

Online Fashion Gen-Z Consumers' Reviews: A Text Mining Approach

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ABSTRACT

The study aims to evaluate electronic service quality (e-SERVQUAL) and insert the Freudian theory to reformulate the model. The research employs text mining and psychoanalytic models, a unique methodology, to investigate the dominant factors in application services based on customer reviews. Ten thousand reviews were collected online through e-Matahari, Zalora, and Pomelo between 2020 and mid-2023. The re-modelling of the cross theory of electronic service quality and the psychoanalytic model theory from Sigmund Freud reveals that consumers have structured mind (Id, ego, and superego) motives that encourage them to purchase. The electronic service quality theory suggests that a positive image of the service quality would influence the intention to repurchase. The text mining analysis using the Orange application produces ten topic keywords and a sentiment analysis. Using Social Semiotics Analysis (SSA), customer review items are tabulated in a cross-item table and some comments as Id are more ego and superego. This means that Gen-Z consumers prefer to buy fashion products as a result of stimuli, immediate gratification, and instincts. Factors influencing reusing such e-commerce could contribute to quantitative research insights.

Keywords: Gen-Z, consumer behavior, text mining, psychoanalytic theory, Sigmund Freud theory, social semiotics analysis, e-WOM, e-SERQUAL

JEL: O32, E17, M15, M31

INTRODUCTION

According to the Digital 2022 Global Overview Report, Indonesia is the 5th country where citizens often shop online, with 36% of people using e-commerce. A survey of 1,420 respondents showed that the

relatively high level of online shopping also influences the sustainability of e-commerce in Indonesia. Based on Databoks (2022), 58% of respondents bought fashion products online, with 50% being Millennials and 36% being Generation Z. Generation Z, also referred to as Gen-Z, is the generation that comes after Millennials and before Generation Alpha. Gen-Z is the generation born between 1997 to 2012.

Although online shopping has increased, Databoks (2022) reports that only 1.10% of respondents spent more than 30% of their monthly income on online shopping, while another 25.26% did not shop online at all in the last three months. Therefore, this program can provide an overview of e-commerce activities in Indonesia.

Asians often use e-commerce to shop for fashion items, including Zalora, Pomelo, and Matahari. Based on the data, Zalora and Matahari can become the Asian community's main e-commerce choices, while Pomelo is a newcomer that has significantly energized the fashion e-commerce landscape (Anonymous, 2019).

Customers look for products or services and consider their service quality when shopping online for fashion. The most common theory of electronic service quality (e-SERVQUAL) was initiated by (Parasuraman et al., 2005). The theory was developed with the objective of electronic banking services. However, the respondents were not specified as Gen Z, and this issue has become very common in the current era. Gen Z has unique characteristics, with digital technology attached to daily life and dominated by the emotional decision called Id (Sudaryanto et al., 2024). The relevance of the research study lies in its innovative approach, combining e-SERVQUAL based on e-word of mouth (E-WOM) and the use of e-commerce applications (App) to purchase Gen-Z fashion products.

The problem arises when e-SERVQUAL no longer fits Gen Z, who need a simple, quick response. On the other hand, Gen Z consumer behavior is more based on Freudian psychoanalytic theory (Penaloza, 2013). Does the e-SERVQUAL theory need to be mixed with the Freudian theory?

LITERATURE REVIEW

Empirical research in fashion consumer behavior found that product quality and trust influence customer loyalty in e-commerce (Nofrizal et al., 2023; Srinivasan et al., 2002). Besides that, e-service quality influenced mobile stickiness intention in Malaysia (Bahtar et al., 2022; Chang et al., 2009; Wijaya et al., 2021). In detail, the information quality, e-service quality, usefulness, and e-trust affect e-satisfaction (Hidayat & Anasis, 2020). Empirical qualitative research evidenced that the e-commerce website influences customer satisfaction (Md Sabri et al., 2022). Nevertheless, the e-commerce side has difficulties in developing attractive website features.

On the other hand, a psychoanalytic theory focuses on a causative model of the development of cyberculture and virtual living (Lippmann, 2002). Psychoanalysis by Sigmund Freud (1954) has contributed to the concept of the superego as a primitive and aggregate of values and the unconscious in recent authors. Damasio (1994) contributed his thoughts on the irrational content of consumer psychology and undermined traditional ideas of human rationality. In marketing and consumer behavior, rational and irrational decisions relate to ethnic groups (Sudaryanto et al., 2021). More importantly, psychoanalysis lets everyone know how certain characters behave while doing unintentional things (Elimimian, 2007). This study would enrich the wide range of psychological aspects of consumer behavior, such as the celebrity endorsement psychological aspect (Knoll & Matthes, 2017), interactive advertising (Pavlou & Stewart, 2000), instead of product quality influence (Hoe & Mansori, 2018)

Electronic Words of Mouth

Electronic word-of-mouth (e-WOM) is the process of people sharing their opinions, recommendations, reviews, and feedback about products, services, or brands through digital channels, such as social media, online forums, review websites, and email (Pavlou & Stewart, 2000). Generally, e-WOM strengthens online promotion through consumer empowerment. Researchers also studied the influence of e-WOM on repurchase intention (Sudaryanto et al., 2022), online reviews and ratings influencing online purchase

decisions (Hajati, 2022), and purchase intention (Torres et al., 2019; Sudaryanto et al., 2022). The indicators of online reviews can be categorized into negative and positive reviews on the product, service, and brand (Torres et al., 2019).

E-Service Quality

The theory of e-service quality refers to a service provided on the internet network as an extension of a site's ability to facilitate shopping, purchasing, and distribution activities effectively and efficiently. Similar research on service quality using a text mining approach was conducted, and that attempt to identify the dimensions of service quality in consumers' ratings in a hotel service (Gunasekar et al., 2021). The research examines the moderating effect of: (a) domestic vs foreign, (b) novice vs experienced, (c) less vs more popular, and (d) brief vs elaborate writing. The result implies that reviewers pay more attention to the attributes of service quality such as tangibles, reliability, and responsiveness. The recommendation is the importance of usefulness and service planning.

According to Wu & Ke (2015), a scholar is doing research on the influential factors of personality traits, perceived risk, and technology acceptance regarding online shopping intention. E-Service Quality, also known as e-SERVQUAL, is part of service quality (Parasuraman et al., 2005). One of the most researched topics in the marketing field is e-service quality because of its relationship to cost, satisfaction, retention, and loyalty (Gounaris, et al., 2010). Important issues in e-service quality include the dimensions and results of e-service quality (Lin & Ho, 2008). E-service quality is generally also defined as the difference between expected service and perceived service (Gronroos, 1982). According to Zeithaml, Parasuraman, and Malhotra (2002), e-service quality is defined as the extent to which a website facilitates shopping in the efficient and effective purchase and delivery of products and services.

Dimensions of E-Service Quality

Parasuraman (2005) conceptualizes service quality as the e-SERVQUAL, which is based upon seven aspects of service quality dimensions, which are divided into 2 parts, namely Electronic-Service Quality (E-S-Qual) and Electronic-Recovery Service Quality (E-RecS-Qual) (Ali et al., 2020; Chang et al., 2009; Hidayat & Anasis, 2020; Jonathan, 2013; Ojasalo, 2020; Parasuraman et al., 2005; Rita et al., 2019; Zavareh et al., 2012):

E-S-Qual with indicators as follows:

1. Efficiency: ease and speed in accessing the site.
2. Fulfilment (settlement): all types of transactions carried out can be completed as expected.
3. System availability: all kinds of available technical functions can run smoothly.
4. Privacy (personal secrets): provides security and guarantees for individual/personal data.

E-RecS-Qual with indicators as follows:

1. Responsiveness: respond quickly on the site.
2. Compensation: the level of compensation that can be received by the customer if a problem occurs
3. Contact: availability of customer service via telephone or representatives in online support facilities

Psychoanalytic model theory from Sigmund Freud

Psychoanalytic theories refer to a set of psychological theories and therapeutic approaches that were developed by Sigmund Freud (1954) and known as psychoanalysts. These theories focus on the role of the unconscious and structured mind (Elimimian, 2007; Lippmann, 2002). This theory emphasizes the

importance of early childhood experiences in shaping an individual's personality and behavior. Here are some key aspects of psychoanalytic theories:

1. Unconscious Mind: Freud believed that a significant portion of an individual's thoughts, feelings, and desires exist in the unconscious mind, and these unconscious processes influence our conscious thoughts and behaviors.

2. Structural Model: Freud introduced a structural model of the mind, consisting of three components:

- Id: The Id operates on the pleasure principle, seeking immediate gratification of desires and instincts.
- Ego: The ego operates on the reality principle and mediates between the Id's desires and the external world, trying to balance the two.
- Superego: The superego represents an individual's internalized moral and ethical values.

The online reviews toward fashion e-commerce create a spread of insight. Most customers have their own experience of the application services. Nevertheless, seller e-service quality also contributes to consumer behavior, psychologically directed into unawareness our mind of the product or services. Consumers ego would decide to buy the product unintentionally.

The purpose of the study is to find out the combination model of e-service quality with Freudian psychoanalytic theory. Therefore, based on the literature review discussed above the following preposition proposed:

Proposition

Accordingly, this research would provide valuable information on which theories apply to e-SERVQUAL and psychoanalytic theories.

METHODS

This is exploratory qualitative research using Social Semiotic Analysis (SSA) based on text mining data. Text mining is a process of extracting information where users interact with large documents from time to time using such analysis (Halvadia et al., 2022; Hudaefi & Badeges, 2022; Hussain et al., 2023; Lee & Hong, 2014; Vásquez Rojas et al., 2018; Zhong et al., 2020). Text mining is looking for information from data sources of data through identifying and exploring patterns.

SSA has three central goals: collect, investigate, and contribute (Djonov & Zhao, 2017; Hestbaek Andersen et al., 2015). Hereby, the output of the text mining is then confirmed in cross-theories between e-SERVQUAL and psychoanalytic to answer the research propositions.

The Data and Sources

The secondary data were collected from the 8577 after cleaning out of 10.000 customer reviews between 2020 to mid of 2023 via third-party online sources:

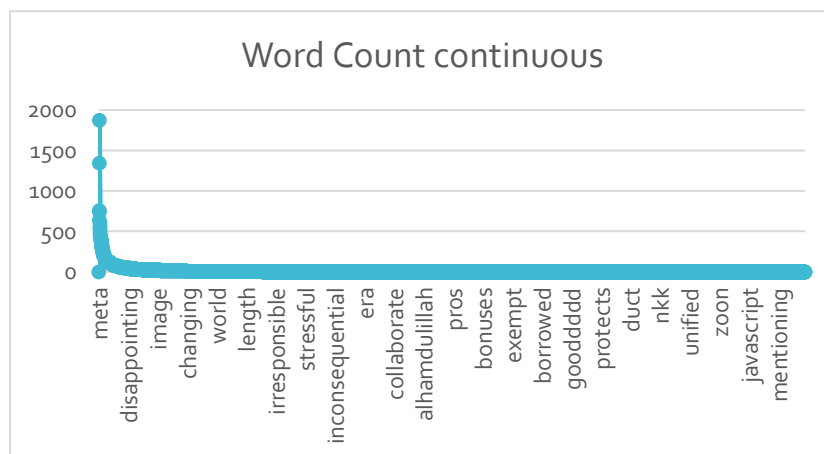
1. Zalora <https://play.google.com/store/apps/details?id=com.zalora.android&hl=en&gl=US>
2. Matahari <https://play.google.com/store/apps/details?id=app.ndtv.matahari&hl=en&gl=US>
3. pomelo fashion <https://play.google.com/store/apps/details?id=com.mobile.pomelo&hl=en&gl=US>

This research used a computerized process in every stage, in two stages:

1. Web Scrapping, by collecting the data from those three websites;
2. Orange data mining includes.
 - (a) Data selection

- www.rsisinternational.org

Figure 2. Word count of e-WOM



Out of 48.419 words can be describes into the following picture:

Topic Modelling

Topic coherence is 0.5007 that produce some relevant topics mentioned in the e-WOM. The result is presented in the following Table 1.

Table 1. Topic keywords

Topic	Topic keywords
1	app, can't, even, items, order, still, time, like, delivery, customer
2	app, order, delivery, items, even, customer, still, though, item, service
3	can't, good, even, items, delivery, customer, service, shopping, though, open
4	good, can't, order, app, still, quality, application, always, really, time
5	items, delivery, customer, order, service, good, even, really, app, please
6	order, shopping, items, can't, good, really, application, like, product, even
7	even, order, customer, time, service, still, item, though, delivery, can't
8	customer, shopping, can't, service, even, good, time, though, order, delivery
9	delivery, order, time, items, shopping, even, long, size, takes, online
10	even, time, shopping, order, customer, please, always, service, though, =

There are 10 topics among customers' e-WOM on using online fashion applications that were produced by Orange. Each topic involved some words that reflect the indicators of each dimension.

Sentiment Analysis

Data collected from the customers' e-WOM consist of positive and negative reviews of the e-commerce platform that can be analyzed through sentiment analysis. The descriptive statistics of the analysis is presented in Table 2.

Table 2. Sentiment Analysis

	positive	negative	neutral	compound
sum	3490,085	560,841	5504,059	2142,725
ava	0,358693	0,057674	0,565749	0,220183
min	0	0	0	-0,9791
max	1	1	1	0,9878
med	0,217	0	0,641	0,3612
mod	0	0	1	0

Table 2 explains the statistical description of the sentiment analysis. The Orange application produces positive reviews with 3490,085 rather than negative reviews with only 560,841.

DISCUSSION

It shows that fashion consumer behavior indicates that the products are of quality, and it can influence customer loyalty in e-commerce. This finding is consistent with Nofrizal et al. (2023) and Srinivasan et al. (2002).

The e-WOM in this study is customers sharing their opinions, recommendations, reviews, and feedback about products, services, or brands through three e-digital channels, mentioning the e-SERVQUAL, particularly the dimension of system availability. This is in line with the research findings of scholars (Belanche et al., 2020; Rachbini et al., 2021). Generally, e-WOM strengthens online promotion through consumer empowerment when the positive reviews are higher than negative reviews. Also, it will have a positive influence on the repurchase intention when the reviews received from consumers are positive (Sudaryanto et al., 2022).

In order to answer the research proposition, we try to cross the two theories of e-SERVQUAL and Psychoanalytic theory by using the words collected from the topics. The result is presented in the following Table 3.

Table 3. The cross-theory of e-SERVQUAL vs. Psychoanalytic

	Psychoanalytic Theory		
	Id	Ego	Super ego
E-servqual Efficiency: the first app; can't, even, item, still	Can't,	good	like

time, order, like, delivery, customer			
Fulfillment: the second and sixth app, order, delivery, items, even, like, product	Even	order	product
System availability. The eight rows are merely identical to system availability	App	shopping	service
Responsiveness at fourth; and eight; customer, good, can't, order, app, still, quality, app, always, really, time	always really,		delivery,
Privacy; fifth; items, delivery, customer, order, service, shopping, thought, open	open	order thought	
Compensation the third; can't good, event, items, delivery, customer, service, shopping, thought, open	can't		service
Contact; the last; event, time, shopping, order, customer, please, always, service, thought	always	time	please

Table 3 explains the cross-item comparison between two theories using SSA. The consumer's Id is more dominant in service quality. This is in line with research conducted by Hussain et al., (2023) mentioning that e-SERVQUAL has more positive sentiment. Responsiveness: e-commerce providers also have positive comments (always, really) from the consumer's Id. Consumer's ego: e-commerce providers were mentioned in privacy (order, thought). These findings support (Hudaefi & Badeges, 2022). However, the superego, that provide social control, such as ethical issues in buying a product, is mentioned more mentions how the service, delivery, and the products support findings of (Hudaefi & Badeges, 2022; Hussain et al., 2023).

Psychoanalysis, pioneered by Sigmund Freud, underscores the significance of comprehending the subconscious in shaping human behavior. Conversely, e-SERVQUAL serves as a framework for evaluating the quality of e-services, pinpointing factors impacting customer perceptions of online services. While initially disparate, these theories are intricately linked within the realm of understanding and catering to individuals. In psychoanalysis, the recognition emerges that an individual's actions aren't solely tethered to their conscious expressions but are also steered by underlying motivations and conflicts unbeknownst to them. E-SERVQUAL, meanwhile, underscores that customers' assessments of service quality are not solely tethered to technical or tangible elements but are also profoundly influenced by psychological dimensions like expectations, perceptions, and past encounters. Consequently, by melding insights from psychoanalysis regarding the subconscious with an e-SERVQUAL framework when crafting online services, organizations can gain a more holistic understanding and adeptly respond to customers' needs and preferences, thereby enhancing their overall service experience.

CONCLUSION

The purpose of the article is to integrate psychoanalytic theory with e-servqual represents a novel revelation that has not previously been proposed by researchers. Marketing managers or business strategists should take into account the notion of purchasing decisions made by Generation Z, which is predominantly influenced by the subconscious (Id), in their endeavors to stay competitive. Gen-Z, often associated with technology, exhibits heightened responsiveness to external stimuli and swiftly processes them to inform decision-making. This inclination toward rapid decision-making doesn't imply a disregard for societal norms or commitments; rather, it underscores the prioritization of speed as a distinctive trait of this generation. Conversely, the established societal norms or standards (Ego) serve as a crucial reference point for repeat purchases, while the significance of societal rules (Superego) warrants reassessment.

Consumer reviews from big data create patron on identifying the expected psychoanalytic versus proposed e-SERVQUAL theory. The Id is more dominant in Gen-Z consumer behavior in pursuing prizes and any

other spontaneous stimulus as an affective response. On the other hand, the proposed e-SERVQUAL is legitimately perfectionist, which is more rigid in predicting the expected e-SERVQUAL based on the consumer's ego rather than superego.

Widespread topics of consumers' reviews and the limited empirical research become the research limitation in this study.

Permission

This research does not require any permission regarding human beings as objects as they have no violation or sexual harassment.

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