Do generation Y and Z really concern about environmental issues?

D Dwidienawati¹, S B Abdinagoro², D Gandasari³, and D Tjahjana⁴

¹²Binus Business School, Bina Nusantara University, Indonesia
³Polbangtan Bogor, Indonesia
⁴Universitas Multimedia Nusantara

Email: diena.dwidienawati@binus.ac.id

Abstract. Generation Z has started entering adulthood and the workplace in the last couple of years. Both generations Y and Z will be a major force in workplace as well as marketforce. Both generations shared similar characteristics, e.g. digital naïve, constant connection online, high confidence, and demanding. However, they are born and raised in different economic and life situation. Those differences will affect the beliefs, behaviors, and values. Understanding this will help companies and other organizations who work to tackle the environmental issue on how to approach and ensure their participation. At present, there remains limited studies to see the difference between both generations' characteristics. This research aims to see whether there are differences in concern on the environmental issue between groups. A descriptive quantitative study was conducted in generation Y and Z in Indonesia. Samples were collected using snowball methods. Four-point Likert scale questionnaires were designed and distributed. 140 questionnaires were collected and eligible to be analyzed. The result shows there are no significant differences in the concern of the environment, participate in reducing plastic use, and the opinion of the importance of a company to have a sustainability development program. However, there is a significant difference in actively participating in an event promoting environmental issues. This research contributes to the body of evidence on Generation Y and Z characteristics.

Keywords: environment, environmental issue, generation Y, generation Z

1. Introduction
There are five different types of legal adult generations now namely Silent Generation, Baby boomers, Generation X, Generation Y, and Generation Z. Generation Z has started entering adulthood and the workplace in the last couple of years. It is estimated that by 2020, Generation Z will occupy 20% of the workplace [1]. As a total, both Generation Y and Generation Z will occupy almost half of the workplace [2]. Between both generations actually, there is only one decade away. However, studies show that the two's share both similarities and differences. Both Generation Y and Z are technology savvy and constantly connected with the internet [3], [4]. Heir main communication tools are online, mostly with handphone [2]. They also both have high expectation and is known as high self-confident [5]. In terms of concern and awareness of the environment these two generations also share a passion for environmental issues [5].

They also have differences in characteristics. Studies show that different experiences in life will influence people's behaviors, values, and beliefs [6]. Generation Y growth up during the booming of
the economy. Therefore, they have a relatively easy life growing up and it makes Generation Y feel entitled [3]. They were raised in a complete and protected family. It makes them be self-centered optimistic and drive [3][7]. Generation Y embraces the challenge and takes chance [3].

On the other hand, Generation Z is facing economic recession and uncertainty growing up [8], [9]. They have experienced with their own eyes that some family members and neighbors lose their jobs and homes during the crisis [1]. These experiences influence the characteristic of Generation Z. They are known to be less demanded and to avoid risk compared to Generation Y [10].

Currently, there are several studies on the behaviors of Generation Y. However, there are still few studies available on Generation Z. Nevertheless, studies comparing both generations Y and Z. Both generations are known to be demanding and less in socializing. Do they self-centered and do not care what happened in the environmental issue? Do they only care about achievement and work for a successful company at any cost? This study taps to see both generation perceptions on the environmental issue. Is there any difference between those two generations?

Understanding this will help companies and other organizations who work to tackle the environmental issue on how to approach and ensure their participation. This study will also contribute to the literature of the characteristics of Generation Z.

2. Literature review

2.1. Generation cohort

Generations represent distinct and separate groups of people with a common set of beliefs, experiences, and values about the way the world works [4]. Strauss et al. in [11] define generation as “Generation is defined by both its years of birth and a particular set of shared social and economic conditions during their formative years”.

Parry & Urwin [12] define generation as "a set of historical events and related phenomena that creates a distinct generational gap". It requires "some form of social 'proximity' to shared events or cultural phenomenon" to identify the differences among generations [12]. Generation is also defined as “a series of birthdays of a group of people” [13]. Generation is also defined as “the generational cohorts or groups, who belong to the same age group, experience, or will experience accordingly the similar life experience in the years they may shape their lives” [13].

From those descriptions, it is understood that generation has two important factors. Those two factors influence the shared characteristics of one generation. Those two are namely 1) a common lifetime period in historical time and 2) shared common events and experiences. Those two factors shaped their traits, values, thinking, and beliefs [11]. Throughout a generation's lifetime, those values and behaviors will relatively remain the same. Those behaviors are what set them apart from the earlier and next generations [14].

At present, there are five generations of legal adults namely Silent Generation (Traditionalists or the Greatest Generation; those born between 1922 and 1945), the Baby Boomers (born from 1946 to 1964), Generation X (born from 1965 to 1977), and Millennials (born from about 1977 to 1993) and Generation Z (born from 1993 to 2005) [12]. Other researchers state that Generation Z is the generation born between 1995 and 2015 [4], [6], [8], [10].

2.2. Generation Y

Generation Y or Millennials are those who were born between 1977 to 1993/1995 [4], [6], [8], [10]. This generation is also known as the digital generation and entitled generation [3]. Generation Y is very different compared to earlier generations.

Unlike Generation Z who are many raised by a single parent, Generation Y was raised in a complete and protected family. Generation Y used to get attention and direction from their parents growing up; therefore, they are more self-centered and need micromanagement [7]. Generation Y is known to be self-centered, entitled, challenging, risk-taker, optimistic, and drive [15]. They are very demanded and high expectations compare to generations before or even to Generation Z [3].
If Baby boomer grew up with TV and Generation X grew up when the computer started to evolve, Generation Y came to the age when the internet development was exploded. Generation Y is the first generation who gets high exposure to the internet. They are technology savvy. This changes their behaviour and lifestyle and this makes Generation Y stand out compared to the previous generations [16].

2.3. Generation Z

Generation Z is the global generation. This generation shares the food interest, fashions, language, and expression with their counterpart globally [6]. Generation Z is the most educated generation moving into adulthood. They are growing up with a liberal set of attitudes and openness to social trends [17].

Reaching the age of twenties, some of Generation Z is starting to enter the workplace. By 2020, it is estimated that they will occupy 20% of the workplace [1]. This generation will have very huge spending power. This newer generation is expected to influence the retail market heavily both from the technology point of view, as well as product-specific point of view [18].

Generation Z is growing up in different global economic and social experiences compared to Generation Y. It makes Generation Z has a distinctive characteristic compared to Generation Y. Generation Z is growing up experiencing recession and economic uncertainty [7], [10], [19], [20]. They have seen with their own eyes how their parents and people they know struggling and lose their jobs and homes during the crisis [1].

[10] states that those economic condition has shaped Generation Z to be more realistic compared to Generation Y who is very optimistic. Generation Z is warier about their both long-term and short-term future. Generation Z is as not as demanding as and having lower expectations compared to Generation Y. He also states that Generation Z is confident but cautious.

Generation Z is also called 'Facebook Generation', net generation, and i-generation [8] about how constantly they connected online. Generation Z spends on average 6.5 hours daily in front of an electronic screen [21]. They write and receive 109.5 texts per day [4]. They considered a smartphone as an important part of their life [9]. Their attention span is short [19]. Spending hours in front of the screen does not make Generation Z non-social. With technology advancement, they prefer interactive communication such as facetime, interactive video games, and more social able compare to Generation Y.

2.4. Environmental issues

Population growth, improvement of living standards, industrialization and urbanization have caused the diversification and increase of goods and services consumption. This has speeded up the exhaustion of natural resources and bring a negative impact on the environment (Hubacek et al. 2007) in [5]. Environmental issues, climate change, global warming, etc., are hot topic and widely publicized in society [22].

Millenials or Generation Y, born between 1980 and 1995 (or 2000) are much more concerned with taking responsibility for the environment than Gen Xers and Baby Boomers (Royne et al. 2011 in [5]. Millennials and Generation Z members, are aware that their buying decisions have direct impact on the environment [23]. They are willing to buy and pay higher price for “green” food and products and from company who involve in sustainability development. [5] confirms that both Generation Y and Z actively involved in cultural and social event than previous generations. [24] also confirm that Generation Z are willing to donate money and participate in a Cause Related Marketing program.

Since both generations have differences and similarity, this study will focus to see whether difference perception between two generations on environmental issues. The study will try to answers these research questions:

1. Is there any difference in active participation in reducing the use of plastic?
2. Is there any difference in active participation in event which is promoting environment issue?
3. Is there any difference in the importance of sustainability in the company they work for?
4. Is there any difference in the concern about the issue of environment e.g. climate change?
3. Methodology
This research aims to see whether there are differences in the concerns on the environmental issue between Generation Y and Generation Z. To answer the research questions, an online survey was conducted and targeted to people born from 1977 to 2005 (Generation Y and Z). The structured questionnaire was used as the instrument. Statements regarding their concern about environmental issues and involvement in any environment activity were asked. The statements were:
1) “I actively participate in reducing the use of plastic”.
2) “I actively participate in the event which is promoting environment issue”
3) “It is important that the company they work with promotes sustainability”.
4) “I do concern about the issue of environment e.g. climate change”.

They had to self-rated their opinion with a four-scale Likert scale from 1 (very much disagree) to 4 (very much agree). Mid-point of Likert scale was omitted to avoid social desirability bias [24].

Respondents were college students from Jakarta and Bogor, Indonesia for Generation Z and were young employees from Jakarta and Bogor for Generation Y. The snowball sampling method was employed in this study. Questionnaires were sent to 10 respondents to fill in. At the same time, they were also asked to spread to their friends or peers. A total of 227 questionnaires were returned and all 227 responses were scrutinized. However, due to missing data only 140 questionnaires (87 were Generation Z and 53 were Generation Y) were eligible for further analysis. The omission of the questionnaires was based on 1) there was no data on year of birth and 2) the all 4 statements were not answered. A descriptive analysis was employed to see the respondents' self-rating. The differences between groups were further analyzed with SPSS.

4. Results
As seen in Figure 1, from 53 respondents of Generation Y, 56% was male and 44% was female. From 87 respondents of Generation Z, there were 40% male and 59% female. Most of Generation Y (73%) has parents from the Baby Boomers generation. However, for Generation Z, their parents mostly are Generation X (70%). Seventy-six percent of Generation Y was from Greater Jakarta and only 56% for Generation Z. Twenty-five percent of Generation Y from other cities and the number was 44% for Generation Y. As expected, most Generation Y (73%) was already graduated from college and most of Generation Z (92%) was still studying in college or high school graduates.

![Figure 1. Genders, Location, Parents and Educational Background](image-url)
Based on what is provided in Figure 2, the exposure to the gadget was much earlier for Generation Z. More than 30% claimed that they started learning to use gadgets since they were 5-10 years-old. Five percent of Generation Z even claimed to learn as early as less than 5 years. Ninety percent of Generation Y stated that their know gadget between the ages of 10-20 years-old.

The result showed that for Generation Y the use of desktop was still relevant. Only 22% claimed they used their mobile for more than 70%. Generation Z, on the other hand, claimed that 43% of them used mobile more than 70%. More than 30% of both Generation Y and Z said that they spent more than 20 hours per week in front of their mobile phone.

### Table 1. Environmental Issue Awareness and Participation

| Statement                                           | Gen Y Mean (SD) | Gen Z Mean (SD) | T-Stat  | P-Value |
|-----------------------------------------------------|-----------------|-----------------|---------|---------|
| I actively participate in reducing the use of plastic | 3,231 (0.690)   | 3,268 (0.764)   | 0.768   | 0.768   |
| I actively participate in the event which is promoting environment issue | 2,865 (0.615)   | 3,228 (0.606)   | 3.480   | 0.001   |
| It is important that the company they work with promotes sustainability | 3,173 (0.606)   | 3,205 (0.783)   | 0.261   | 0.795   |
| I do concern about the issue of environment e.g. climate change | 3,231 (0.690)   | 3,182 (0.655)   | 0.428   | 0.669   |

By seeing Table 1, all statements had a mean value above 3, except for statement “I actively participate in the event which is promoting environment issue” in the group of Generation Y. It means almost all respondents agreed that they concerned about environmental issues. There were not any significant differences between groups for the three statements: “I actively participate in reducing the use of plastic”, “It is important that the company they work with promotes sustainability” and “I do concern about the issue of environment e.g. climate change”. However, there was a significant
difference between Generation Y and Generation Z when answering the statement “I actively participate in the event which is promoting environment issue”.

5. Discussion

Generation Y and Generation Z have some similarities and differences. Understand these characteristics will be important for parents, managers, companies, and other organizations who work in environmental issues to get these generations' motivation and participation.

This study shows that both generations share similarities in internet usage. They are both known as technology savvy. Technology has been part of their daily life since they are young ages. Therefore, they depend on the internet, laptop/mobile for most of their activities such as listening to music, watching movies, playing a game, shopping, and doing the payment. This result is confirming previous studies that stated that Generation Y and Z spend much time in front of the screen and are doing a lot of their daily activities online.

Generation Z and Y are very much around their screen (either desktop or mobile). These generations spend more than 1.5 hours to more than 3 hours per day with their gadgets. This result confirmed the previous study [21] that Generation Z spends hours in front of their screen.

Issues on the environment become the concern of both generations. They all agreed that they actively participate in reducing the use of plastic. They also think that it is important that the company they work with promotes sustainability. Overall both generations do concern about the issue of the environment such as climate change. Generation Y is known to be idealistic and drive [15]. Therefore, for them to contribute to the good of nature is important. They take their responsibility for the environment much more seriously compared to earlier generations [5].

Issues on the environment become the concern of both generations. They all agreed that they actively participate in reducing the use of plastic. They also think that it is important that the company they work with promotes sustainability. Overall both generations do concern about the issue of the environment such as climate change. Generation Y is known to be idealistic and drive [15]. Therefore, for them to contribute to the good of nature is important. They take their responsibility for the environment much more seriously compared to earlier generations [5].

This study also confirms a previous study [23] which shows that both Generation Y and Z are aware of how their consumption decisions will have a direct effect on the environment. Similar to the result of this study, a study from [23] shows that those two generations think it is important that companies involve in sustainability development.

However, this study shows that on actively participating in a social event promoting environmental issues, Generation Z has more interest compared to Generation Y. There is two possible explanation about this. First, even though both generations spend long hours online, they have a different type of social creature. For Generation Z, spending hours in front of the screen does not make Generation Z non-social. Even though with technology advancement they prefer interactive communication such as facetime, interactive video games, still generation Z is more social-able compare to Generation Y. Therefore, they are more kin to involve actively in the event.

The second explanation will be to the fact that Generation Z is the most educated generation moving into adulthood. They are growing up with a liberal set of attitudes and openness to social trends. They are also a global citizen. They are growing up with a similar attitude to other generation Z in other parts of the world. Therefore, any social issue, in this case, the environmental issue, in which Generation Z all over the world activity involves in the movement, will also influence how Indonesia Generation Z feels the need to actively involved in the cause.

6. Conclusions

Generation Y and Z are only one decade apart. They share a similar and different characteristic. This study showed that Generation Y and Z both real concerns about environmental issues in this world. They actively reducing the use of plastic and they also shared that it is important for a company to have sustainability development.

Even though both of them agreed that they actively participate in events promoting environmental issues, this study showed a significant difference between groups. Generation Z was more active than Generation Y. This is because Generation Z is the first global generation who share a similar view
with other Z's in the other part of the world and second. After all, Generation Z is more social-able than Generation Y.

There are some limitations to this research. First, the size of the sample is small and the respondents are only from 2 cities in Indonesia. Second, this study only showed a comparison between generations without a deeper understanding of the reason behinds the data.

Understanding this will help companies and other organizations who work to tackle the environmental issues on how to approach and ensure their participation. This study will also contribute to the literature of Generation Z.

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