

Millennial Generation Preferences for the Use of Technology in Improving Livelihood Experiences in Accommodation Services

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Abstract

Purpose: Determine the preferences of the millennial generation towards the use of technology in improving the experience of staying at accommodation services.

Method: The data analysis technique used in this research is descriptive statistical techniques using measuring instruments in the form of the Microsoft Excel 2013 computer program. The data collection technique uses a questionnaire. Respondents in this study were domestic (Indonesian) tourists from the millennial generation who were on holiday in Bali with an age range of 20-40 years and had stayed in accommodation facilities for at least 1 year. This research determined a sample size of 100 people.

Result: Respondents agreed that the existence of new technology had an impact on respondents' decisions in choosing accommodation to stay. So does the willingness to pay extra for accommodation that has the latest technology. The presence of technology in accommodation facilities has a positive impact on tourists' staying experience. The presence of new technology has an impact on respondents' decisions in choosing accommodation to stay and their willingness to pay extra for accommodation that has the latest technology. The role of technology is very important for the millennial generation in choosing accommodation and is able to provide new experiences for enjoying current accommodation.

Contribution: The use of smartphones will become an option to attract the interest of the millennial generation to stay at an accommodation service, especially during the check-in and check-out process. Apart from that, it is also hoped that the millennial generation in this research can use smartphones to open rooms (smartphone applications as room keys). Meanwhile, to control rooms and order food, the millennial generation in this study preferred to use tablets or iPads in hotel rooms.

Keywords: preference, technology, accommodation, millennial generation

Introduction

Indonesia is entering a new era in the field of demography known as the demographic bonus era. A country is said to be experiencing a demographic bonus when the number of people of productive age is above 2/3 of the total population. The demographic bonus is a rare phenomenon because it will only happen once in the history of a nation (Kholis et al., 2023). 2020 is the year the demographic bonus begins. The demographic bonus is basically inseparable from the millennial generation. The percentage of the population of productive age in Indonesia reaches around 67.02 with 33.75 percent being the millennial generation. The following Figure 1 shows the composition of Indonesia's population grouped by generation:



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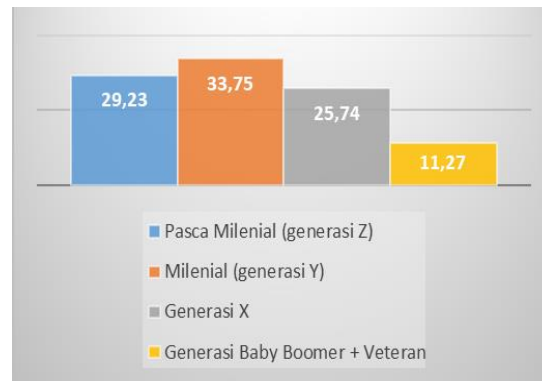


Figure 1
Population Composition by Generation (percent)
(Source: Statistik Kesejahteraan Rakyat, BPS (2017))

In Figure 1 above we can see that the millennial generation is 33.75 percent higher than the generations before and after. The generation before the millennial generation, namely the baby boomer and veteran generations, amounted to 11.27 percent, then generation X amounted to 25.74 percent. Meanwhile, the generation after the millennial generation, namely the post-millennial generation (generation Z), is 29.23 percent.

Seeing the large population of the millennial generation, this is a big opportunity, especially for the tourism industry. Based on research conducted by the IDN Research Institute in its report entitled Indonesia Millennial Report 2019, it was found that 4 out of 10 Indonesian millennials go on tourist trips every year. In general, tourists who go on tour need accommodation facilities to rest, as do millennial tourists. To attract millennial tourists to stay at an accommodation service, it is important for accommodation owners to know the characteristics of the millennial generation. The existence of the millennial generation has brought major changes to the social order of society. The millennial generation has different characteristics from several previous generations (GI generation, Silent Generation, Baby Boomer Generation, Generation X). The millennial generation was born and grew up amidst the rapid development of technology, especially information and communication technology. According to the results of a survey conducted by the PEW Research Center in early 2018, compared to generation X and the baby boomer generation, the millennial generation has the highest rate of use of technology. This also happens in Indonesia. The following Figure 3 shows the percentage of the population in Indonesia who access the internet according to generation and area of residence:

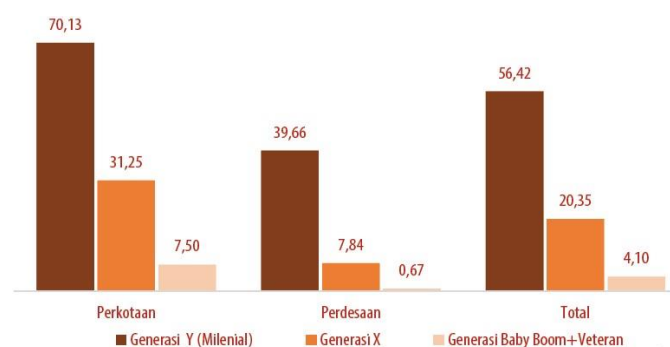


Figure 2
Percentage of Population in Indonesia Who Access the Internet
According to Generation and Area of Residence
(Source: Statistik Kesejahteraan Rakyat, BPS (2017))

Based on Figure 2 above, we can see that the millennial generation is the generation that has the most access to the internet, both in urban and rural areas, compared to the previous two generations. This further confirms that the millennial generation is more responsive to the use of technology compared to previous generations. The millennial generation uses technology as part of their daily lives, so it can be concluded that the millennial generation and technology are two things that cannot be separated.

Bali is one of the tourist destinations that is a travel destination for tourists, including tourists from the millennial generation. Bali is one of the 3 favorite tourist destinations for the millennial generation apart from Jogjakarta and Bandung (Indonesia Millennial Report, 2019). The tight competition in the accommodation business is a challenge for managers of accommodation facilities to continue to innovate in order to attract tourists to stay overnight. One of them is by providing a stay experience by utilizing technology. Technological advances have influenced the travel of the millennial generation, this shows that technology is an important factor in influencing the way the millennial generation travels (Parhusip, 2018). The application of technology in hotels is divided into two, namely the operational level and the managerial level, as well as for guest service in rooms (Barker et al., 2003). Knowledge and understanding of consumer preferences or things that consumers like, in this case the millennial generation, as a fairly large and potential market segment, is very important to know. Knowledge of consumer preferences is very important to be able to adapt to any changes and maintain business continuity. Consumer preferences are closely related to purchasing decisions. Research on the use of technology to improve tourists' stay experience was previously carried out by Margarido (2015) with the research title "the impact of technological amenities on customer experience in upscale hotels". This research used leisure guests with an age range of 18 years to 65 years as research respondents. This research tries to use respondents specifically from the millennial generation to see that in the future the millennial generation will dominate in traveling and using accommodation facilities to rest. The aim of this research is to determine the millennial generation's preferences for the use of technology in improving the experience of staying in accommodation services. Marikyan et, al (2019) explained that technology-based accommodation is an opportunity to improve services. Technological capabilities are able to respond and anticipate responses to customer needs. The better the technology-based accommodation service, the more it will be able to attract the younger generation to become the main customers now and in the future (Qi and Mo; 2021)

Research Method

The location of this research was carried out in Bali by distributing questionnaires in Kuta and Sanur. Garikapati (216; 558) explains that the millennial generation is someone born from 1979-2000, respondents in this study were domestic tourists (Indonesia) from the millennial generation who were on holiday in Bali with an age range of 20-40 years and had stayed in accommodation facilities for at least 1 year. According to Ferdinand (2002:51), to obtain good results, the number of respondents taken to fill out the questionnaire is five to ten times the number of indicators. In this study there were 11 indicators, so a good sample size range is $55 < n < 110$. Based on this range, taking into account existing resources, this research determined a sample size of 100 people. Primary data in this research was obtained from the results of distributing questionnaires given to respondents using Google Form media. The quantitative data in this research is the score from the questionnaire distributed to respondents.

The data analysis technique used in this research is descriptive statistical techniques using measuring instruments in the form of the Microsoft Excel 2013 computer program. Descriptive statistics relates to the application of statistical methods to collect, process,

present and analyze quantitative data descriptively. Descriptive statistics is a statistical method that provides a general description of the data that has been collected and processed. The main purpose of descriptive statistics is to present information from data obtained in the field. This information can be in the form of tables, graphs or diagrams.

Result and Discussion

Result

1) Characteristics of Research Respondents

The characteristics of respondents in this study were described based on gender, age, education level, occupation and income. The characteristics of respondents collected through questionnaire collection can be seen in Table 1 as follows:

Table 1
Respondent Characteristics

No	Respondent Characteristics	Classification	Amount	Percentage
1	Nationality	Indonesia	100	100
2.	Type of Sex	Male	34	34
		Female	64	64
	Total		100	100
2.	Age	20-24 years old	90	90
		25-29 years old	10	10
		30-34 years old	-	-
		35-40 years old	-	-
	Total		100	100
3.	Education	Senior High School	78	78
		Beachelor	13	13
		Postgraduate	8	8
		Other	1	1
	Total		100	100
4.	Work	Student	78	10,8
		Professional	16	16,9
		Entrepreneur	1	41,5
		Other	5	25,4
	Total		100	100

(Source: Research result, 2020)

Table 1 shows several things related to the characteristics of respondents. Based on nationality, all respondents in this study were Indonesian citizens. Referring to the table, it can be seen that female respondents dominate, namely 64 percent compared to male respondents at 36 percent. Based on age group, 20 to 24 years old has the highest percentage, namely 90 percent. Judging from the respondents' last level of education, it can be seen that the highest level of education is high school with a percentage of 78 percent. Based on the type of work, data was obtained that the student group was the largest with a percentage of 78 percent.

Discussion

1) Millennial Generation's Preference for Using Technology When Checking In

Based on research results with the statement item "If you had all the following options available to do the Check-in, which one would do you prefer?" shows that as many as 73 percent of respondents chose to use a smartphone application to carry out the check-in process, then 21 percent chose to check-in via the front desk and 6 percent of respondents chose to check-in with self-service check-in kiosks. The following is Figure 3 which shows the research results.

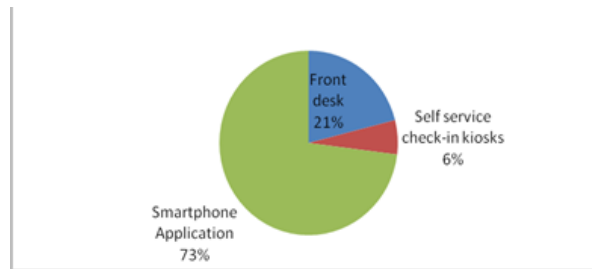


Figure 3
Millennial Generation Preferences in Carrying Out the Check-in Process
 (Source: Research Results, 2020)

2) Millennial Generation's Preferences for Using Technology When Checking Out

The following Figure 4 shows the results of research regarding the millennial generation's preferences for using technology when checking out:

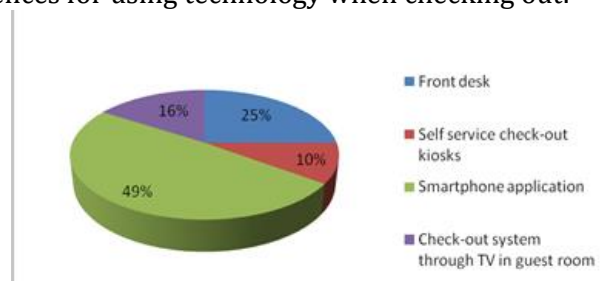


Figure 4
Millennial Generation Preferences in Carrying Out the Check-out Process
 (Source: Research Results, 2020)

Based on research results with the statement item "If you had all the following options available to do the Check-out, which one would you prefer?" shows that as many as 49 percent of respondents chose to use a smartphone application in carrying out the check-out process, then 25 percent chose to check-out via the front desk, 16 percent of respondents chose to check-out using the check-out system via TV in the guest room and 10 percent respondents chose to carry out the check-out process with self-service check-out kiosks.

3) Millennial Generation's Preferences for the Use of Technology in Controlling Rooms While Staying

The results of research with 100 respondents who are millennials with the statement item "If you had all the following options available to control the room (heating systems, air conditioning, lighting, music, TV and curtains) which one would you prefer?" shows that 62 percent of respondents chose to use a hotel room tablet or iPad to control the room, then 24 percent of respondents chose to use a smartphone application and 14 percent of respondents chose to use a TV remote control to control the room. The following is Figure 5 which shows the results of research regarding the millennial generation's preferences for the use of technology in controlling rooms when staying overnight:

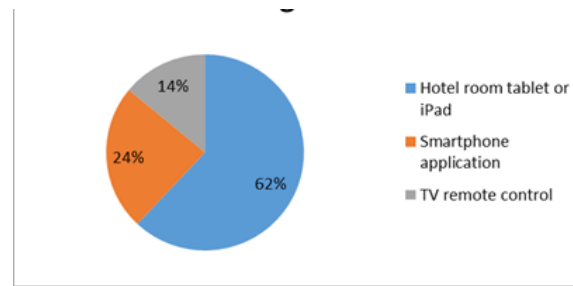


Figure 5
Millennial Generation Preferences in Controlling the Room
 (Source: Research Results, 2020)

4) Millennial Generation's Preference for Using Technology in Ordering Food (Room Service)

The following Figure 6 shows the results of research regarding the millennial generation's preferences for the use of technology in ordering food:

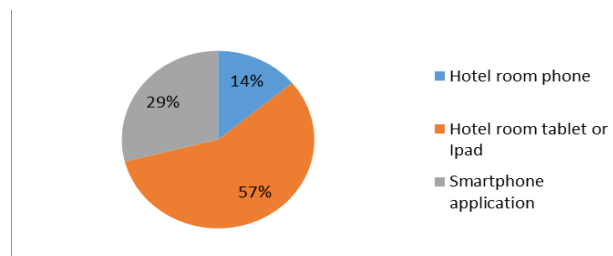


Figure 6
Millennial Generation Preferences in Ordering Food (Room Service)
 (Source: Research Results, 2020)

Based on the results of research with the statement item "If you had all the following options available to order room service or to make a restaurant reservation, which one would you prefer?" shows that 57 percent of respondents chose to use a hotel room tablet to order food, then 29 percent of respondents chose to use a smartphone application and 14 percent of respondents chose to use a hotel room phone to order food.

5) Millennial Generation Preferences Regarding Technology That Can Improve the Staying Experience

The following Figure 7 shows the results of technology that can improve the stay experience:

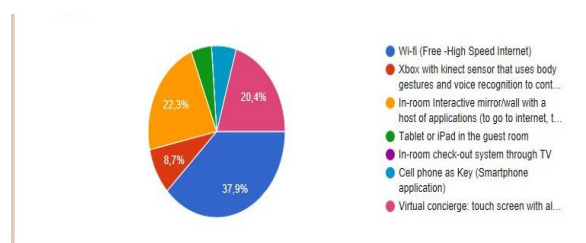


Figure 7
Millennial Generation Preferences Regarding Technology That Can Improve the Staying Experience
 (Source: Research Results, 2020)

Based on the research results, it was found that high-speed Wi-Fi is the main component that can improve the millennial generation's staying experience.

6) The Impact of the Existence of New Technology on the Choice of Accommodation for Staying and Willingness to Pay Extra

The following is Table 2 which shows the results of research regarding the existence of new technology on the choice of accommodation for overnight stays and the willingness to pay extra. Through statement items: (1) The availability of new guest room technologies impacts my decision in choosing a hotel? (2) I am willing to pay extra for a guest room which has the latest technologies? are as follows:

Table 2

The impact of the existence of new technology on the choice of accommodation to stay and the willingness to pay extra

(Source: Research Results, 2020)	1	2	3	4	5			
<i>The availability of new guest room technologies impacts my decision in choosing a hotel</i>	-	1	9	62	28	417	4,17	Agree
<i>I am willing to pay extra for a guest room which has the latest technologies</i>	-	7	31	46	16	371	3,71	Agree

(Source: Research Results, 2020)

Based on Table 2 above, it shows that respondents agree that the existence of new technology has an impact on respondents' decisions in choosing accommodation to stay overnight. Likewise with the willingness to pay extra for accommodation that has the latest technology. This is supported by 92 percent of respondents stating that they are looking for unique accommodation, including unique in terms of technology, and 100 percent of respondents stating that the presence of technology in accommodation facilities has a positive impact on the tourist experience of staying. The following is Table 3 of respondents' responses regarding the impact of technology on tourists' stay experience with the question item Are you looking for a unique/different experience in terms of your stay and facilities? and Do you think that available technologies in hotels, have a positive impact on your experience?

Tabel 3

Respondents' responses related to the impact of technology on tourists' stay experience

Indicator	YES	No
<i>Are you looking for a unique/different experience in terms of your stay and facilities?</i>	92%	8%
<i>Do you think that available technologies in hotels, have a positive impact on your experience?</i>	100%	-

7) Summary of Respondents' Input in Order to Improve the Staying Experience

The following is Table 4, a summary of respondents' input in order to improve the experience of staying at accommodation services:

Tabel 4
Summary of respondents' input in order to improve the experience of staying at accommodation services

No	Masukan Responden
1.	<i>I'd be thankful if the hotel provide every room a vacuum cleaner robot because i usually feel uncomfortable to let people entering my room. So, with vacuum cleaner robot, my room can be clean without letting people enter my room.</i>
2.	<i>Smartphone application for check-in, check-out, and as a key room.</i>
3.	<i>I would say hotel should offer some technological game that available in hotel, such as hoverboard game so it can attract millenials who love it</i>
4.	<i>I want a game console to be available at the hotel, such as playstation, VR, Xbox or anything that relates to a game, especially during pandemic like this</i>
5.	<i>Voice censor</i>
6.	<i>Menurut saya dengan menggunakan aplikasi seluler, para tamu dapat memesan penginapan, memilih lantai dan arah kamar yang diinginkan. Setelah tiba di hotel para tamu dapat menggunakan fitur pengenalan wajah (face recognition) untuk mendapatkan akses ke lift serta ke kamar mereka. Tidak lagi menggunakan kunci atau kartu akses.</i>
7	<i>I think it's gonna be awesome if hotel can provide us the technology services because nowadays people are getting chose the less interaction between the employees due to covid 19</i>
8	<i>Health Protocol technologies during covid-19</i>
9	<i>VR that accomodate a free scenery tour of the city i stayed in</i>
10	<i>In current situation, touchless/voice/ censor activated technology is needed, which allows us to connect with hotel staffs for room or HK services without touching any devices (not only for games or entertainment)tt</i>
11	<i>1 apps about that hotel so we can do almost everything just by clicking the menus there.</i>
12	<i>I would like to have a smart voice assistant like siri (the one that apple have) to do everything such as providing menu from the hotel's restaurant, ask to making up my room, etc. It would be great experince for me to stay in the hotel which have this technology.</i>

The results of this research are in line with research produced by Margarido (2015) that the application of impact technology has a significant impact in improving the guest experience. The existence of new technology has an impact on respondents' decisions in choosing accommodation to stay and their willingness to pay extra for accommodation that has the latest technology. The role of technology is very important for the millennial generation in choosing accommodation and is able to provide new experiences for enjoying current accommodation.

Research Implications

Based on the findings in this research, in the future the use of smartphones will become an option to attract the millennial generation to stay at an accommodation service, especially in the check-in and check-out process. Apart from that, smartphones are also expected by the millennial generation in this research to be used to open rooms (smartphone application as a room key). Meanwhile, to control rooms and order food, the

millennial generation in this study prefers to use hotel room tablets or iPads. In open statements, many millennials provided input so that in the future hotels could use voice sensors in carrying out activities in hotels, especially in opening room doors and controlling rooms. Especially in Covid-19 conditions such as "In current situation, touchless/voice/censor activated technology is needed, which allows us to connect with hotel staffs for room or HK services without touching any devices". Apart from voice sensors, respondents in this study also provided input for hotels to implement/use "Health Protocol during Covid-19 technologies". In this research, 100 percent of respondents from the millennial generation agreed that the existence of the latest technology had a positive impact on improving their stay experience.

Conclusion

The conclusion that can be conveyed in this research is that respondents agree that the existence of new technology has an impact on respondents' decisions in choosing accommodation to stay and their willingness to pay extra for accommodation that has the latest technology. This is supported by 92 percent of respondents stating that they are looking for unique accommodation, including unique in terms of technology, and 100 percent of respondents stating that the presence of technology in accommodation facilities has a positive impact on the tourist experience of staying overnight. The advice that can be conveyed in this research is that for accommodation business owners, in the future, the millennial generation is a potential generation as a target market, so it is very important to understand the characteristics of this generation. The millennial generation is a generation that is familiar with technology. In the future, accommodation business owners can use smartphone applications owned by tourists for the check-in and check-out process. Meanwhile, to control rooms and order food (room service), accommodation owners can fill their rooms with tablets or iPads. If currently guests want to prepare food or contact the front office/operator using the telephone, in the future they can use a multifunctional tablet or iPad. Tablets or iPads can be used to control rooms (heating systems, air conditioning, lighting, music, TV and curtains) as well as for room service. For the next researcher, because this research was conducted during Covid-19 conditions, 100 percent of the respondents in this study were Indonesian citizens. In the future, similar research can be implemented using foreign tourist respondents with a larger number of respondents. Future research can also add guest satisfaction variable in the use of technology in accommodation to complement this research.

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References

- Badan Pusat Statistik. (2017). Statistik Kesejahteraan Rakyat. Jakarta: CV Dharmaputra
- Baker, M. 2014. Hotels expand mobile check-in options, Business Traveler News. Retrieved from: <http://www.businesstravelnews.com/Hotel-News/Hotels-Expand-Mobile-Check-In-Options/?ida=Hotel%20Chains&a=mgmt> (Accessed in 15-06-2014).

- Ferdinand, Agusty. (2002). *Structural Equation Modelling dalam Penelitian Manajemen*. Badan Penerbit Universitas Diponegoro: Semarang.
- Garikapati, Venu M, et al. 2016. *Activity Patterns, Time Use and Travel of Millennials: A Generation In Transition?* *Journal Transport Reviews*, (5), 558-584
- Global Data. (2018). *Understanding the motivations and behaviors of millennial tourists*. Millennial Traveler Insight.
<https://docplayer.net/138852442-Trends-in-global-millennial-travel.html>
- IND Research Institute. 2019. Indonesia Millennial Report 2019.
<https://cdn.idntimes.com/content-documents/indonesia-millennial-report-2019-by-idn-times.pdf>
- Kholis, A., Nugroho, M. S., & Ma'ruf. (2023). Evaluation of Tourism Development Using the TALC Approach. *Jurnal Kepariwisata: Destinasi, Hospitalitas Dan Perjalanan*, 7(1), 35–50. <https://doi.org/10.34013/jk.v7i1.821>
- Margarido, Ana carina Freire. (2015). The impact of technological amenities on customer experience in upscale hotels. *Dessertation Master in Businees Administration*: University Institute of Lisbon.
<https://repositorio.iscte-iul.pt/bitstream/10071/11530/1/Final%20Thesis.pdf>
- Marikiyan, D., Papagiannidis, S., & Alamanos, E. (2019). A Systematic review of the smart home literature: A User Perspective, Technological Forecasting and Social Change, 138. 139-154.
- Phinemo. (2017). Generasi Millennial, Kalianlah Penguasa Dunia Traveling Saat ini.
<https://phinemo.com/generasi-millennial-indonesia/>
- Pew Research Center. (2020). Millennials Overtake Baby Boomers America's Largest Generation.
<https://www.pewresearch.org/fact-tank/2020/04/28/millennials-overtake-baby-boomers-as-americas-largest-generation/>
- Parhausip, Nina Ester, I Nyoman Sukam Arida. (2018). Wisatawan Milenial di Bali (Karateristik, Motivasi dan Makna Berwisata). *Jurnal Destinasi Pariwisata*, 6(2), 299-303.
<https://ojs.unud.ac.id/index.php/destinasipar/article/view/46235>
- Qi, H., Mo, R. (2021). Exploring Customer Experience of Smart Hotel: A Text Big Data Mining Approach. *E3S Web of Conferences* 251, 01034
- WYSE Travel Confederation. (2014). Millennial Traveler.
<https://www.wysetc.org/wp-content/uploads/2014/11/Millennial-Traveller-executive-summary.pdf>