values of this variable are ranged from 3.64 ($\pm .642$) to 4.60 ($\pm .494$) and all the mean values are around the agreed point. Above mentioned facts under the demographic profile and construct, items are identified by the researcher as the key findings of the study.

4.2 Findings: Regression Analysis

4.2.1 Multiple regression analysis

Table 7: Summary of R^2 and adjusted R^2

Model	R	Model Summary		
		R^2	Adjusted R Square	Std. Error of the Estimate

1	.469 ^a	.220	.170	.24757
Predictors: (Constant), AV_Proactivity, AV_Health, AV_Stakeholder, AV_Occupant, AV_Commitment				
Source: Survey data				

Table 7 shows the overall predictability of the model. The adjusted R² value of 0.170 indicates that occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity are collectively explaining 17% of the variance of green innovation performance in audit firms.

Table 8: ANOVA Values

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.345	5	.269	4.388	.001 ^b
	Residual	4.781	78	.061		
	Total	6.126	83			

a. Dependent Variable: AV_Green_Innovation

b. Predictors: (Constant), AV_Proactivity, AV_Health, AV_Stakeholder, AV_Occupant, AV_Commitment

Source: Survey data

Table 8 shows that the p-value of 0.001 is less than 0.05 which means that there is a significant correlation between the dependent variable and independent variables. Also, a considerable F-value of 4.388 means that the model and data are a healthy fit in explicating the green innovation performance of audit firms.

Table 9 presents the coefficient analysis which shows the relationship between green innovation performance and each independent variable; occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity.

Table 9: Coefficients values of multiple regression analysis

		Coefficients ^a			T	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
	(Constant)	1.662	.488		3.403	.001
	AV_Occupant	.068	.081	.113	3.110	.003
	AV_Commitment	-.033	.111	-.054	2.834	.006
	AV_Stakeholder	.201	.094	.254	3.817	.000
	AV_Health	.046	.092	.052	.655	.514
	AV_Proactivity	.124	.101	.241	3.951	.000

a. Dependent Variable: AV_Green_Innovation

Source: Survey data

To support the hypotheses, sig. value/ p-value should be less than 0.05. Hence, except for health benefits, other hypotheses can be supported because of their sig. values are less than 0.05. To have a positive relationship, the B value should be positive. Therefore, Independent variables;

occupants' awareness, stakeholder pressure, and environmental proactivity have a significant positive relationship with green innovation performance. However, it was observed there is an unexpected significant negative relationship between environmental commitment and green innovation performance because its B value is negative.

4.3 Discussion of the Results: Hypotheses Testing

The researchers identified five independent variables, namely, occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity. Five hypotheses were statistically tested on the relationship between independent variables and the dependent variable.

H₁: There is a significant relationship between occupants' awareness and green innovation performance.

It is hypothesized occupants' awareness has a significant effect on green innovation performance (H₁). The parameter estimates results (p -value = 0.003, t -value = 3.110) are around the agreed points ($p < 0.05$). Therefore, according to those results, the H₁ hypothesis can be supported. It explains that there is a significant relationship between occupants' awareness and green innovation performance. When considering the past studies about the relationship between occupants' awareness and green innovation performance, environmental-friendly buildings can provide a competitive advantage over rivals in the industry because it helps to build up a sound organizational image (Kato, Too & Rask 2009). The commitment relating to environmental sustainability has become one of the valuable assets that an organization has while considering the increasing public awareness and researchers have identified that the organizations which are maintaining a sound environmental recording system would not only have a higher standing with the public but also more developed positive relationships with the environmental regulators (Makower 1994). Human resources in an organization can be viewed as another very important part in the process of environmental strategy formulation and implementation process in an organization because the success of the environmental strategies would be depending on general problems which are rising with environmental changes and benefits and costs associated with these environmental issues (Hart 1995, Klassen & Angell 1998). Hence, as per these studies, occupants' awareness regarding the environment and applying the green concept has a significant impact on introducing a green workplace environment to audit firms.

H₂: There is a significant relationship between environmental commitment and green innovation performance.

It is hypothesized environmental commitment has a significant effect on green innovation performance (H₂). The parameter estimates results (p -value = 0.006, t -value = 2.834) are around the agreed points ($p < 0.05$). Therefore, according to those results, there is a significant relationship between environmental commitment and green innovation performance. When considering the past studies about the relationship between environmental commitment and green innovation performance, environmental commitment is explained as a set of resources and various efforts that an organization uses for the best of environmental protection and environmental management (Henriques & Sadorsky 1999). As per Keogh and Polonsky (1998), environmental commitment has been identified as a necessary attribute for organizations to get social support. However, it was

observed there is an unexpected significant negative relationship between environmental commitment and green innovation performance because its B value under regression analysis is negative. Therefore, it is contrary to the literature.

H₃: There is a significant relationship between stakeholder pressure and green innovation performance.

It is hypothesized stakeholder pressure has a significant effect on green innovation performance (H₃). The parameter estimates results (p -value = 0.000, t -value = 3.817) are around the agreed points ($p < 0.05$). Therefore, according to those results, the H₃ hypothesis can be supported. It explains that there is a significant relationship between stakeholder pressure and green innovation performance. When considering the past studies about the relationship between stakeholder pressure and green innovation performance, stakeholders can be defined as parties who can affect a company's performance and who can be affected by the company's operation (Freeman 1984). In explaining the above definition, Freeman (1984) emphasized that companies produce externalities to both internal as well as external parties. These externalities always make an impact on the stakeholders to make pressure on the company's performance. Responding to these pressures of stakeholders may require capabilities relating to organizational learning and especially when there are pressures that are conflicting and derived from a variety of stakeholders (Roome & Wijnen 2006). Hence, as per these studies, stakeholders make a significant impact on organizational decisions. Therefore it can be concluded that there is a significant relationship between stakeholder pressure and green innovation performance.

H₄: There is a significant relationship between health benefits and green innovation performance.

It is hypothesized health benefits have a significant effect on green innovation performance (H₄). The parameter estimates results (p -value = 0.514, t -value = 0.655) are not around the agreed points ($p < 0.05$). Therefore, according to those results, the H₄ hypothesis cannot be supported. It explains that there is not a significant relationship between health benefits and green innovation performance. When considering the past studies about the relationship between health benefits and green innovation performance, high work-related stress has been one of the major reasons for job dissatisfaction and poor work performances (Ismail & Tan 2011). Absenteeism, illness, alcoholism, bad decisions, lack of motivation, indifference, and apathy are also the impacts of being over-stressed in the workplace (Arandelovic & Ilic 2006). As a result, most of the employees in audit firms are not considering much about health benefits that they can be obtained from audit firms since they are facing more stress. Therefore, as per these studies, health benefits do have not much impact on introducing a green office environment. Hence, there is no significant relationship between health benefits and green innovation performance.

H₅: There is a significant relationship between environmental proactivity and green innovation performance.

It is hypothesized environmental proactivity has a significant effect on green innovation performance (H₅). The parameter estimates results (p -value = 0.000, t -value = 3.951) are around the agreed points ($p < 0.05$). Therefore, according to those results, the H₅ hypothesis can be supported. It explains that there is a significant relationship between environmental proactivity and green innovation performance. When considering the past studies about the relationship between

environmental proactivity and green innovation performance, Environmental proactivity can be defined as the voluntary and participatory implementation process of practices as well as initiatives that are designed to improve the environmental performance and which will be able to be manifest through various kinds of strategies. Not only that each strategy is characterized using a set of environmental practices (Hart 1995, Vastag, Kereks, & Rondinelli 1996, Aragon-Correa 1998, Henriques & Sadorsky 1999, Buysse & Verbeke 2003). Bansal and Roth (2000), have identified different kinds of motivations which are leading to a higher level of environmental proactivity and it has been identified that various motivational factors induce the implementation of the portfolio of environmental practices. Hence, as per these studies, it can be concluded that there is a significant relationship between environmental proactivity and green innovation performance.

Hence it can be concluded that considering the findings of this study and illustrations of previous studies; influencing factors to the green innovation performance are occupants' awareness, stakeholder pressure, and environmental proactivity.

5 SUMMARY AND CONCLUSION

The main purpose of this research study is to investigate what are the factors affecting the establishment of a green workplace in an audit firm. According to the main research problem, the research design was developed. Also, research objectives were developed based on the research questions.

When considering the establishment year of the audit firms, most of the firms are established before 2001 and it shows by 71.9% as a frequency. Also, most of the firms have 1-100 employees in their audit firms and it is around 76.2% as a frequency. Moreover, the audit firms which have the highest number of employees; between 100-3000 were few and it is explained by 23.8%. According to the number of branches that each firm has, most of the firms have only one branch and it is explained by 53.6%. But only 2.4% of the firms have more than four branches. Moreover, the researchers conducted a descriptive analysis for the number of partners of the audit firms and have identified most of the audit firms have two partners. It is 31% of the total number of responded audit firms. There were only 22.6% of firms that have more than three partners. There is only one firm from responded firms which has fifteen partners engaged in their audit firm. Moreover, 16.7% of firms from the responded firms have only three partners. Therefore, it can be concluded that most of the responded firms have only two partners. When it considering the number of services provided by the responded firms, 26.2% of the responded firms are providing 3 services as Audit, Tax, and Advisory. On the other hand, 7.1% of the responded firms provide 1 service, and 7.1% of firms supply 6 services. 23.8% of the responded firms provide 5 services. Accordingly, the selected sample reflects that characteristic of the population where out of 84 responded firms the majority of the firms are providing 3 services to their clients.

When considering the occupants' awareness, respondents have positively responded to the research questions provided under occupants' awareness. Most of the respondents were strongly agreed with the statement that the company has a wastage reduction program to enhance the employees' awareness. Therefore, it confirms that at the moment there is no issue regarding the occupants' awareness in audit firms. When considering the environmental commitment, respondents have positively responded to the questions provided under environmental commitment. Most of the respondents strongly agreed with the statement that "I usually direct my

employees towards environmental commitment”. Therefore, it confirms that the audit firms are committed to applying the green concept in audit firms. Although mean values of stakeholder pressure score range between 2.21 to 4.05, some firms are neutral to the question that stakeholders of the organization have a positive influence on the organization's green practices. Under the health benefits, the overall result is audit firms think that they can obtain health benefits through introducing a green office environment. Regarding the environmental proactivity, audit firms reacted positively. The mean values of the variable ranged between 3.64 to 4.60.

When considering the derived p-values concerning the regression analysis, it was observed that occupants’ awareness has a significant effect on green innovation performance (H_1) and it is a positive relationship. According to the findings, there was a significant relationship between environmental commitment and green innovation performance (H_2). However, it is an unexpected negative relationship. Moreover, based on the findings the H_3 hypothesis was supported and it explains that there is a significant relationship between stakeholder pressure and green innovation performance and it is a positive relationship. Furthermore, according to those results, the H_4 hypothesis was not supported. It explains that there is no significant relationship between health benefits and green innovation performance. Moreover, according to those results, the H_5 hypothesis is supported. It explains that there is a significant relationship between environmental proactivity and green innovation performance and it is a positive relationship. All in all, by considering the p-values derived from the multiple regression analysis, it can be concluded that occupants’ awareness, stakeholder pressure, and environmental proactivity have a significant effect on the green innovation performance, but health benefits have not a significant effect on the green innovation performance of the audit firms.

The overall study provides comprehensive data on discussing the achievements of specific objectives as well. Therefore, present audit firms can implement the findings to real-world audit firms when applying green office environment and when following environmentally friendly strategies. Furthermore, it can covert threshold competencies into core competencies that provide competitive advantages over rivals.

Based on the empirical findings and knowledge gathered through the research experience, the researchers can conclude suggestions and recommendations to real-world audit firms. Most business organizations are nowadays trying to apply green office background to their business organizations. Since this is a new concept to Sri Lankan audit firms, they should identify what the factors are affecting when introducing this new concept. Since audit firms are much focusing on providing quality and professional service to their clients, they can improve the quality of service by applying this green concept to their day-to-day operations. Then if the clients came to the office, they will be more satisfied with the service they are getting from the audit firm as well as with the office background that exists within the firm. Therefore, applying green office background will be much helpful for audit firms in providing quality service to their clients. On the other hand, since this concept is not still applied in audit firms, it will facilitate the audit firms to obtain a competitive advantage over rival firms. Therefore, if the firms can apply this concept, it is very healthy to the firms’ future performance as well. Therefore, it is recommended to conduct environmentally friendly strategies such as environment protection campaigns, wastage reduction at the firm, electricity conservation, water conservation, and recycling, etc. Moreover, if firms applying this green office background to their office environment, the firms obviously will be able to solve the problem of employees’ turnover since the employee turnover rate is comparatively high in audit

firms. It is because most firms do not much consider the health level of employees. The employees in audit firms are working with more stress to meet the deadlines of audits. It can create workplace stress for employees. Therefore, the management of the firms should plan remedies for this problem. Workplace stress through the workload can create because of the turnover of an employee. If the organization is planning to replace the employee that has left, they should have potential replacements on hand to fill that voids. But replacing a new employee with any void is highly cost-consuming and needs to spend a lot of time identifying, interviewing, selecting, and training. Therefore, applying this green office background will be able to provide a less stressful environment to work. As a result, the firms will be able to retain their employees within the organization. If the organization can develop it up in the future, it is very healthy for the organization's performance. Although there are costs, risks, and a lot of time-consuming with these recommendations, the researcher believes that audit firms can apply green office environment strategy using these recommendations. Furthermore, it helps to provide high quality and professional service to their clients as well as a friendly background to their employees.

Within this research, the researchers faced some limitations. This study is focused on only one particular industry called audit firms in Sri Lanka. Further, it narrows down to one particular district as audit firms in the Colombo district. But the researchers suggest applying the findings of this research study to all audit firms. The behaviors of each audit firm are different from each other. Even though the researchers trying to apply those findings to all audit firms, the researchers could not be able to collect data from a sample that represents whole audit firms. Also, the findings of this study entirely cannot be applied to other industries. Furthermore, this study focused on few factors such as occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity only. But there might be some other factors that can be affected for introducing a green office environment that is not taken into accounts when conducting this study. Also, the researchers collected data regarding the above-mentioned factors at only one particular time. It was not a continuous data collection process. Therefore, the status regarding those factors can be changed from time to time. Moreover, the present study examines only five independent variables which can be affected by the introduction green office environment such as occupants' awareness, environmental commitment, stakeholder pressure, health benefits, and environmental proactivity. But some other factors can be determined green innovation performance and future researchers can develop their studies based on those factors by using possible sources of literature. Therefore, it can be a considerable limitation of the research study.

Furthermore, future researchers can develop their research studies based on a wider scope than this study such as covering all the audit firms in Sri Lanka when selecting the sample. Then it can provide better results that can apply to whole audit firms or/ and particular organizations. Moreover, it can be recommended that future research studies can be done of a qualitative nature to conduct in-depth study and get more idea about the issue. Because, it was noted that respondents were ready to provide more details regarding the problem, but the designed questionnaire was not allowed them to elaborate on all those things. Qualitative research studies support getting in detailed information, capture executive-level employees' emotions, and observing their behavior patterns. Thus, it is recommended that in the future, the researchers could collect data from the middle and lower-level employees within the audit firms. It can be useful to get more ideas under different aspects in this regard.

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