

The Influence of Pro-Environmental Behaviour on the Leadership for Sustainability Among Employees in Jakarta

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Abstract

Green Business has been a detrimental topic to the current industry in almost every sector. Therefore, there need to be actions that help us transition into a more sustainable future. This research studies how Pro-Environmental Behaviour (PE) might influence Leadership for Sustainability (LS) and how this could motivate others to have a more sustainable lifestyle. This study is carried out with questionnaires for employees in Jakarta. It will be analyzed using the Rasch measurement model and Linear Regression analysis. As for how it turned out, PE indeed proved to have a significant influence on LS. Therefore, most people do have a high degree of PE and LS. Most people who have a high degree of LS were also accompanied by a high degree of PE. This implies that most people have a vision for a better, more sustainable future and are actively working towards it. Therefore, there should be help from businesses to help them achieve this. The questionnaires were filled out by 221 respondents, and a total of 191 were taken as valid responses.

Keywords

Pro-Environmental Behaviour, Leadership for Sustainability, Green Business, Sustainable Future

1. Introduction

Green Business has been a detrimental topic to the current industry in almost every sector possible. Cases of environmental pollution have been increasing over the years (Maciel 2017). As ecological pollution keeps growing, problems revolving around environmental health such as flooding, increased temperature, air pollution, and so on will also increase (Maciel 2017; McKinsey 2021). Businesses are being railed against this issue because the business process always impacts the environment regardless of its significance (Maciel 2017). Therefore, the business must focus on this topic as they are the primary source of the problem.

Green management refers to producing environmentally friendly products or services. They are practicing their business process with behaviour that minimizes the harmful environmental impact of their packaging, marketing, and so on (McKinsey 2021). Building sustainability will not be just a trend anymore. Instead, it will be the standard for the market, meaning pro-environmental behavior is on the rise, and it is not showing any signs of stopping (McKinsey 2021).

There is a pretty clear rise in green consumerism where the consumer would choose the option that is more sustainable. To help prove this statement, a survey done by (OneTreePlanted 2019) reveals three important points in green consumerism. The first, consumers would expect businesses to do their business more than just to turn a profit. Second

consumers would stop buying products from certain businesses if they learned that the company is doing irresponsible business practices (OneTreePlanted 2019). Third, Most people are ready to drop a brand if they find out that this brand is doing something irresponsible in its business practices. In conclusion, green consumerism has increased, and more people have actively switched to a more sustainable option instead of choosing a cheaper or easier option (OneTreePlanted 2019; McKinsey 2021).

1.1 Objectives

The research aims to discover the following things:

1. Employees residing in Jakarta show a degree of pro-environmental behavior or green business.
2. The degree of leadership for sustainability from employees residing in Jakarta.
3. Significance of relation pro-environmental behavior has on sustainable leadership for employees residing in Jakarta.

2. Literature Review

2.1 Pro-Environmental Behaviour in Action

When discussing pro-environmental behavior in action, one must showcase what's considered one and what's not. With the ever-growing mindset, especially in the younger generation, strangely enough, the concept of what is sustainable still differs from one to another (Eriksson et al. 2020). Fortunately, there seems to be an agreement on what is considered unsustainable. This at least helps unite the mindset on which action isn't going towards pro-environmental behavior and, therefore, can be avoided (Eriksson et al. 2020). The grand line of putting pro-environmental behavior in action is to save energy and reduce toxins. These behaviors can be as simple as turning the lights off when not used or using sunlight as a light source instead of electricity (Jans 2021).

These things are a small step in saving energy that leaves a huge impact. It can gradually go to a more complex form of saving power from here, such as using refills instead of a one-time use product, recycling product packaging instead of throwing it out, stopping using fast fashion products, and more. The energy-saving impact caused by each action shows to be more prominent but also more costly, whether in the form of money or time. It is no lie that switching to pro-environmental behaviors is expensive (Jans 2021). Still, without changing to this course of action, global warming may cause effects that might be irreversible in the future. It would even be more costly than now. Campaigns and education regarding pro-environmental behavior have been around for some time. It has been shown to increase the likelihood of people trying to switch to these actions as their lifestyle. Some of them are campaigns like 'save the turtle,' 'earth hour,' and more (Eriksson et al. 2020; Jans 2021). Even though many people treat this kind of campaign mainly as a trend, it brings a positive result to this problem. Even more, pro-environmental behavior is addressed as the 'new cool' these days, and if a trend is supposed to be good, this is most likely to be one of them.

The section above shows pro-environmental behavior in its general form. Big corporates are mainly the contributor to these global warming causes. They tend to waste chunks of energy and produce a lot of toxins that they don't process in the effort of cost-saving. Thankfully as the younger generation takes place in the workforce, they do some changes toward pro-environmental behavior, especially in the workplace (Pabian & Pabian 2022). Changing a corporate structure or process will be a tough challenge. However, applying pro-environmental behavior could help slowly change these organizations' culture, which eventually helps keep their system under regulations that overlook their impact on the environment (Eriksson et al. 2020; Jans 2021; Pabian & Pabian 2022).

The most significant factor that allows sustainable pro-environmental behavior in the workplace is the appearance of sustainable managers. Their knowledge in the sustainability field would help make others in the workplace take this guidance better (Pabian & Pabian 2022). The main point of having sustainable managers is mostly to lead their subordinates to adopt and adapt pro-environmental behaviours in their workplace, practicing them in their daily lives and encouraging others to do the same. But occasionally, sustainable managers can also help lead a sustainable innovation, whether profitable or increasing efficiency, which is a rare case but a tremendous help to the organization (Eriksson et al. 2020); (Jans 2021); (Pabian & Pabian 2022).

Sustainable innovation is considered a considerable advantage since sustainability is seen as a competitive advantage in this day and age, just like in the background of the research where we can see that people are willing to buy sustainable packaging even if it costs more. Sustainable managers knowledgeable in this area can help promote pro-

environmental behaviors in the workplace. They encourage others and hopefully work on a new system that is more efficient or might even be profitable to the organization. The bottom line is bringing advantages to the organization as to how this trend unfolds in the future. The previous study found various ways to make the workplace more sustainable. The simplest act is practicing pro-environmental behaviour as they learn from sustainable managers (Pabian & Pabian 2022).

(Cobb-Walgren & Pilling 2017) has researched, students might show stronger attraction towards the rewarding experience. On the other hand, misconceptions about green business practices could also surface as green businesses are deemed more costly, have more restrictions, and the list goes on. Therefore, education about the misconception will help students have a better and more positive attitude towards green business practice, which is highly needed (Cobb-Walgren & Pilling 2017). Other than rectifying misconceptions about green business practice, other factors also help in motivating green business practice, being extrinsic and intrinsic factors. Within its own explanation, outside factors talk about external forces that have a role in motivating oneself, whether positive or negative, and inherent factors would be the other way around. (Binti et al. 2017) found in their research that most employees would commit when they are satisfied, which usually comes from the internal factor of motivation.

Therefore, in its bottom line, there should be entrepreneurship education for both students, especially in green business practice, to derive any misconceptions they might have as well as develop their entrepreneurial intention, making green business practice viable and growing ecopreneurs from students (Binti et al. 2017). If every student could adopt green mindset and green business practice, then hopefully in the future, businesses would have better ethical decision-making that actually reduces the negative impact of a company on the environment to as low as it can get. The green mindset should be implemented in young generation. Businesses should reduce activities that cause negative impacts in the future. Hence pro-environmental behavior is needed at its highest urgency (Binti et al. 2017).

When talking about the dimensions of pro-environmental behaviour, one of the main values we can pick out would be the biospheric value. Biospheric value refers to the behaviour and attachment to caring about nature and the environment involved (Wang et al. 2021). Biospheric value is considered to be one of the main values as how they are believed to be kind of a root of pro-environmental behaviour. According to (Wang et al. 2021), these personal biospheric values indirectly influences pro-environmental behaviour meaning these values are subconsciously making people choose the option that is more sustainable. In this study, there are 3 indicators that we placed as biospheric values and that is:

- PE1: I think about my actions that gives impact to the environment.
- PE2: I volunteer to do pro-environmental behaviour in my workplace.
- PE3: I took initiative in protecting my workplace environment effectively.

Along with biospheric values, altruistic values are related to pro-environmental behaviour as they advocate benefits for the environment, not for personal interest or gain (Wang et al. 2021). Generally, altruistic values refer to the well-being of others, however, in this context, altruistic values refer to the environment as well, caring about the well-being of others and how they connect with nature. In this study, there are 3 indicators that we placed as altruistic values and that is:

- PE4: I invite my co-worker to care about the workplace environment.
- PE5: I encourage my co-worker to do pro-environmental behaviours.
- PE6: I actively discussed about ecological issue with my co-worker.

Utilizing can be internal or external where it can be more on personal behaviour or doing it with the hope of inviting others to do the same (Linder et al. 2022). Utilization values of pro-environmental behaviour most of the time encourages others to do the same. In this study, there are 4 indicators that we placed as utilization values and that is:

- PE7: I actively participate in pro-environmental behaviour acts in my workplace.
- PE8: I actively spread information about pro-environmental behaviours in my workplace.
- PE9: I actively contribute in pro-environmental behaviours to protect my company's image.
- PE10: I am a volunteer for pro-environmental project in my workplace.

2.2 Leadership for Sustainability Implementation

The green business practice has been considered a good business approach because of its flexibility. It helps contribute to the economy and generate profit, which would be the main reason for a business. However, businesses must realize that they harm the environment through their business process, which is called eco-efficiency (Ekahe & Raymond

Uwameiye 2019). Therefore, they ought to adapt to the green business practice no matter what their industry stands on. Environmental issues have also become increasingly important today, resulting in increased demand for environmentally friendly products. A business could see this as an opportunity, a competitive advantage, instead of a burden to increase their expenditure to have a greener process or product (Ekahe & Raymond Uwameiye 2019). Although implementing green business practices is considered good, it still does not necessarily protect the environment itself because the nature of a domain is a complex structure. However, continuous planning, policies, and implementation of a greener way of living and business practice can help repair the environment (Loknath & Azeem 2017).

When talking about making businesses internal better from the effort of leadership for sustainability, one of the biggest topics we will talk about is usually around the concept of employee well-being, mostly their spiritual states towards their job and their life (Loknath & Azeem 2017). Employee well-being is the core of what makes businesses internal better as with good employee well-being usually there's a higher productivity rate compared to companies with higher-paid employees but low employee well-being rate. There are three vital components that directly influence employee well-being and that is employee commitment, job satisfaction, and work-life balance (Garg 2017). With the ability of the manager as well as the personnel to institutionalize and be aware of these factors as a part of the company culture, it could lead to better sustainability of the life of the company.

The awareness of these factors helps in creating a better workplace for its employee thus prolonging their worktime by increasing productivity. With the help of these strategies should allow personnel to achieve their true potential by having them work best in their own element, that is why it's very important to have personnel vision align with the company's. However, this doesn't mean that this approach will work in every case, cross-border on every culture and every organization, there are limitations that each company has to find and shape towards their own business, as well as looking at their values, vision, and mission (Loknath & Azeem 2017). Additionally, developing leadership for sustainability with pro-environmental behaviours in mind could turn into economic development for the business according to (Hammer & Pivo 2017)

There are also influences from leaders to their followers where some act of altruism can actually go a long way, making the followers trust the leader and even making them willing to follow for quite some time (Sebahattin 2019). That is why there is very big importance needed to be placed upon choosing the leader or usually in a business would be the manager of an organization because in some cases, there is a high turnover rate of employees because of a manager that acts as they please. One of the main reasons why this topic of leadership for sustainability could correlate with sustainability in terms of green business is that a lot of people nowadays have started to adopt the environmentally aware as a lifestyle, thus wanting to bring that along to their workplace (Sebahattin 2019).. Having a company that doesn't support that decision and keeps producing uncontrolled waste could also be one of the reasons why employees are not satisfied as it goes against their principles. Meanwhile, a company that adopts these green business mindsets when matched with personnel (who mostly have adopted this mindset now) could help increase the personnel's well-being by aligning both of their values together (Sebahattin 2019).

The appearance of a leader in this sense is very important since the objective of a leader is to align people with the shared vision (Leal Filho et al. 2020). This remains true to the fact that the mindset of choosing a sustainable choice can be motivated and encouraged by the appearance of these leaders. In this study, there are 4 indicators that we placed as utilization values and that is:

- LS1: My company have a sustainable vision.
- LS2: Sustainable vision inspired me to do my best work.
- LS3: A sustainable vision is my commitment.
- LS4: I'm interested in a sustainable vision.

According to the study done by (Islam et al. 2020), a good level of trust actually brings in good benefits such as a higher approach to work engagement. A study done by them shows that the level of work engagement is influenced positively by the degree of trust the followers have in the leader. In this study, there are 4 indicators that we placed as trust values and that is:

- LS5: I actively participate in reaching a sustainable vision for the company.
- LS6: I support in the achievement of a sustainable vision.
- LS7: I commit to the sustainable vision of a company.
- LS8: I fully support the success of a sustainable vision.

Altruism value in a leader helps develop an ethical leadership where being altruistic and having integrity go hand in hand (Engelbrecht et al. 2018). Altruism strongly affects how ethical decisions were made in a business and that also affects organizational effectiveness. In this study, there are 5 indicators that we placed as altruism values and that is:

- LS9: The current leader of this company has integrity.
- LS10: The current leader of this company is honest.
- LS11: Company is loyal to its employee.
- LS12: The current leader is bold to defend its employee.
- LS13: Company is giving its attention to its employee.

3. Methods

The study used a quantitative approach in comparative research design to perform research on the influence *Pro-Environmental Behaviour* has on *Leadership for Sustainability*. There are two questionnaires to measure this influence, the first one is for *Pro-Environmental Behaviour* which consists of 10 indicators from 3 dimensions, biospheric, altruistic, and utilization (Wang et al. 2021; Linder et al. 2022). The second questionnaire is for *Leadership for Sustainability* which consist of 13 indicators from 3 dimensions, vision (Leal filho et al. 2020; Islam et al. 2020; Engelbrecht et al. 2018). Primary data was collected from personal questionnaire with close-ended questions on a five point Likert scale. The first analysis method is through Rasch model analysis using Winsteps software to examine the validity and reliability of the instrument, as well as cleaning and data conversion to interval data (Sumintono & Widhiarso 2014). Hypotheses test is provided by using both Rasch model analysis and Linear Regression analysis.

The study collected the primary data from 221 employees in Greater Jakarta using a 5-point Likert scale close-ended questionnaire. Through the data cleaning, only 191 respondents are taken as valid responses. These 191 respondents are taken as valid response because their MNSQ value is between 0.5 to 1.5 which is considered as bias-free (Sumintono & Widhiarso 2014).

The Rasch model analysis is used to examine validity and reliability of the questionnaire items, cleaning and data conversion, and examine research hypotheses using Winsteps software. The validity and reliability of the items in this research are shown in Table 1. Using Rasch model analysis, researcher is able to conver ordinal data from the five point Likert scale into interval data which may be used in Linear Regression analysis (Sumintono & Widhiarso 2014). The Rasch model is the most fitting technique for quantitative analysis since the data generated is ordinal data and it's based on probability. Furthermore, the Rasch model helps eliminating biased data on self-report questionnaire such as the one used in this research.

The table below (Table 1) shows the Cronbach's alpha for the instrument reliability are 0.91 and 0.87, this indicates that there is an excellent interaction between the item and person for *Pro-Environmental Behaviour* and shows a good interaction between the item and person for *Leadership for Sustainability* (Sumintono & Widhiarso 2014). For *Pro-Environmental Behaviour*, it shows that the person reliability to be 0.90 meaning there is a great consistency on respondent's response and the item reliability to be 0.98 meaning there is an excellent reliability on the questionnaire's item, however, there is 1 item that is not valid for having MNSQ value more than 2 and that is PE1 (I think about my actions that gives impact to the environment). For *Leadership for Sustainability*, it shows that the person reliability to be 0.87 meaning there is a great consistency on respondent's response and the item reliability to be 0.96 meaning there is an excellent reliability on the questionnaire's item, and all of the items from the questionnaire is valid for having MNSQ value between 0.5 to 1.5 (Sumintono & Widhiarso 2014).

Table 1. Reliability and Validity Test Results

Research Variables	Alpha Cronbach	Person Reliability	Item Reliability	Item Validity
Pro-Environmental Behaviour	0.91	0.90	0.98	9 items – accepted 1 item – rejected
Leadership for Sustainability	0.87	0.87	0.96	13 items – accepted

Source: Primary Data, 2022

4. Data Collection

The study was carried out in Greater Jakarta, Indonesia, in 2022 among employees. The research was carried from March 2022 to June 2022. In response to the literature review, a questionnaire was developed from the variables and dimensions. The method for data collection is through personal questionnaire and convenience sampling using cross-sectional time horizon among employees in Greater Jakarta. The usage of convenience sampling is due to the cost and time constraints upon researcher as well as maximizing efficiency since convenience sampling is based on proximity (QuestionPro 2018). The supporting ground for using convenience sampling is due to the unlimited population of employees in Greater Jakarta.

The study obtained primary data from 221 employees in Greater Jakarta which is dominated by male respondent (62%), respondent aged from 21 to 30 years old (52,5%), respondents having a bachelor's degree (66,5%), respondents being Christian (33,5%), respondents having work experience for 2 to 5 years (42,5%), and respondents working as a staff – officer (33,9%).

5. Results and Discussion

5.1 Rasch Model Analysis

In the Rasch's measurement model approach, item measure is used to determine frequency of an item being carried out by respondent in the questionnaire (Sumintono & Widhiarso 2014). Measure is being calculated the same way an item is being interpreted in a wright map where the higher the position of the item in the map means the rarer the item is and the lower the position of the item in the map means the more frequent the item is.

Table 2. PE and LS Item Measure

Pro-Environmental Behaviour Item Measure		
Item	Measure	Explanation
PE8	1,04	Rarest Item In The Measure
PE9	-1,14	Most Frequent Item In The Measure
Leadership For Sustainability Item Measure		
Item	Measure	Explanation
LS12	1,55	Rarest Item In The Measure
LS1	-1,38	Most Frequent Item In The Measure

(Source: Primary Data, 2022)

The interpretation of these numerical results are:

- Highest measure of item for Pro-Environmental Behaviour is on PE8 with score of + 1,04 logit with the statement of: *I actively spread information about pro-environmental behaviours in my workplace*. This means that most respondents agreed that this item is the rarest event they have experienced.
- Lowest measure of item for Pro-Environmental Behaviour is on PE9 with score of – 1,14 logit with the statement of: *I actively contribute in pro-environmental behaviours to protect my company's image*. This means that most respondents agreed that this item is the most frequent event they have experienced.
- Highest measure of item for Leadership for Sustainability is on LS12 with score of + 1,55 logit with the statement of: *The current leader is bold to defend its employee*. This means that most respondents agreed that this item is the rarest event they have experienced.
- Lowest measure of item for Leadership for Sustainability is on LS1 with score of – 1,38 logit with the statement of: *My company have a sustainable vision*. This means that most respondents agreed that this item is the most frequent event they have experienced.

Person wright map tells the degree of the variable at study for each respondent of the study, thus person of the research. In the wright map, respondent having a positive logit or going upwards to the more section means the person have higher degree of the variable, and having negative logit or going downwards to the less section means the person have lower degree of the variable (Sumintono & Widhiarso 2014). This research generated wright map with the help of Winsteps software. The result of the person wright map are as follow:

Table 3. Person Wright Map – Mapping

Variables	High (%)	Low (%)	High LS (%)	Low LS (%)	Total (%)
Pro-Environmental Behaviour	78.5	21.5	-	-	100
Leadership for Sustainability	83.2	16.8	-	-	100
High Pro-Environmental Behaviour	-	-	96.11	3.89	100
Low Pro-Environmental Behaviour	-	-	5.41	94.59	100

(Source: Primary Data, 2022)

The wright map indicated that most respondents have a high degree of *Pro-Environmental Behaviour* (78,5%) and high degree of *Leadership for Sustainability* (21,5%). Meanwhile, on the comparison, most respondents who have a high degree of PE also have a high degree of LS (96,11%) and most respondents that have a low degree of PE also have a low degree of LS (94,59%).

Table 4. Rasch Model Difference Test

Code	Mean Measure
* (ALL) / MEAN	4.03 logit
R	1.25 logit
T	4.48 logit
PROBABILITY VALUE	
0.000	

(Source: Primary Data, 2022)

Based on the result from Rasch measurement model as shown on the table above, probability value shows to be 0.000 where probability value of $0,000 < 0,05$ means that there is a significant difference in low degree of *Pro-Environmental Behaviour* and high degree of *Pro-Environmental Behaviour* towards the dependent variable *Leadership for Sustainability*. Through the mean measure, it is shown that respondent with low degree of *Pro-Environmental Behaviour* tend to shows minimum reaction towards *Leadership for Sustainability* whereas respondent with high degree of *Pro-Environmental Behaviour* tend to be the other way around, which shows high degree of *Leadership for Sustainability*.

5.2 Statistical Hypotheses Testing

The study uses linear regression analysis as the second method of analysis to measure the influence the independent variable have on the dependent variable (Statistics Solutions 2013). Linear regression can be used to predict or forecast the phenomenon happening with simple equation known as regression equation. The table below (Table 5.4) shows the regression equation between *Pro-Environmental Behaviour* and *Leadership for Sustainability*.

Table 5. Unstandardized Coefficient Analysis Table

UNSTANDARDIZED COEFFICIENT ANALYSIS TABLE	
MODEL	Unstandardized Coefficients
(Constant)	43.296
PE	0.449

(Source: Primary Data 2022)

In the table shown above, we can determine that the regression equation for this research to be: $Y=43,296+0,449X$. This means that for each score of *Pro-Environmental Behaviour*, it adds another 0,449 score to the overall score of *Leadership for Sustainability*. This equation models shows that *Pro-Environmental Behaviour* shows to have a positive influence on *Leadership for Sustainability*.

Table 6. Model Summary Analysis Table

MODEL SUMMARY		
Model	R	R Square
1	0.634	0.402

(Source: Primary Data 2022)

Based on the SRSS table output, R2 result achieved on 0,402, therefore we can draw a conclusion that 40,2% of the variable Pro-Environmental Behaviour affect the changes in the variable Leadership for Sustainability, meanwhile the remaining 59,8% might be explained by other variables.

Linear regression in this research is used mainly for its tool to prove hypotheses being true or false (Statistics Solutions 2013). With a subset of directions, we can prove a hypotheses to be true or false, with the help of SPSS result. The hypotheses made for this research are as follows:

H0 : There is no significant influence on Pro-Environmental Behaviour from the concept of Leadership for Sustainability

H1 : There is a significant influence on Pro-Environmental Behaviour from the concept of Leadership for Sustainability

Table 7. Linear Regression Coefficient Analysis

COEFFICIENT ANALYSIS TABLE			
MODEL	t	Sig.	t table
(Constant)	14.695	0.000	1.65
LS	11.261	0.000	

Source: Primary Data. 2022

Based on the SPSS table output, achieved t calculated to be 11,261 that is higher than t table which is 1,65 and being supported with the result of significancy value to be 0,000 that is smaller than alpha value which is 0,05, therefore, we can draw the conclusion that there is a significant influence from *Pro-Environmental Behaviour* towards the *Leadership for Sustainability*. With the result showing that *Pro-Environmental Behaviour* does have a significant influence on *Leadership for Sustainability*, it supports the preceding research where pro-environmental behaviours and habits plays a vital role in making a sustainable leader (Pabian & Pabian 2022; Hammer & Pivo 2017).

5.3 Discussion

The item measure shows us the most frequent and rare item from the self-report questionnaire. In the study, we can find both items from both variables given. From *Pro-Environmental Behaviour*, we can find that PE8 with the statement of *I actively spread information about pro-environmental behaviours in my workplace* to be the rarest they have experienced, meanwhile PE 9 with the statement of *I actively contribute in pro-environmental behaviours to protect my company's image* to be the most frequent they have experienced. On the other hand, from *Leadership for Sustainability*, we can find that LS12 with the statement of *The current leader is bold to defend its employee* shown to be the rarest they have experienced, meanwhile LS1 with the statement of *My company have a sustainable vision* to be the most frequent they have experienced.

The wright map analysis generally show us the image of degree of PE and LS the respondents have. Fortunately, the study found that 78,5% of the respondents have a high degree of *Pro-Environmental Behaviour* and 83,2% of the respondents have a high degree of *Leadership for Sustainability*. Through Rasch model, we can also find how a low and high degree of PE have its effect on LS. As it turns out, 96,11% of respondents that have a high degree of PE also shown to have a high degree of LS. On the other hand, 94,59% of respondents that have a low degree of PE also shown to have a low degree of LS. This shown that PE have its influence on LS which will be explained in the later part.

Through the Rasch model difference test that shows the probability value to be lower than 0,05, pointed out that in this study, there is a significant difference in low degree of *Pro-Environmental Behaviour* and high degree of *Pro-Environmental Behaviour* towards the dependent variable *Leadership for Sustainability*. This difference test serves as the first hypotheses test where it proved that there is a significant difference.

Moving on through Linear Regression analysis, we can find the regression equation to be $Y=43,296+0,449X$. Where Y represents the *Leadership for Sustainability* and X represents *Pro-Environmental Behaviour*, this shows that PE have a positive influence on LS. With the R^2 value being 0,402 also shows that 40,2% of PE responsible for the changes in LS.

Through the coefficient analysis table from SPSS result, we can find the main objective for this study which is the hypotheses test whether *Pro-Environmental Behaviour* have a significant influence on *Leadership for Sustainability* or not. Through the t-test as the second hypotheses test, we can find that t calculated higher than the t table and the significancy value to be smaller than alpha value of 0,5. This draws the conclusion that *Pro-Environmental Behaviour* have a significant influence on *Leadership for Sustainability*. Additionally, the regression equation shows that PE have a positive influence on LS.

The most important discovery of this study is that it is proven to be true that PE does have a significant influence on LS. Using this as a leverage, business could gain competitive advantage in implementing pro-environmental behaviours to achieve the leadership in the sustainability field. Not only businesses, this finding could also be used by governments to make regulations that is pressing more on sustainability. With the significant positive influence PE has, organizational culture should adopt sustainability in its processes to maintain its growth.

These findings aid in the understanding of the preceding research done by (Pabian & Pabian 2022; Hammer & Pivo 2017) where they found that most sustainable leaders are equipped with the knowledge and behaviours of pro-environmental, and pro-environmental behaviour is also presence in making compliance on sustainability. This indicates that pro-environmental behaviour plays a role in making a leader considered as being sustainable and have a sustainability leadership style. The findings of this study has implications for raising self-awareness and developing programs or systems that encourage people to pick a more sustainable options that emphasize more on pro-environmental habits.

6. Conclusion

The topic surrounding green business and sustainable options have increased over the year where companies need to take leadership in sustainability for achieving competitive advantage, however to do that, pro-environmental behaviours and habits are imminent. The study aims to find if there is an influence from *Pro-Environmental Behaviour* towards the *Leadership for Sustainability*. Usage of Rasch model analysis and Linear Regression analysis is done to prove the validity of the hypotheses.

The wright map in Rasch model analysis was used to describe the phenomenon in this research. From the wright map we can draw some conclusions such as: most of the respondents have high degree of *Pro-Environmental Behaviour* (78,5%) and most of the respondents also have high degree of *Leadership for Sustainability* (83.2%), additionally, on the comparison, most respondents that have high degree of *Leadership for Sustainability* also have a high degree of *Pro-Environmental Behaviour* (94,59%).

The study hypotheses were validated by two methods, Rasch model and Linear Regression. The Rasch model indicated that there is a significant difference on *Leadership for Sustainability* from high degree and low degree of *Pro-Environmental Behaviour*. Meanwhile, Linear Regression indicated that there is a significant influence on *Leadership for Sustainability* from *Pro-Environmental Behaviour*.

According to the study's findings, the employees in Jakarta that is considered as consumer market have been actively working towards a more sustainable future by implementing pro-environmental behaviours and making sustainable choices, even in their leadership style. This suggests that the shift to a sustainable future is prominent and businesses might acquired competitive advantage by taking leadership in sustainability. Furthermore, the findings should help raise the awareness from individual, businesses, and even governments to take action and to encourage more sustainable choices.

There are still limitations to the research that can be suggestions for the future research and researchers. First, it would be preferable if the study were done on multiple variables instead of just between two variables, the presence of other variables helps us decide which variables are influencing the independent variable in the study, it also helps us

understand what course of actions we can take to adapt into a more sustainable future. Second, there should be additional research on specific group of people and may even from other proximity area, constraining the amount of population in the study to further clarify the effect these variables has, preferably towards group of people that will be leaders in the future. Last but not least, it would be a great addition to have research on the older generations as how these type of research are mostly done with the younger generations being its object of research. Future research may also connects these variables and object of research into one to further describe the phenomenon.

References

- Binti, M. A., Rasli, M., Afiqah, N., Johari, B., Awanis, N., Muslim, B., & Romle, A. R., Intrinsic and Extrinsic Factors of Job Hopping: A Perspective from Final Year Business Student, *World Applied Sciences Journal*, 35(11), 2308–2314, 2017.
- Caldera, S., Desha, C., & Dawes, L., Exploring the Role of Lean Thinking in Sustainable Business Practice: A Systematic Literature Review, *Journal of Cleaner Production*, 167, 1546–1565, 2017.
- Cobb-Walgren, C., & Pilling, B., Does Marketing Need Better Marketing? A Creative Approach to Understanding Student Perceptions of the Marketing Major, *E-Journal of Business Education and Scholarship of Teaching*, 11(1), 97–117, 2017.
- Coppolino, Joseph, 5 Eco-Friendly Brands Winning the Heart of Consumers, Available: <https://onetreeplanted.org/blogs/stories/eco-friendly-brands>, accessed on 5 June 2022
- Ekahe, F., & Raymond Uwameiye, P., Green Business Best Practices for Enterprises Sustainability in South-South, Nigeria, *International Journal of Business Marketing and Management*, 4, 2456–4559, 2019.
- Engelbrecht, A. S., Kemp, J., & Mahembe, B., The Effect of Altruism and Integrity on Ethical Leadership and Organisational Justice, *Management Dynamics*, 27(4), 2–11, 2018.
- Eriksson, D., Lingqvist, O., Feber, D., Nordigården, D., & Granskog, A., Sustainability in Packaging: Inside the Minds of Global Consumers, Available: <https://www.mckinsey.com/industries/paper-forest-products-and-packaging/our-insights/sustainability-in-packaging-inside-the-minds-of-global-consumers>, accessed on 5 April 2022.
- Feber, D., Granskog, A., Lingqvist, O., & Nordigården, D., Sustainability in Packaging: Consumer Views in Emerging Asia, Available: <https://www.mckinsey.com/industries/paper-forest-products-and-packaging/our-insights/sustainability-in-packaging-consumer-views-in-emerging-asia>, accessed on 10 March 2022
- Garg, N., Workplace Spirituality and Employee Well-being: An Empirical Exploration, *Journal of Human Values*, 23(2), 129–147, 2017.
- Hammer, J., & Pivo, G., The Triple Bottom Line and Sustainable Economic Development Theory and Practice, *Economic Development Quarterly*, 31(1), 25-36, 2017.
- Islam, M. N., Furuoka, F., & Idris, A., The Impact of Trust in Leadership on Organizational Transformation, *Global Business and Organizational Excellence*, 39(4), 25–34, 2020.
- Jans, L., Changing Environmental Behaviour from the Bottom Up: The Formation of Pro-Environmental Social Identities, *Journal of Environmental Psychology*, 73, 101531, 2021.
- Jebolise, E., & Emmanuel, A., Effect of Green Business Practices on Organizational Performance of Selected Manufacturing Firms in Nigeria, *International Journal of Development and Management Review*, 13(1), 1–26, 2018.
- Krishnan, M., What Will a Green Global Economy Cost? Our Experts on the Numbers-and What's at Stake, <https://www.mckinsey.com/about-us/new-at-mckinsey-blog/how-much-will-a-green-global-economy-cost-our-experts-explain>, accessed 10 March 2022
- Leal Filho, W., Henrique Paulino Pires Eustachio, J., Cristina Ferreira Caldana, A., Will, M., Lange Salvia, A., S. Rampasso, I., Anholon, R., Platje, J., & Kovaleva, M., Sustainability Leadership in Higher Education Institutions: An Overview of Challenges, *Sustainability (Switzerland)*, 12(9), 2020
- Linder, N., Giusti, M., Samuelsson, K., & Barthel, S., Pro-Environmental Habits: An Underexplored Research Agenda in Sustainability Science, *Ambio*, 51(3), 546–556, 2022.
- Loknath, Y., & Azeem, B. A., Green Management – Concept and Strategies, *National Conference on Marketing and Sustainable Development*, 688–702, 2017.
- Maciel, J. C., The Core Capabilities of Green Business Process Management – A Literature Review. *International Conference on Wirtschaftsinformatik*, November, 1526–1537, 2017.
- Pabian, A., & Pabian, B., Profile of a Sustainable Manager from the Perspective of Pro-Ecological and Pro-Social Management of Energy Company, *Energies*, 15, 1–16, 2022.

- Polas, M. R. H., Hossain, M. I., Tabash, M. I., Karim, A. M., Dad, A., & Ong, T. S., Does Green Entrepreneurial Intention Persuade an Individual to Contribute to the Sustainable Green Economy? *Talent Development & Excellence*, 12(2), 1142–1157, 2020.
- QuestionPro, Types of Sampling: Sampling Methods with Examples, Available: <https://www.questionpro.com/blog/types-of-sampling-for-social-research/>, accessed on 30 March 2022
- Quintás, M. A., Martínez-Senra, A. I., & Sartal, A., The Role of SMEs' Green Business Models in the Transition to a Low-Carbon Economy: Differences in Their Design and Degree of Adoption Stemming from Business Size, *Sustainability (Switzerland)*, 10(6), 2018.
- Sebahattin, E., The Relationship among Altruism, Affective Commitment, Job Satisfaction, and Turnover Intention: A Research on Boundary Spanning Positions in Hotel Enterprises, *Journal of Tourism and Gastronomy Studies*, 7(1), 310–327, 2019.
- Sumintono, B. and Widhiarso, W., *Aplikasi Model Rasch untuk Penelitian Ilmu-Ilmu Sosial*, Revision Edition, Trim Komunikata Publishing House, 2014.
- Wang, X., Van der Werff, E., Bouman, T., Harder, M. K., & Steg, L., I Am vs We Are; How Biospheric Values and Environmental Identity of Individuals and Groups Can Influence Pro-Environmental Behaviour, *Frontiers in Psychology*, 12, 1-11, 2021.
- Yusof, N., Tabassi, A. A., & Esa, M., Going Beyond Environmental Regulations — The Influence of Firm Size on the Effect of Green Practices on Corporate Financial Performance, *Manchester Metropolitan University*, 27, 32–42, 2019.
- Yusoff, T., Wahab, S. A., Latiff, A. S. A., Osman, S. I. W., Zawawi, N. F. M., & Fazal, S. A., Sustainable Growth in SMEs: A Review from the Malaysian Perspective, *Journal of Management and Sustainability*, 8(3), 43, 2018.

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