



Evaluating Restaurant Innovativeness - The Generation Z Perspective Across Dining Format

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ABSTRACT

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This study develops a scale to measure restaurant innovativeness across three distinct food and beverage service formats: casual dining, fast food, and coffee shops. The notion is based on perceived firm innovativeness by customers, proposed for a specific one-generation cohort. The respondents were 519 Generation Z individuals, gathered in mid-2023 using both printed and online questionnaires, consisting of 165 samples for casual dining, 172 for fast food, and 182 for coffee shops. Data were analyzed using factor analysis with SPSS. The restaurant innovativeness for Gen Z is formed into five clusters based on past literature reviews, such as product innovativeness, technology-based service innovativeness, experiential innovativeness, promotion innovativeness, and brand innovativeness. However, findings for the Gen Z measurement resulted in only four dimensions and 19 items. Casual dining innovativeness can be measured with 15 scales, fast food with 16 scales, and coffee shops with 19 scales, each consisting of two dimensions respectively. Findings also reveal how customers perceived each measurement differently, including from the perspectives of different genders. This study provides a theoretical contribution to the knowledge of hospitality and tourism, particularly in the food and beverage context, by empirically investigating restaurant innovativeness for various restaurant settings.

1. INTRODUCTION

In general, the term “innovation” refers to the outcomes of new features or a new combination of conventional features in a business process, whereas the term “innovativeness” refers to a company's ability to be open to new services, ideas, and promotions [1]. Although each term seems similar, it contrasts meaningfully. The notion of innovation itself emanates from the concept of diffusion of innovations defined by Roger in 1965, which later has been adopted widely to study the behaviors in various industries in correlation with the innovation adoption, including in the tourism and hospitality context. Simply put, in the restaurant setting, “innovation” can be in the form of a self-service kiosk or new menu in collaboration with a popular artist, while “innovativeness” goes beyond that. It means that the restaurant can provide a self-service kiosk for customers on the premises, or that the restaurant does a partnership with the artist to launch a new menu. In other words, a restaurant has the capability to actually turn innovation to merge into the company strategy and operation.

The notion of innovation in the food service industry starts to emerge equally when technology and social media start on demand [2, 3]. Restaurant innovation is commonly associated with introducing new products and or improvements to existing products in order to better comply with customers' preferences, which will potentially lead to higher satisfaction levels [4]. From the industry perspective, innovativeness is the

first construct of innovation and is defined as “a company's capability to captivate in innovation that strongly relates to the introduction of new ideas, service processes, and products” [5]. Particularly in the tourism and hospitality industry, innovativeness means “new services, new promotion tools, new infrastructure, new target groups and consumers, new distribution channels, new marketing applications” [6]. This is in line with the past study mentioning that full-service restaurant innovation capability usually comes in the context of a new menu, innovative business processes (home delivery, home catering, online order and delivery to offices, and event booking), and dining environment [7].

Other scholars, on the other hand, use the term “perceived firm innovativeness” defined as the consumer's perception of an enduring firm capability that results in novel, creative, and impactful ideas and solutions for the market” [8-10]. These studies focus on innovativeness in the restaurant context thus the term “restaurant innovativeness” further used, adopted the most recent and outstanding study [1]. Consequently, restaurant innovativeness definition turn into “a foodservice businesses' broad activities that show capability and willingness to consider and institute unique and meaningfully different ideas, services, and promotions from customers' perspectives when selected from alternative activities”.

The main objective of this study is to develop the scale of restaurant innovativeness that can fit specifically into three different types of food and beverage service businesses: casual

dining, fast food, and coffee shop, based on the perceived firm innovativeness of Generation Z. The Generation Z was chosen for the focus of this study as this generation is considered the most untapped but prospective market in the restaurant industry because their growing in number, led to the most substantial in size, highly influential, and has spending power.

2. LITERATURE REVIEW

Restaurant innovativeness (RI) can be prolonged into two folds; the first is a supply-side view and the second is a demand-side view. Yet, many works of literature [11-16] found it to be in the first fold instead of the second fold that pointed out the term “innovation capability” or “firm innovation” or “firm innovativeness” or “innovation orientation”. However, the term itself is used interchangeably [17].

On the other hand, less literature stresses the second fold, especially for the past three decades. Only 4.61% of the literature was found investigating innovation in the context of tourism and hospitality from 1992 to 2014 from a demand-side perspective such as of customer or guest or client [18]. To be said, 59.21% of the literature was found from the supply- side such as company owners, entrepreneurs, employees, managers, and experts. For instance, recent studies have been carried out for this fold specifically in the restaurant context [1, 10, 19-22].

Moreover, it is worth mentioning the research which stream restaurant context research should more greatly investigate from the customer perspective as the demand side instead of the management perspective as the supply side [18, 23]. Nevertheless, as pointed out by Savino et al. [24], future research regards to restaurant contexts from diverse age groups is also essential. As a result, and to overcome the research gap, the current study integrates RI literature using an approach from the customer perspective in the context of the restaurant business for a specific generation cohort by integrating various RI construct which stresses technology and environment sustainability while extending to possible implementation for diverse type of restaurant premises.

Following the categorizations of restaurant innovativeness (RI) from the various works of literature in the previous section, seven restaurant innovativeness dimensions are identified, which have interlinked one another with different terms used interchangeably. Those seven dimensions are product, technology, experiential, promotion, environmental, process, and management. However, two out of seven dimensions are excluded in this study, which is process innovativeness and management innovativeness, due to both dimensions' characteristics that accordingly should be investigated from the firms' point of view, and not from a customer point of view as this research focus [11, 12]. This left five dimensions to remain to be further used in this study (see Figure 1).

2.1 Menu innovativeness

The first dimension of restaurant innovativeness is menu innovativeness (MI) derived from product innovativeness specifically for the food service industry in which food remains the main offering of restaurants [1]. According to Gomezelj [18] product innovativeness means “a new product or service or one that is significantly improved regarding its characteristics or intended uses”. Gagić [15] suggested that restaurant should widen their menu offerings to include dishes created with ingredients that customers consider to be healthy, for example, organic food, whole grain cereals, low-fat, low-energy, and gluten-free foods. Accordingly, in order to be able to compete in the harsh food and beverage industry, a restaurant must constantly introduce specialized and new menus as well as service [25].

2.2 Technology-based service innovativeness

The second dimension of restaurant innovativeness is technology-based service innovativeness (TI). Service innovativeness itself means “innovation taking place in the various contexts of services, including the introduction of new services or incremental improvements of existing services” [26]. Their study found that most of the service innovation in the service industry does not integrate the service process with the advancement of technology although the rising technology and social media platforms have altered the way the hospitality industries deliver services, including the restaurant [2, 3, 27], and also in related tourism hospitality industry as such in hotel [28], souvenir handicraft [29], and tourism destinations [30].

To overcome this gap, the contribution of study considered the most prominent and significant yet latest literature in the restaurant context [1], has focused on the technology into service innovativeness, thus the term “technology-based service innovativeness” emerged and was used further. Similarly, Mavale and Rautela [31] strongly suggested that technology-based innovation should be prioritized by the restaurant premises to maintain its business sustainability.

According to Kim et al. [1], technology-based service innovativeness means “methods for a restaurant’s integrating technology into service and thereby creates an advantage for customers through the most contemporary service delivery processes” that can be measured using a four-item- scale. The first scale is “This restaurant offers new apps or online ordering tools”. In a prior study, technology-based service innovativeness measurement includes the term “delivery service” apart from online ordering tools [12]. Additionally, Brewer and Sebby [32] suggested that integrating both online

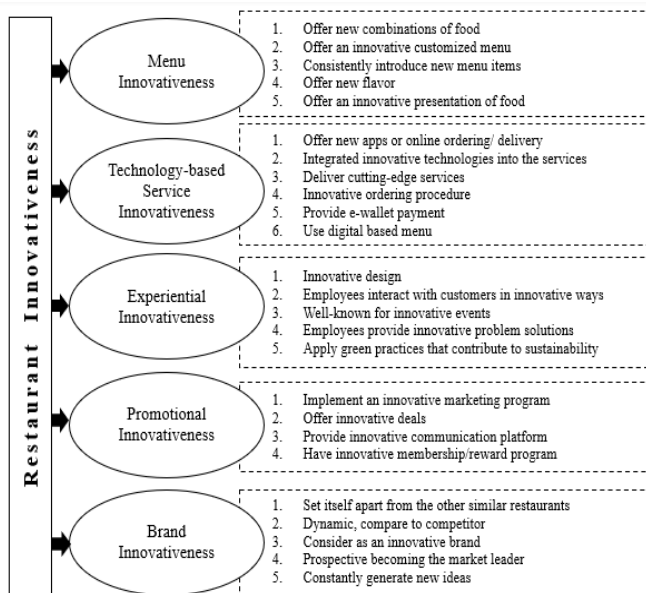


Figure 1. Newly proposed restaurant innovativeness measurement based on literature reviews

food ordering and delivery service during the COVID-19 pandemic led to customer purchase intention. Aligned with Ma et al. [33] and Kim et al. [34] highlight the importance of restaurants having delivery service, especially since COVID-19 hit in 2020 as it will boost the transactions and sales.

In contrast, the majority of RI research was conducted before the COVID-19 pandemic although it was published during the period 2020 to 2021. Consequently, the measurement items have not considered the RI approach to the COVID-19 pandemic situation. The logic underlying this is due to dine-in restrictions during the COVID-19 pandemic, instead, only takeaway and delivery are allowed. The finding advises that restaurants are likely to see primary growth after the delivery service introduction. Hence, the first-item scale will be added one new term which is “delivery service”. Next, the second to fourth-item scale [1] will remain the same with no further amendment.

However, since the focus of this study will be on Generation Z in Indonesia, the RI construct should fulfill the generation characteristic. For example, a recent study in Indonesia's fast food chain restaurants stresses the usage of technology such as ease of payment using GoPay as a part of firm technology adoption [35]. This is in the same vein as the characteristic of the younger generation in Indonesia prefer to opt for digital wallet or e-wallet payment rather than conventional payment using cash or card [36], in which 45% of digital wallet goes for food and beverage while the remaining 39% for transportation and 9% for parking and online shopping. Four top-of-the-mind digital wallet brands for Indonesian Gen Z are 52% GoPay, 35% OVO, 11% Dana, and 2% LinkAja [36]. On the other hand, Suarez et al. [37] studied the tablet-based menu in the three types of restaurant premises and highlighted that customers in fast food and midscale restaurants are more likely to adopt tablet-based menus compared to upscale restaurants.

Another concern is also due to the COVID-19 pandemic in accelerating contactless dining experience on the premises thus leading to digital menus instead of printed menu to prevent shared touch points [38, 39]. Yet, the four-item scale [1] does not emphasize these generation characteristics in terms of technology-based service innovations. Therefore, to fill the literature gaps, two additional measurements of digital wallet and digital menu should be complemented to comprehensively determine this dimension.

2.3 Experiential innovativeness

The third dimension of restaurant innovativeness is experiential innovativeness (EI) meaning “a firm’s practice for creating a personalized and lifestyle-based experience for individual customers with a novel approach” [40]. Similarly, a definition from [1] is “employees’ interactions with customers, problem-solving, design of physical facilities, intangible atmosphere, activities, and events”. In the hospitality sector, the accent of EI is the establishment of an environment where customers can engage with staff or other customers in innovative ways, resulting in long-term relationships.

A study by Chou et al. [41] found sustainable service innovation; in this sense, the term “service innovation” is equal to “experiential innovation”; depicted as the basis of restaurant business sustainable development. They elaborate that this act may lead the restaurant to become an innovative leader in the related domain. This includes the act of fewer environmental causes or eco-friendly or green practices such as reducing food waste, material waste, and less single-use

plastic. It is also consistent with a recent study by Rodríguez-López et al. [42] of bibliometric analysis from over 700 journals in the restaurant context from the period span 2008 to 2018 identified the emerging trend and the research gap. The findings rigor list of topics that should be addressed more from the standpoint of innovation, with a new approach to healthy eating and sustainability. Further, Filimonau and Sulyok [43] also emphasizes the need for a restaurant to contribute to environmental impact by reducing single-use plastic such as packaging, straws, cutleries, and mini-size condiments. Yet, the four-item scale [1] does not emphasize these sustainable characteristics in terms of service or experiential innovativeness. Therefore, to fill the literature gap, one additional measurement of green practice should be complemented to comprehensively determine this dimension.

2.4 Promotional innovativeness

The fourth dimension of restaurant innovativeness is promotional innovativeness (PI), meaning “new methods and changes in design, packaging, placement, promotion, or price, i.e., changes in any of the marketing mix dimensions” [18]. Similarly, a definition from [1] is “customers’ perceptions of a restaurant’s innovative marketing strategies”. This innovativeness comprises the restaurant marketing activities, including promotions, deals, as well as the membership program.

2.5 Brand innovativeness

The fifth dimension of restaurant innovativeness is brand innovativeness (BI), meaning “consumers’ perceptions of innovativeness of a restaurant brand as the extent to which a brand is perceived to be innovative, differentiating, dynamic, generative, and primary in the industry” [44]. Aligned with Kunz et al. [8], the definition is “consumers’ perception of a brand’s capability of providing new and useful offerings to fulfill their needs”. The key point to brand innovativeness is the viewpoints of amazement such as the wow factor and surprise [45] that can benefit the company in recent fierce competition due to its effect on overall brand value [9, 46]. For instance, when McDonald’s collaborated with the famous South Korean boy band BTS in 2021 and launched BTS meals globally, it indicated that McDonald’s had set itself apart from other fast-food restaurants, hence becoming a brand that wow the customer, while also bringing more profit to the company. Another example is when Starbucks opened its store called “Signing Store” throughout the world, with the purpose of not only selling coffee but also supporting and embracing equality for the deaf and people with hearing impairments, it surprised the community with how the company committed to accessibility and opportunity.

A recent study in 2020 of bibliometric analysis from over 700 journals in the restaurant context from the period span 2008 to 2018 identified the emerging trend and the research gap [42]. The findings rigor list of topics that should be focused more, for example, the measurement of brand value from the innovation perspective. An extensive body of previous studies for this stream can be widened to see as the extension from either study of Eisingerich and Rubera [47] or Kunz et al. [8] measurement of brand innovativeness. For instance, Shams et al. [45] for mobile phones in Australia, Hetet et al. [48] for electricity meters in France, Huaman-Ramirez et al. [49] for fast-food restaurants in France, and the

most recent Lin and Zhou [50] for a green restaurant in China.

At this point, the key measurement is effective solutions, different product offerings, and new solutions. On the other side, some studies employed the measurement [8] in which key measurements are creativity, new solutions, new ideas, and market changes. For example, a study in the hotel context in Norway integrated the stream with brand experience and customer satisfaction [51]. However, in the notion of restaurant context, the recent study was particularly relevant due to its characteristics that are specified for the restaurant business with casual concept and considers brand innovativeness as a part of restaurant innovativeness from the customer perspective [44].

3. METHODOLOGY

Restaurant innovativeness (RI) is measured using 5 dimensions and 25 indicators, as presented in Figure 1. The first dimension, Menu Innovativeness (MI) consists of 5 indicators, adopted from Kim et al. [1]. The second dimension, Technology-based Service Innovativeness (TI) consists of 6 indicators, adopted from Kim et al. [1], Scarlett et al. [35], and Suarez et al. [37]. The third dimension, Experiential Innovativeness (EI) consists of 5 indicators, adopted from Kim et al. [1] and Chou et al. [41]. The fourth dimension, Promotion Innovativeness (PI) consists of 4 indicators, adopted from Kim et al. [1]. Last, the fifth dimension, Brand Innovativeness (BI) consists of 5 indicators, adopted from Kim et al. [44]. A six-point Likert scale was deployed as the measurement unidimensional scale for all items, with 1 being strongly disagree, 2 being disagree, 3 being likely disagree, 4 being likely agree, 5 being agree, and 6 being strongly agree. All the questionnaire was written in the Indonesian language due to the respondent native language.

The study was conducted in Indonesia, involving 577 respondents across 12 different cities in Indonesia. The survey was using a questionnaire, delivered in two forms printed and electronic using Google Form, distributed both online (using link) and offline (face-to-face) between May to July 2023. Three criteria for respondents were aside, which are (1) must be Indonesian citizens, (2) categorized as Generation Z or born between 1997 to 2006, and (3) have had experience onsite dining in the food and beverage service premises for the past six months. The sample location was aside from the beginning to ensure two out of three criteria were met, therefore several education institutions and senior high schools were chosen. At the end of data collection, all participants received the gratitude of IDR 25,000 in the form of an electronic wallet or mobile credit, based on their preferences. The response rate for the face-to-face method was considered 100 percent as all the participants filled out the printed questionnaire right away and turned it in. However, researchers did screening incomplete questionnaires and excluded them from the total respondents. Meanwhile, the response rate for the online method, adhering to quota sampling also meets the aside number of quota for each city.

Despite there is no single rule of thumb for sample size in factor analysis, it is important that the sample is adequate. Kyriazos [52] summarized various methods in sample size that should be applied for studies in factor analysis. For instance, those with a size of 100 are considered poor to 500 are considered as very good. Similarly, MacCallum et al. [53] suggest a sample between 300 to over 500 is appropriate. Of

the 577 respondents, only 519 data were further processed for the analysis after excluding bias and incomplete data. Therefore, the sample size of 519 in this study complies with the above minimum threshold. Data was processed using factor analysis [54-56]. with SPSS version 27. A pilot of 54 samples was processed before proceeding with the main analysis, indicating that the data was valid and reliable with Cronbach's Alpha value for all indicators greater than 0.9 as present in table below. However, a few wording was revised to better present the questions and enhance the respondent's understanding.

4. RESULTS AND DISCUSSION

At the beginning of the questionnaire, respondents were asked to choose one of their most visited restaurant types among three given options: casual dining, fast food, and coffee shop, as a basis for their remaining answers in the questionnaire. The respondent's demographics of this study are 34.87% male (181 respondents) and 65.13% female (338 respondents), with their choices of the most visited restaurant type being 31.79% casual dining (165 respondents), 33.41% fast food (172 respondents), and 35.07% coffee shop (182 respondents).

Restaurant innovativeness measurement

The step-by-step process in SPSS uses the menu of =>Analyze =>Dimension Reduction =>Factor =>Descriptive (KMO and Bartlett's test of sphericity, Extraction (Principal Component, Correlation matrix, Based on Eigenvalue greater than 1), Options (suppress small coefficient with an absolute value below 0.50) [54-56]. In total, there are three steps of factor analysis in this study as seen in Table 1.

The first analysis employs 25 items from its original literature review. As a result, three items (MI5, TI3, TI4) have low loading (below the aside value of 0.50) while two items (EI1, TI6) show high cross loading to more than factor. Therefore, these five items were deleted. The second analysis employs only 20 items after the five-item deletion from the first analysis. The finding shows no item has a loading below 0.50, but there is one item (BI5) that has high cross loading, and therefore eliminated. The third analysis leaves only 19 items, after six items deletion from the previous two steps. As a result, none have low loading or high cross-loading. All three steps result in forming four factors with the statistical results such as KMO, Bartlett's sig, communalities, and cumulative total variance presented in Table 1.

Table 1. Factor analysis

Step	KMO	Sig.	CL	LL	CUM	F1	F2	F3	F4
S1	.977	.00	2	3	77.52	67.99	3.55	3.42	2.55
S2	.973	.00	1	-	80.19	68.89	4.18	4.15	2.95
S3	.971	.00	-	-	80.31	68.51	4.40	4.32	3.07

It can be posited that Step 3 resulted in the highest cumulative total variance percentage (80.31%), compared to Step 2 (80.19%) and Step 1 (77.52%). Despite the increase for each step being less than 1%, still, it enhances progressively, indicating that the 19 items better explain the restaurant innovativeness than its 25 original items. Accordingly, the final factor analysis refers to the result in Step 3, as seen in Table 2 displays the statistical result for communalities, correlation, and loading factor for all items. In addition,

Cronbach's Alpha value for all items is more than 0.9 showing high reliability.

Table 2. Measurement items statistical result

Items	Mean	S.D	C.A	COR	COM	C.M
MI1	4.49	1.192	.980	.969	.768	.746
MI2	4.44	1.267	.980	.963	.780	.766
MI3	4.46	1.214	.979	.961	.764	.650
MI4	4.61	1.220	.979	.965	.776	.578
MI5*	4.76	1.215	.979	-	-	-
TI1	5.09	1.230	.980	.953	.857	.803
TI2	4.80	1.174	.979	.976	.766	.692
TI3*	4.71	1.166	.979	-	-	-
TI4*	4.69	1.253	.979	-	-	-
TI5	5.20	1.146	.979	.953	.860	.751
TI6*	4.68	1.312	.980	-	-	-
EI1*	4.84	1.189	.979	-	-	-
EI2	4.79	1.209	.979	.974	.779	.634
EI3	4.60	1.263	.979	.975	.758	.686
EI4	4.78	1.230	.979	.984	.788	.668
EI5	4.71	1.244	.979	.981	.761	.718
PI1	4.71	1.204	.979	.960	.843	.752
PI2	4.76	1.167	.979	.962	.842	.745
PI3	4.79	1.226	.979	.983	.790	.655
PI4	4.57	1.293	.979	.984	.770	.707
BI1	4.76	1.220	.979	.973	.853	.665
BI2	4.73	1.231	.979	.972	.843	.701
BI3	4.71	1.214	.979	.965	.873	.735
BI4	4.58	1.244	.979	.984	.787	.658
BI5*	4.69	1.224	.979	-	-	-

Note: SD (Standard Deviation), C.A (Cronbach Alpha), COR (Correlation), COM (Communalities), C.M (Component Matrix), *deleted

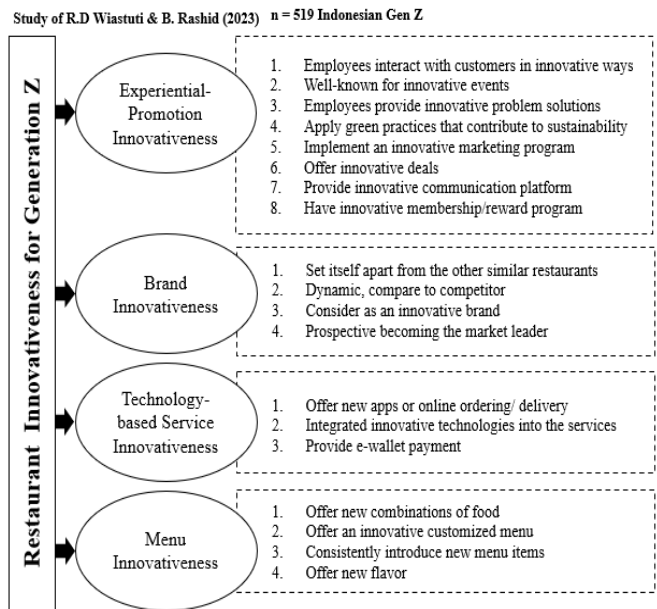


Figure 2. Newly proposed restaurant innovativeness measurement specific for Gen Z

Table 1 and Figure 2 show the first factor account for 68.51% of the total variance and consists of 8 items as a combination of experiential innovativeness and promotional innovativeness. The second factor accounts for 4.40% of the total variance and consists of 4 items, formed only from brand innovativeness. The third factor accounts for 4.32% of the total variance and consists of 3 items, formed only from technology-based service innovativeness. The fourth factor accounts for 3.07% of the total variance and consists of 4

items, formed only from menu innovativeness. The next section presents the Gen Z restaurant innovativeness based on three settings; casual dining, fast food, and coffee shops with the basis of using only 19 items of 25 origin items.

Restaurant innovativeness for casual dining

31.79% or equal to 165 respondents chose the casual dining concept as their most visited restaurant type. The casual dining intended in this study refers to the food service business that offers table service with a casual atmosphere and a quite cozy dining space, including family restaurants and ethnic restaurants. In the context of Indonesia, several brands mentioned by respondents are Solaria, Pan & Co, Ramen Ya, Mang Engking, Pizza Hut, Sushi Tei, Bakmie GM, Es Teler 77, Shaburi, Bebek Kaleyo, Ta Wan, Sushi Hiro, Imperial Kitchen, Pancious, Gerobak Betawi, and many other.

Based on the factor analysis, the KMO is .952, df 105, and Sig. 000. Of 19 items, another 4 items were deleted due to low loading (MI1, EI4) and high cross-loading (BI1, PI3), and there are 15 items. According to Table 3 and Figure 3, factor analysis for fast food Gen Z is formed into two factors of 15 items (component with eigenvalue below 1 is not presented) with 72.17% cumulative. The first factor accounts for 65.17% (10 items) of the restaurant innovativeness variance, followed by the second factor accounts for 7% (5 items).

Table 3. The new factor for casual dining

Comp	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %
1	9.776	65.175	65.175	9.776	65.175	65.175
2	1.051	7.004	72.179	1.051	7.004	72.179

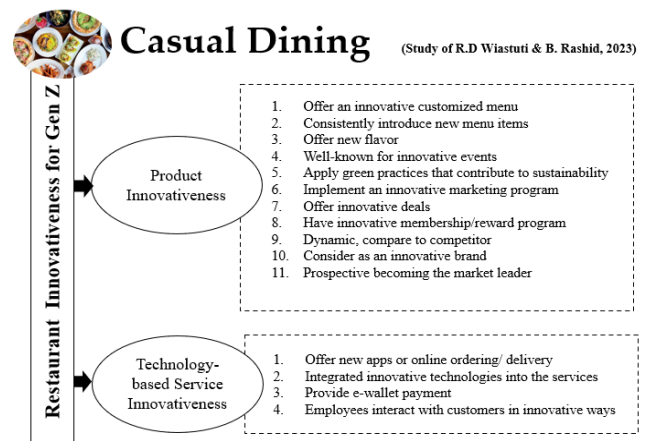


Figure 3. Newly proposed casual dining innovativeness measurement

Restaurant innovativeness for fast food

33.41% or equal to 172 respondents chose fast food or quick service concept as their most visited restaurant types. The fast food intended in this study refers to the food service business that does not offer table service, in which customers order by themselves at the counter, where the dining atmosphere is more past face and not as comfortable as casual dining. In the context of Indonesia, the fast food restaurant brand mentioned by respondents is McDonald's, KFC, Burger King, CFC, Hokben, A&W, and Yoshinoya.

Based on the factor analysis, the KMO is .956, df 120, and Sig .000. Of 19 items, another 3 items were deleted due to high cross-loading (EI2, EI4) and low loading (MI1), with 16 items remaining. According to Table 4 and Figure 4, factor analysis for fast food Gen Z is formed into two factors of 16 items (using two-factor numbers to extract) with 76.98% cumulative. The first factor accounts for 71.30% (12 items) of the restaurant innovativeness variance, followed by the second factor accounts for 5.67% (4 items).

Table 4. The new factor for fast food

Comp	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %
1	11.409	71.306	71.306	11.409	71.306	71.306
2	.908	5.677	76.983	.908	5.677	76.983

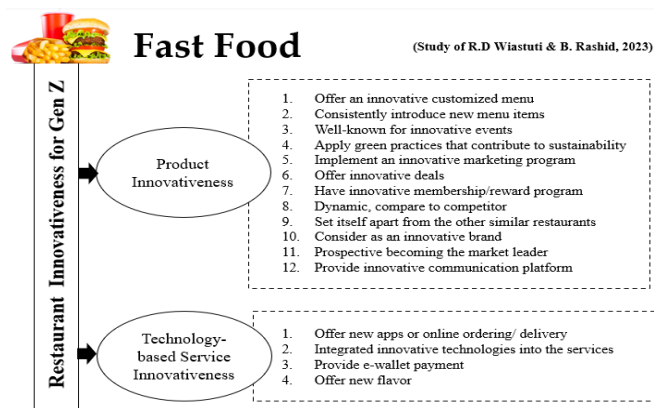


Figure 4. Newly proposed fast food innovativeness measurement

Restaurant innovativeness for coffeeshop

35.07% or equal to 182 respondents chose the coffee shop concept as their most visited restaurant type. The coffee shop intended in this study refers to the food service business that offers beverage-based (instead of food) main products. The booming of these business types in Indonesia consists of those from the international chain and also from national brands as well. To name a few, such as Janji Jiwa, Starbucks, Kopi Kenangan, Mixue, and Chatime.

Based on the factor analysis, the KMO is .954, df 171, and Sig .000. Of 19 items, none show cross-loading and low loading value, therefore the items remain the same. According to Table 5 and Figure 5, factor analysis for fast food Gen Z is formed into two factors of 17 items (using two factor number to extract) with 75.06% cumulative. The first factor accounts for 70.24% (12 items) of the restaurant innovativeness variance, followed by the second factor accounts for 4.82% (7 items).

Table 5. The new factor for coffee shop

Comp	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %
1	13.346	70.242	70.242	13.346	70.242	70.242
2	.916	4.820	75.062	.916	4.820	75.062

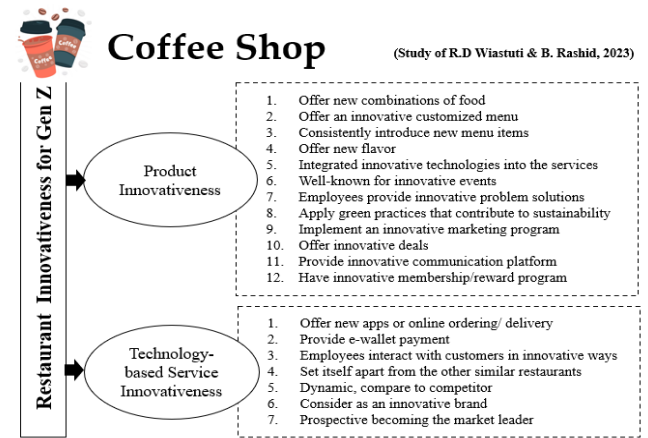


Figure 5. Newly proposed coffeeshop innovativeness measurement

Perceived restaurant innovativeness

In addition, this study also extends the degree of perceived restaurant innovativeness based on industry types and gender according to the descriptive statistic result. As seen in Figure 6, all customer, who often visit casual dining restaurant, fast food, and coffee shop agree that the existence of e-wallet payment and online apps are two restaurant innovativeness they perceived the most during their dining experience. Moreover, casual dining restaurant customers tend to perceive innovative food presentation compared to fast food and coffee shop customers. This makes sense since casual dining restaurants indeed offer more food or menu variety, which sometimes can vary from appetizer to dessert, with mostly higher prices, and therefore food presentation should come as a company strategy for product innovativeness. Coffee shops, on the other hand, offer fewer food options, in which customers are more on the beverage selection. Meanwhile, for fast food restaurants, the menu usually comes very simple, without much variety to choose from due to its business characteristics.

Type of Restaurant	Top 5 Most Perceived Innovativeness for Gen Z
Casual Dining 	<ol style="list-style-type: none"> 1. Provide e-wallet payment 2. Offer new apps or online ordering 3. Provide innovative designs 4. Integrated innovative technologies 5. Offer an innovative presentation of food
Fast Food 	<ol style="list-style-type: none"> 1. Provide e-wallet payment 2. Offer new apps or online ordering 3. Integrated innovative technologies 4. Employees provide innovative problem solutions 5. Provide innovative designs
Coffee Shop 	<ol style="list-style-type: none"> 1. Provide e-wallet payment 2. Offer new apps or online ordering 3. Provide innovative designs 4. Innovative ordering procedure 5. Provide innovative communication platform

n = 519 Indonesian Gen Z (Study of R.D Wiastuti & B. Rashid, 2023)

Figure 6. Major perceived restaurant innovativeness by types

As seen in Figure 7, show slight differences in how males and females perceived innovativeness during their dining experience in the restaurant premises. Both do agree that the existence of e-wallet payment and online apps are two restaurant innovativeness they perceived the most. However, female Gen Z tend to perceive innovative design, innovative technology in service, and innovative staff interaction. Meanwhile, male Gen Z shows very different results as they tend to perceive how restaurants are more dynamic than their

competitors, innovative problem solutions, and innovative communication platforms. It is interesting to see the result as females place value on employee interaction while males on communication platforms. This shows that in-store dining in terms of service experience is more important for female than male. While engagement outside in-store dining is more prevalent for male than their female counterpart.

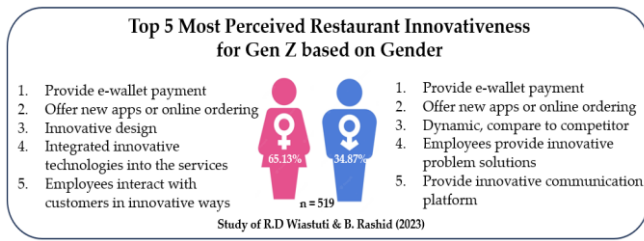


Figure 7. Major perceived restaurant innovativeness by gender

Discussion

Past studies have explored and confirmed the literature on diverse restaurant innovativeness. This study attempted to investigate the measurement scale of restaurant innovativeness from the customer-perceived point of view, meaning the consumer’s perception of an enduring firm capability that results in novel, creative, and impactful ideas and solutions for the market” [8-10]. Five dimensions were initially proposed, consist of 25 items (see Figure 1), namely (1) menu innovativeness, (2) technology-based service innovativeness, (3) experiential innovativeness, (4) promotional innovativeness, and (5) brand innovativeness. The first RI dimension (5 items) uses the term “menu innovativeness” whereas other pieces of literature use the term product innovativeness. The second RI dimension (6 items) uses the term “technology-based service innovativeness” where literature uses various terms interchangeably such as technology innovativeness or technology-related service innovativeness. The third RI dimension (5 items) uses the term “experiential innovativeness” where kinds of literature use various terms interchangeably such as experience-related service innovativeness, service innovativeness, and service quality innovativeness. The fourth RI dimension (4 items) uses the term “promotional innovativeness” where literature uses various terms interchangeably such as promotion innovativeness, marketing innovativeness, and market innovativeness. The fifth RI dimension (5 items) uses the term “brand innovativeness” which acts as the new literature contribution to the restaurant innovativeness concept.

Since the focus of this study is on Generation Z, the restaurant innovativeness construct should fulfill those characteristics with three main adjustments. The first focus refers to Generation Z or Gen Z's shifting perspective on consumption. A study found that 89% of Gen Z prefer to purchase from a company that supports environmental and social issues over one that does not [57]. In the same vein, Gen Z's eating attitude indicate not buying food product from the company in which ecologically irresponsible as they believe their lifestyle tend to be more sustainable consumption [58]. The second focus refers to the research location, where the younger generation in Indonesia tend to use digital payment for their food and beverage transaction The third focus refers to the latest worldwide (including Indonesia) condition due to the COVID-19 pandemic in accelerating contactless dining

experience on the premises thus leading to the digital menu instead of a printed menu [36] to prevent shared touchpoints [38, 39]. Mendoza-Silva [17] also insisted that more innovation studies should be conducted in developing countries due to the previous research majority founded in Taiwan, Spain, China, and Australia. In this sense, exploring the RI concept in Indonesia (classified as a developing country) will be an interesting phenomenon.

As a result, in the context of the particular market of the generation cohort, in this sense, Generation Z, a new restaurant innovativeness measurement was proposed, consist of 4 factors or dimensions of 19 items (see Figure 2). The first factor formed from the combination of experiential innovativeness and promotional innovativeness, can be considered a “core” innovativeness as it contributes the most. It confirms 8 items, which are; employees interact with customers in innovative ways, are well-known for innovative events, employees provide innovative problem solutions, apply green practices that contribute to sustainability, implement an innovative marketing program, offer innovative deals, provide innovative communication platform, and have innovative membership/ reward program. Instructively, Gen Z considers these factors as what determines them the most in terms of perceived firm innovativeness, while the remaining three factors account for a small contribution. This implies that customers nowadays, especially Gen Z, are starting to perceive not only the food while they dine but also other factors intensively. In fact, customers start to understand what the restaurant has to offer apart from only its food and beverage. For instance, the way restaurants implement an innovative marketing program and what are the innovative deals available. Although these might not be the main determinant for customer dining satisfaction [59], this comes as the most perceived by customers, meaning that when restaurants create or launch related to this program, customers will definitely be aware and show their involvement in that program.

The second factor is named brand innovativeness since all items come from only one factor. It confirms 4 items, which are; set itself apart from other similar restaurants, dynamic-compared to competitor, consider as an innovative brand, and prospective becoming the market leader. Interestingly, since brand innovativeness is considered a new factor or dimension in the existing literature, this factor itself is placed as the second substantial factor of restaurant innovativeness. This implies that an innovative restaurant brand stands out among young customers. For instance, McDonald’s which collaborates with various K-Pop Idols, is considered an innovative fast food brand among Gen Z. This is not only because of the new menu that they launched, but also other innovative products that suit the value of young customers. This also set them apart from their fast food competitor.

The third factor is named technology-based service innovativeness since all items come from only one factor. It confirms 3 items, which are; offer new apps or online ordering delivery, integrate innovative technologies into the services, and provide e-wallet payment. The fourth factor is named menu innovativeness since all items come from only one factor. It confirms 4 items, which are; offer new combinations of food, offer an innovative customized menu, consistently introduce new menu items, and offer a new flavor. Surprisingly, this menu innovativeness became the least substantial among other factor. This result contradicts most past literature that found the menu as the most important innovation from the customer's point of view.

5. CONCLUSION

This study aims to develop the scale of restaurant innovativeness that can fit into three different types of food and beverage service businesses: casual dining, fast food, and coffee shop, based on the perceived firm innovativeness for a specific one-generation cohort of Generation Z. It turns out that restaurant innovativeness for Gen Z can be measured with 19 items (see Figure 2) consisting of four dimensions, from its literature review of 25 items and five dimensions. In the same vein, the measurement scale for coffee shop (see Figure 5) also remains the same with those 19 items. Meanwhile, casual dining innovativeness can be measured with 15 items (see Figure 3), and fast food with 16 items (see Figure 4). It remains clear that each restaurant setting leads to different innovativeness measurement scales, despite all exhibiting the same two dimensions with the first factor being the most substantial.

Theoretical contribution

This study provides several theoretical contributions to the knowledge of hospitality and tourism. First, this study provides a comprehensive literature review of restaurant innovativeness topic and depicts it according to the recent market condition with recent literature. As a result, this study corresponds with Moreno and Tejada [23] who strongly suggest further investigating this stream from the demand-side or customer point of view by integrating the perspectives from the firm's management, which is in line with what is present in this study. Second, this study is also in response to a recommendation made by Rodríguez-López et al. [42] to further address restaurant innovation from sustainability based on environmental practices. As a result, this study confirms that "applying green practices that contribute to sustainability" is considered substantial as a measurement of restaurant innovativeness in the context of Gen Z. Third, this study merges new dimensions of brand innovativeness into the mainstream existing restaurant innovativeness scales (menu-service-ambiance innovativeness), and therefore enrich the concept.

Fourth, this study complements the demand [1, 20] for conducting future studies in various restaurant types such as fast-food and fine-dining as most research focuses only on casual dining restaurants. To this end, this study answers the above demands, and as far as the authors' knowledge, no similar research has been published. This work contributes to the theoretical understanding particularly in the food and beverage business by empirically investigating restaurant innovativeness for three types of restaurant settings for certain generation cohorts. Instructively, a new measurement scale was proposed for further researchers who would like to study restaurant innovativeness, in casual dining, fast food, and coffee shop, from the fold of demand-side or customer-perceived innovativeness.

Restaurant brand innovativeness also emerged as the novelty from the RI dimension in this study, as most of the studies oversee only in terms of product, service, and promotion while lacking in highlighting the innovation from the brand perspective. As a result, this larger viewpoint on the experience of innovativeness at the brand level adds to the present literature on customer-perceived innovativeness in the restaurant context. To the researcher's understanding, this is the first study that appears to integrate restaurant innovativeness not only from its product, service, and

technology but also from its brand perspective customer-side.

Managerial implication

This research proposes several recommendations for food and beverage businesses, specifically those with Gen Z as one of their customers. It is prevalent that male and female customers perceive innovativeness differently while they dine in the restaurant, despite they dine together and might visit the same brands. Female Gen Z is more concerned with restaurant innovative design and technology integration into service. While male Gen Z is surprisingly more into restaurant communication platforms and problem solutions.

Furthermore, among all restaurant strategies to be innovative, what Gen Z notices the most is the availability of electronic wallet payment choices. Recently, the Quick Response Code Indonesian Standard (QRIS) was developed as a barcode payment that may be utilized in numerous e-wallet payments in Indonesia. Restaurants should keep these payment choices available since they may be preferred by younger customers over traditional payment methods. However, this condition might apply differently for country that do not have this type of payment. In addition, restaurants should retain and continue to develop their online and offline delivery, whether through official business applications or third-party online delivery services like GoFood, GrabFood, and ShopeeFood. The availability of restaurant brands for internet access has emerged as an innovative initiative among the Gen Z market.

Apart from the strategies above that can be applied to all dining formats, several strategies might be applied differently since Gen Z perceived restaurant innovativeness differently. For casual dining, innovative food presentation is indeed important, thus making sure that it is implemented and carefully operationalized is crucial. Gen Z not only opts for good food but also those that are well-presented and appealing to feed their eyes. Gen Z do know, that the money that they spend on casual dining should go beyond just good food. Meanwhile, for fast food, Gen Z somehow place a great value on innovative problem solutions. Hence, fast food should ensure that they are able to solve any occurring problem. For example, technical problem might occurred on the self service kiosk machine, such as unsuccessful payment and discount code. In this case, restaurant should immediately solve this issue in timely manner. Lastly, for the coffee shop, Gen Z puts a high value on innovative communication platforms, therefore it is important for the coffee shop to establish it. This can be through the membership system, social media, and official channels. The main point is not only to have all this communication throughout all platforms but to keep it updated, engaged, and empowered.

As restaurant innovativeness research expands, its interrelationship with the impacted factors is crucial, despite the fact that it is still frequently disregarded. A considerable body of studies explored the consequences of customer perception towards a firm's innovation that has proven to have a positive and significant effect on various constructs, for example, the perception of overall value [60], willingness to pay more [9], purchase intention [32], customer value co-creation behavior, customer satisfaction [19, 20], behavioral intention [21], brand credibility and brand preference [22].

The need for innovation in the restaurant business is that restaurant must always do their best to improve both product and service owing to the nature of being easily copied, which has resulted in the loss of the value of innovation [61].

Customer innovativeness eventually should go hand in hand with company innovation, to better sustain the business as well as customer needs and wants.

Limitations and future research

The first limitation of this study is the unbalanced male and female respondent population, with roughly two-thirds of the respondents being female. Hence, the result of this study can be said more from a female perspective. Therefore, future studies should consider providing a balanced respondent gender to avoid any biased data. The second limitation is the study's restaurant settings, which only includes casual dining, coffee shop, and fast food. Therefore, the result of this study is not representative of all existing dining formats. This is because, at the beginning of the questionnaire, respondent was required to choose only one of their most visited restaurant type with only three available answers to choose from. Although there are other food and beverage settings, as such bars, fine dining, and pubs, this study employs only those three owing to industry characteristics in Indonesia. Hence, future research should analyze the distinguishing characteristics of each study locus and select that best fits the market. For example, because of culture and government alcohol restrictions, Muslim countries tend to have fewer bars and pubs. Western and European countries, on the other hand, tend to be more accepting of alcoholics. Lower and less developed countries also tend to have fewer fine-dining restaurant concepts because of their high selling price, focusing instead on local culinary establishments that are not classified as those stated above. Consequently, the next study will be interesting should the researcher dwell on cultural factors or considerations as one of the determinants for customers in choosing a restaurant. Furthermore, this study focuses just on one generation cohort, Generation Z. This is not to say that previous generations are unimportant. As a result, future research covering all generations definitely will be enlightened, as most researchers investigate between one or two generations only.

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