



School of Economics

Master Thesis U.S.E.

Ethical Dimensions of Freemium Models:
Consumer Perceptions
and Behavioural Implications

Supervisors: Dawo Hellen Lillian Atieno; Dandan Xia

Student: Xuelin Yang

Student number: 4661818

Contact details: x.yang8@students.uu.nl

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Abstract

This study examines the ethical dimensions of freemium models in digital multinational enterprises (MNEs) through consumer perceptions and their behavioural implications. Using a quantitative approach, it evaluates how ad-supported and feature-limited freemium designs impact Consumer Perceived Ethicality (CPE) and subsequent behaviours. Data from 220 respondents in China and the Netherlands reveal that feature-limited models are viewed more favourably than ad-supported ones. Additionally, "free mentality" negatively impacts CPE, with consumers believing digital content should be free viewing freemium models as less ethical. When compared to premium models, free mentality moderates the impact of freemium models on CPE, resulting in higher perceived ethicality for feature-limited models. Higher CPE is linked to increased word-of-mouth promotion and premium upgrade intentions, underscoring the importance of ethical practices. This study offers guidelines for ethical business strategy design and suggests future research on diverse freemium strategies and qualitative insights into consumer attitudes.

Key words: Freemium models, digital MNEs, Consumer Perceived Ethicality (CPE), free mentality, ad-supported, feature-limited

1.0 Introduction

Nowadays, with the development of digitalization, the traditional process of internationalization for multinational enterprises (MNEs) has been significantly impacted (Koskinen, 2022). Traditionally, companies expanded internationally through a gradual process, often starting with exporting and later establishing foreign subsidiaries as they accumulated knowledge and experience about foreign markets. This incremental approach is well captured by the Uppsala Model (Johanson & Vahlne, 1977).

However, digital transformation has fundamentally altered this trajectory, enabling many MNEs, particularly digital companies, to be "born global". These digital firms rely on the internet for their production, operating, and delivery processes. Examples include internet platform businesses (e.g., LinkedIn), digital solutions firms (e.g., PayPal), and producers of digital content (e.g., Netflix, Spotify) (Monaghan, Tippmann, & Coviello, 2020). Research shows that these digital companies utilize digital resources to rapidly expand into international markets, bypassing traditional incremental steps (Koskinen, 2022).

Thus, it's important to understand how these digital technologies impact MNEs' internationalization process. According to the Resource-Based View (RBV) theory, which emphasizes the importance of unique, valuable resources that can be easily transferred across borders (Barney, 1991), these companies are built on robust technological infrastructures that enable seamless global operations. Their digital platforms, cloud computing, and internet-based services are inherently scalable and can be accessed by users worldwide without the need for a physical presence in multiple countries (Autio, Sapienza, & Almeida, 2000). Furthermore, Network Theory highlights the role of digital networks and online communities in facilitating the international market entry process (Coviello & Munro, 1997). Digital firms often operate in interconnected ecosystems that provide access to global resources, partners, and customers, thereby accelerating internationalization (Gabrielsson & Kirpalani, 2004). This acceleration is achieved through the digitalization of value chain activities, allowing for the reuse and mixing of resources and the use of digital technologies to optimize decision-making processes and market evaluation (Vadana et al., 2021; Neubert, 2018). The speed of internationalization is further enhanced by direct engagement with stakeholders, automation, network effects, flexibility, and scalability offered by digital technologies (Monaghan et al., 2020).

This transformation has also led to the rise of new business models and revenue streams for MNEs. Among these models, the freemium model has been widely adopted by companies in the digital service sector. For instance, the share of freemium apps on the Apple App Store rose from 25 % in 2009 to over 80 % in 2022 (Shang et al., 2024).

The freemium model follows a pricing strategy where a service or product, typically an application (such as web services, games, media, software, etc.) or a digital offering, is provided without any payment, but a premium is charged for additional virtual goods, services, or features (Panda, 2020). The freemium model is a strategic tool for digital MNEs, since it allows them to acquire a large user base at low cost and benefit from network effects (Lee, Kumar, & Gupta, 2017).

Therefore, managers need to understand how to design freemium models that encourage users to upgrade from free versions to premium versions. This aspect has drawn significant attention from academics. Mäntymäki(2020) finds that the decision to upgrade to premium is driven by enjoyment and price value, while the decision to retain premium is influenced by ubiquity and content discovery. Holm (2017) emphasizes that offering too much for free can reduce the incentive to upgrade. To optimize the value of this model, companies must balance growth with monetization strategies (Lee, Kumar, & Gupta, 2017). Effective freemium models transition users by significantly enhancing privileges and value in the premium version, motivating upgrades (Semenzin et al., 2012).

However, most existing research on designing freemium models only focuses on how businesses can maximize profits, few studies consider the freemium model from the viewpoint of consumer perceptions of corporate ethics. In a context where ethical consumerism is important, and customers increasingly demand that brands demonstrate their ethical commitment at a corporate level, it is likely to expect that customers will feel more identified, satisfied, and recognized if the brands they support actively participate in ethical initiatives (Iglesias, 2019). Therefore, it is necessary to delve deeper into the consumer's ethical perspective on the freemium model.

Understanding the ethical implications of the freemium model requires a thorough consideration of fundamental ethical theories, particularly deontological and teleological ethics. Deontological ethics, rooted in the work of Immanuel Kant, emphasizes duties and principles, suggesting that businesses have an inherent duty to act ethically regardless of the outcomes (Micewski&Troy,2007). In contrast, teleological ethics focuses on the

consequences of actions, proposing that the morality of business practices should be judged based on the outcomes they produce (Macdonald&Beck-Dudley,1994). In the context of the freemium model, designing a more ethical approach means balancing these ethical principles to ensure both ethical conduct and positive outcomes. Consumers' ethical perceptions of different freemium model designs will reflect their moral assessment of the company, which in turn influences their subsequent behaviours.

To address this gap in the literature, this paper aims at answering the following research question: How do different designs of freemium models affect consumers' ethical perceptions of companies, and how do these ethical perceptions influence subsequent consumer behaviours?

This paper aims to contribute to the existing literature by addressing the overlooked aspect of corporate ethics in the context of freemium models. By examining how ethical perceptions influence the effectiveness of freemium models, this paper provides practical guidelines for companies to design freemium models that not only attract users but also build trust and loyalty through ethical practices. Additionally, the insights gained will help managers better understand the ethical expectations of their customers, enhancing customer satisfaction and retention. Policymakers can also benefit from this research by understanding the broader implications of ethical business practices in the digital economy, promoting policies that encourage ethical conduct among digital enterprises.

This paper is structured as follows. First, we provide an overview of the literature on designing freemium models. Then we outline a framework linking consumers' ethical perceptions of different freemium models and their subsequent behaviours, developing hypotheses based on relevant ethical theories. Next, we explain the methods used for data collection and analysis. Subsequently, we present our results, findings and discussions. At last, we conclude the contributions and limitations of this study.

2.0 Literature Review

2.1 Overview of Literature

This part explores strategies associated with optimizing freemium business models, highlighting their conclusions and limitations.

According to Lee, Kumar, & Gupta (2017), the freemium model has become the dominant business model among technology start-ups for its ability to acquire and monetize a

large customer base with limited marketing resources. The freemium model significantly enhances customer acquisition, thereby driving monetization opportunities.

However, from the profitability perspective, the freemium model does not always guarantee optimal results. In research by Rietveld (2018), he finds that compared to premium models, freemium business models tend to result in lower willingness to pay and less time spent using the product. To counter these drawbacks, he suggests that offering a greater variety of paid extras can increase the likelihood of consumers adopting them, thereby boosting revenues for both freemium and premium business models.

For companies that have chosen the freemium model, they face the challenge of designing premium models (Semenzin et al., 2012). Holm (2017) emphasizes that offering too much for free can diminish the incentive for users to upgrade, so it's important to achieve the right balance between free and premium offerings.

Mäntymäki (2020) examines the distinctions between basic and premium users through the consumer value theory, focusing on emotional, functional, social, epistemic, and economic values that influence their decisions to upgrade to or keep premium subscriptions. The study concludes that retention is driven by specific attributes such as ubiquity, new content discovery, and social connectivity, while the decision to upgrade is primarily motivated by enjoyment and the premium subscription's price value.

Semenzin et al. (2012) highlights that the transition from free to premium is typically marked by a significant increase in privileges and access to value-creating features, which fill gaps that the free version leaves open. This strategic transition is key to motivating users to upgrade to premium offerings.

Even with the same freemium content design, the order of the free trial can significantly impact upgrade outcomes. Koch and Benlian (2017) examine the impact of different free trial strategies on conversion rates and profitability. They found that the Premium first strategy, where consumers experience the premium version before the free version, significantly increases conversion propensity compared to the Free first strategy. The effectiveness of the Premium first strategy is even greater when the premium and free versions are more similar.

In previous discussions about freemium model design, two key issues are often overlooked.

Firstly, the literature primarily helps businesses focus on profitability without considering the ethical treatment of free users. Holm (2017) asserts that free users should be treated as valuable resources, not just operational costs. This perspective contrasts with findings in the gaming industry, where Alha et al. (2014) note that the public perception of free games is often negative. Game developers may view this revenue model favourably, but it is perceived as exploitative by many free users. Kimppa et al. (2016) highlights that modern payment methods in freemium games, such as lure-to-pay and pay-to-win, are ethically problematic as they manipulate players using psychological tricks and game-external mechanics. Therefore, more attention needs to be given to the consumer ethical perspective in freemium models.

Secondly, discussions about designing freemium models often treat them as a monolithic strategy without exploring the nuances of different types of freemium models in practice, as presented by Holm (2017) and Semenzin et al. (2012). There is a need for more detailed analyses of how various freemium designs have different impacts.

2.2 Theoretical background and hypothesis development

2.2.1 Consumer Perceived Ethicality (CPE)

In this part, we aim to capture consumers' ethical perceptions of a company. Studies shows consumer perceived ethicality of a brand/company matters a lot on both brand trust and brand affect (Singh et al.2012). Roman (2007) presents a structured framework to assess Consumer Perceived Ethicality (CPE) in online retail, defining it across four dimensions: security, privacy, non-deception, and fulfilment. Based on this framework, he developed a simple three-item scale to measure the overall ethics of an online retailer: "In general, the online retailer is fair," "Overall, I consider that the online retailer follows a moral code," and "Overall, I consider the online retailer to be ethical in its dealings with consumers."

As the field of business ethics has evolved, leading scholars in marketing have introduced the term "Consumer Perceived Ethicality (CPE)" (Brunk, 2010). Brunk's research also developed a comprehensive framework to study company ethics, identifying six key domains that influence CPE: the impact on consumers, employees, the environment, the overseas community, the local economy and community, and the business community. These domains encompass a range of ethical considerations, from fair treatment of employees and sustainable environmental practices to honest communication and support for local economies. By understanding and addressing these areas, companies can improve their

ethical image and build stronger relationships with consumers (Brunk, 2010; Brunk & Blümelhuber, 2011).

Prior research has shown that a company's ethical perception is influenced by CSR activities (e.g., Lichtenstein et al., 2004), employment practices (e.g., Sen & Bhattacharya, 2001) and so on. However, consumers sometimes make subtle and perhaps irrational ethical judgments. These ethical judgments often resemble intuitive and spontaneous reactions rather than being based on a thorough understanding of the company's practices. For example, consumers may judge the ethicality of a company based on its size, often viewing larger companies as less ethically trustworthy (Green & Peloza, 2014). Additionally, the shape of a company's logo can affect ethical perceptions, with organizations featuring symmetrical brand marks being perceived as more responsible (Marsden & Thomas, 2013).

Different business models also influence consumers' ethical perceptions. Su & Jin (2022) found that consumers perceive advertising-based revenue models as less ethical than service-fee-based models. Therefore, it is crucial to deeply understand how different kind of freemium models impact consumers' perceived ethicality.

2.2.2 Freemium Business Model

The freemium business model provides a basic version of a service for free and a premium version for a fee. The term “freemium,” a combination of the words “free” and “premium,” refers to a business model in which a basic version of a product or service is provided at no cost (Panda, 2020). This allows users to access essential features without any payment. However, for users desiring more advanced functionalities or an enhanced overall experience, the model offers the option to purchase a premium subscription or make additional purchases within the service (Rußell,2020).The economic viability of the freemium model is underpinned by principles like price elasticity of demand, price discrimination, and Pareto efficiency (Seufert et al., 2014).

When employing the freemium model, a critical success factor for service providers using the freemium model is their ability to retain paying users while effectively converting non-paying users into paying customers (Kumar,2014). The value discrepancy between the free and the premium versions is a major driver of users' conversion decisions (Rußell, 2020).So understanding the distinction between free and premium versions is crucial for grasping the Freemium business model.

Previous research summarized different aspects of user experience and service features that distinguish free from premium subscriptions, highlighting constructs such as social connectivity, content discovery, ubiquity, advertising intrusiveness, price value, enjoyment, and intention to upgrade. Premium subscriptions typically offer enhanced features, including larger content libraries, exclusive content, ad-free experiences, and superior perceived value, which incentivize users to transition from free to paid versions (Mäntymäki, 2020).

In different designs of freemium models, the free services may have varying levels of limited functionality, prompting customers to pay for additional features, enhanced content or services, upgrades, faster speeds, and virtual goods. Additionally, customers might incur charges after a free trial period ends. Users can also pay to remove or lessen any usage barriers such as time or storage constraints. To enhance their experience, customers may opt to pay for the removal of advertisements. Ultimately, these limitation mechanisms can be used in various combinations (Deubener et al.,2016).

Building on previous research, we select and focus on the two most basic forms of freemium models:

1.Ad-Supported Freemium (without feature-limited): Advertisements are integral to the free version, serving as a common method to differentiate between free and paying users and to generate revenue from the base of basic users (Mäntymäki, 2020). This model relies on ad revenue while offering the basic service at no cost, ensuring that users who do not pay still contribute to the service's profitability through ad views.

2.Feature-Limited Freemium (with Ad-free): The free version lacks enhanced benefits compared to the premium version, such as virtual currency, virtual items, speed-ups, additional content, add-ons, upgrades, services, or capabilities (Deubener et al.,2016). This model allows free users to enjoy an ad-free experience. However, it restricts certain advanced features to encourage users to upgrade to the premium version for a more comprehensive experience.

2.2.3 Freemium Models' Impact on CPE

Vitell (2001) reveals that when forming ethical judgments, consumers primarily rely on ethical norms (deontological ethics) and less so on perceived consequences (teleological ethics).

From a deontological perspective, the Ad-Supported Freemium model frequently interrupts the user experience with commercials, potentially diminishing the enjoyment for basic users (Heimo et al., 2018). Furthermore, Su & Jin (2022) found that, compared to the service-fee-based revenue model like premium model, consumers perceive the advertising-based revenue model as less ethical. This perception arises because it is seen as more motivated by serving advertisers' interests rather than those of consumers, violating principles of fairness.

Conversely, the Feature-Limited Freemium model offers different levels of service to paid and unpaid users while avoiding advertising interruptions, which aligns more closely with fairness principles. Furthermore, this model can be analysed through the deontological principle of business ethics, particularly the justice test. The justice test concerns whether an action leaves some individuals or groups worse off, especially those already in a relatively underprivileged status (Ferrell & Ferrell, 2008). Compared to the premium model, the Feature-Limited Freemium model allows all users, regardless of their financial situation, to access the basic service. In contrast, the premium model excludes individuals who cannot afford the service, limiting access to those with sufficient financial resources. This exclusion violates the justice test of business ethics norms and results in less favourable ethical perceptions toward the company. Based on the discussion above, the following hypothesis can be proposed:

H1a: Consumers are likely to have a negative CPE on Ad-Supported Freemium model than premium model.

H1b: Consumers are likely to have a positive CPE on the Feature-Limited Freemium model than premium model.

2.2.4 Free Mentality's Impact on CPE

Free mentality refers to a user's perception that all content should be free and available to all users (Lin et al., 2013). This intuitive belief is more easily applicable to digital content or digital services (e.g., games, videos, music) than to physical products (e.g., cars, clothing) (Dou, 2004). Lin et al. (2013) described the "free mentality" as a belief shaped by initial experiences of accessing free services and information. Over time, "free" has become a well-accepted norm on the Internet, continuously reinforced by many online service providers.

Niemand et al. (2019) identifies free mentality as central intuitions about freemium offers. One significant finding in the previous literature is that customers may perceive a

certain degree of unfairness when they are asked to pay for content (Lin et al. 2013; Wang et al., 2005). This sense of unfairness can negatively impact their overall perception of the company's ethicality. Given this background, we hypothesize that a strong free mentality negatively influences consumers' CPE of digital MNEs applying freemium business models.

H2: The higher the free mentality, the lower CPE.

At the same time, compared to the premium business model, the freemium business model indeed provides some free content, whether it requires watching ads as a trade-off or only offers the most basic features. For consumers with a free mentality, the premium model is perceived as less ethical compared to the freemium model because it aligns less with their expectation of accessing content without direct payment. Therefore, when discussing the impact of the freemium model on consumer perception of ethicality (CPE), it is crucial to consider the moderating role of the free mentality. Given this context, our hypotheses are as follows:

H3a: When the free mentality is higher, the Ad-Supported Freemium model will have a higher CPE compared to the Subscription model.

H3b: When the free mentality is higher, the Feature-Limited Freemium model will have a higher CPE compared to the Subscription model.

2.2.5 CPE's Impact on Word-of-Mouth (WOM) and Purchase Intentions (PI)

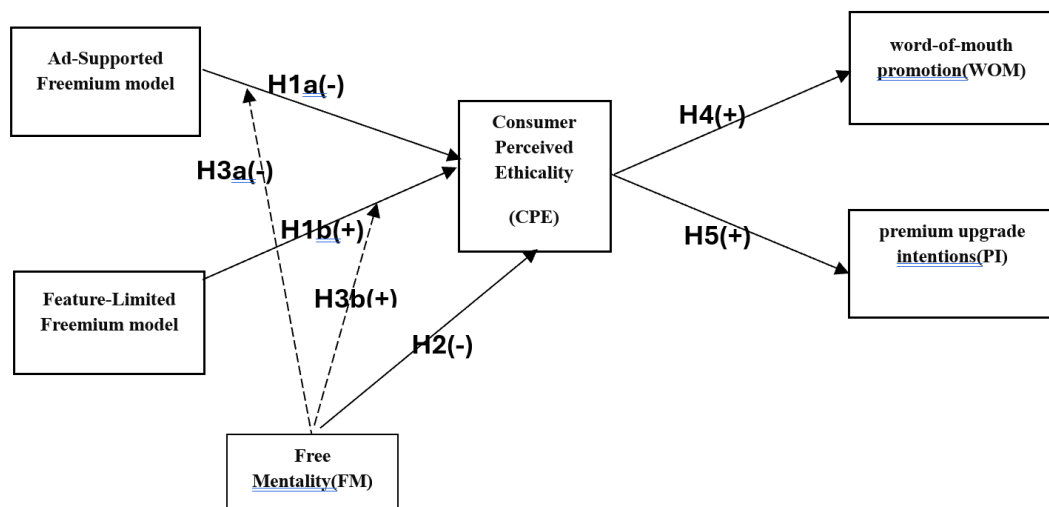
The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), is a widely used psychological framework that helps in understanding how individuals' attitudes, subjective norms, and perceived behavioural control influence their intentions and subsequent behaviours. By extending this framework, Madden et al. (1992) emphasized the significant role of perceived behavioural control in directly affecting behaviours alongside intentions. This theory effectively applied to explore how Consumer Perceived Ethics (CPE) influences Word of Mouth (WOM) and Purchase Intention (PI), especially in service sector (Shah et al, 2020). Therefore, we applied TPB to better understand CPE as predictor of consumers' behaviour intentions .

CPE, which reflects consumers' perceptions of a company's ethical behaviour, directly influences their attitudes towards the company. Positive ethical perceptions can lead to favourable attitudes, making consumers more likely to develop strong purchase intentions and engage in positive WOM.

Research consistently demonstrates that significantly influences consumer behaviour across various industries. Consumers are likely to support firms that maintain ethical standards through their purchasing decisions (Viriyavidhayavongs & Yothmontree, 2002; Shah et al., 2020) and are also predicted to contribute to positive consumer word-of-mouth (Cheung & To, 2020; Shah et al., 2020). Therefore, we hypothesized that:

H4: CPE will have a positive effect word-of-mouth promotion.

H5: CPE will have a positive effect on premium upgrade intentions.



*Figure: The Effect of Different Freemium Models on CPE
And The Effects of CPE on Consumer Behaviour*

3.0 Methodology

3.1 Questionnaire Design

We selected quantitative methods to provide objective, measurable insights into the relationship between freemium models, consumer ethical perceptions, and subsequent behaviours. This approach ensures that the findings are grounded in empirical evidence, offering a more reliable and valid understanding of the interaction among these factors. To examine the proposed hypotheses, we decided to conduct an online survey using a structured questionnaire.

We employed Randomized Controlled Trials (RCTs) to ensure the integrity of our experimental design. In this setup, each respondent's scenario is determined randomly, thereby ensuring homogeneity at baseline between experimental and control groups, reducing selection bias, and minimizing the impact of confounding factors.

The empirical context focuses on online digital content platforms, specifically those employing freemium models. Participants were randomly assigned to one of three scenarios, each describing a fictional company providing an app with consistent descriptions of the online services, differing only in the pricing models: Ad-Supported Freemium, Feature-Limited Freemium, and Premium. After reading their assigned scenario, participants rated several statements regarding their ethical perceptions and subsequent behaviours on a scale from 1 to 5, ranging from strongly disagree to strongly agree.

To ensure the clarity and coherence of the questions, a pilot test was conducted with a small sample. Additionally, native speakers reviewed the questionnaire design to mitigate potential language misunderstandings.

3.2 Variables and Measurements

This study employed a cross-sectional survey design to investigate the impact of different Freemium models on Consumer Perceived Ethicality (CPE), and how this perception further influences word-of-mouth promotion (WOM) and premium upgrade intentions (PI).

3.2.1 Freemium Models and Free Mentality's Impact on CPE

To examine the impact of different freemium models, the dependent variable is Consumer Perceived Ethicality (CPE). Two frameworks are used to measure CPE: the Roman framework (CPE1) and the Brunk framework (CPE2). The Roman framework (CPE1) captures consumers' intuitive and overall judgments about a company's ethicality (Roman, 2007), focusing on simple, immediate perceptions. This makes it suitable for scenarios where consumers may not have detailed knowledge of a company's ethical practices. The Brunk framework (CPE2) offers a more comprehensive and detailed approach, assessing various dimensions of a company's ethical practices. In this study, because ethical judgments regarding freemium design are more reliant on intuitive, overall assessments rather than detailed evaluations, we decided to use CPE1 for our data analysis. However, we will also use CPE2 in our questionnaire to test whether there are significant differences between the two frameworks' results.

There are three independent variables: 1. Scenario, representing different freemium models; 2. FM, measured using items adopted from Lin et al. (2013); 3. FM*Scenario, used to assess the moderating effect of FM on different freemium models.

Control variables include demographic factors such as age, gender, residence, and nationality, as well as Consumer Expertise. Consumer expertise refers to the knowledge and skills consumers develop about products and services through experience or study, enabling them to make informed decisions and judgments (Alba & Hutchinson, 1987). Previous research has shown that consumer expertise impacts CPE. Chiou (1998) noted that product knowledge affects attitudes and subjective norms. We measure Consumer Expertise (Cexp) according to items from Shah et al. (2020).

3.2.2 CPE's Impact on Word-of-Mouth (WOM)

To test how CPE influences word-of-mouth promotion (WOM), the dependent variable is WOM, and the independent variable is CPE1. Control variables include demographic factors such as age, gender, residence, and nationality.

3.2.3 CPE's Impact on Purchase Intentions (PI)

To examine how CPE influences premium upgrade intentions, or purchase intention (PI), we measure PI according to items from Li & Cheng (2014) and Lin et al. (2013). The dependent variable is CPE1. Control variables include demographic factors such as age, gender, residence, and nationality, as well as Consumer Expertise (Cexp). Previous research has shown that consumer expertise greatly influences purchase intentions. Bell (2005) found that customer expertise enhances the link between technical service quality and customer loyalty, thereby strengthening purchase intentions. Shah et al. (2020) discovered that in the fast-food sector, higher customer expertise leads to a more positive relationship between CPE and repurchase intentions. Therefore, we include Cexp as a control variable.

The table below lists the final questionnaire items used to measure each construct.

Table 1: Constructs and Questionnaire Items

| Constructs and abbreviations | items | statements | Reference(s) |
|------------------------------|-------|---|-------------------|
| Free Mentality (FM) | FM1 | Regarding fee-based recipes, I think... | (Lin et al.,2013) |
| | FM2 | | |
| | | ...all recipes on online platforms should be free. | |
| | | ...providing free content fits into the original purpose of the internet (to provide free information). | |

| | | | | |
|---|-------|---|--|--|
| | FM3 | | ...in general recipe online platforms should provide recipes for free. | |
| Consumer Perceived Ethicality within Roman framework (CPE1) | CPE11 | In general, I think the app is fair. | | (Roman,2007;Limbu, 2012) |
| | CPE12 | Overall, I consider that the app follows a moral code. | | |
| | CPE13 | Overall, I consider the app to be ethical in its dealings with consumers. | | |
| Consumer Perceived ethicality within Brunk framework (CPE2) | CPE21 | In my opinion, this company seems to... | ...be responsible to consumers. | (Brunk,2012)(Iglesias ,2019) (Shah et al.,2020) |
| | CPE22 | | ...be good to its employees. | |
| | CPE23 | | ...be environmentally responsible. | |
| | CPE24 | | ...contribute to overseas communities. | |
| | CPE25 | | ...support the local economy. | |
| | CPE26 | | ...be beneficial for the welfare of society. | |
| Word of mouth(WOM) | WOM1 | Regarding this app, I might... | I say positive things about this app to other people. | (Shah et al.,2020) |
| | WOM2 | | I would recommend this app to someone who seeks my advice. | |
| | WOM3 | | I encourage friends and relatives to try out this app. | |
| Customer expertise(CExp) | CExp1 | I frequently use recipe apps to plan and prepare meals. | | (Shah et al.,2020) |
| | CExp2 | I consider myself highly knowledgeable about recipe app. | | |
| Purchase intentions(PI) | PI1 | In the near future, I... | ...will consider paying to upgrade to a premium subscription. | (Li, Z., 2014)(Lin et al.2013) |
| | PI2 | | ...believe the chance of my paying for a premium subscription is high. | |
| | PI3 | | ...am determined to pay for a premium | |

| | | | | |
|--|--|--|---------------|--|
| | | | subscription. | |
|--|--|--|---------------|--|

3.2 Sampling and data collection

The study population consists of individuals worldwide who interact with digital content platforms employing freemium models. The target sample included individuals aged 18 and above who have engaged with such platforms within the past week. To ensure a balanced representation of Eastern and Western ethical perspectives, users residing long-term in the Netherlands and China were selected. we employs an online questionnaire designed in both Chinese and English to accommodate participants from different language backgrounds. The survey was created and distributed using the online survey platform Qualtrics, employing QR codes and links for easy access. Recruitment primarily occurred through online social media platforms, such as WhatsApp in the Netherlands and WeChat in China. Additionally, to capture a broader consumer perspective, random street interviews were conducted for on-the-spot participation.

The questionnaire begins with an introduction to its content and confidentiality assurance, followed by a consent form where participants indicate their willingness to participate.

Out of 327 responses, 231 were complete. Among these, 8 responses were removed for having short completion times (under 100 seconds), and 3 responses were excluded as the participants did not disclose their gender, leading to a final dataset of 220 valid responses. Here are the detailed demographic characteristics of the 220 valid responses:

Table 2: Demographic Characteristics of Respondents

| Characteristic | Subcategory | Percentage |
|----------------|-------------|------------|
| Gender | Female | 60.45% |
| | Male | 39.55% |
| Age | 18-24 years | 17.27% |
| | 25-34 years | 40.00% |
| | 35-44 years | 34.55% |

| | | |
|----------------------|-------------------|--------|
| | 45-54 years | 6.36% |
| | 55-64 years | 1.36% |
| | 65 or older | 0.45% |
| Geographical Region | Eastern countries | 86.82% |
| | Western countries | 11.82% |
| | Other countries | 1.36% |
| Country of Residence | China | 72.73% |
| | Netherlands | 25.00% |
| | Other regions | 1.80% |

The distribution of scenarios among the 220 respondents was fairly even: Scenario 1 (Ad-Supported) had 35.91%, Scenario 2 (Feature-Limited) had 33.64%, and Scenario 3 (Subscription) had 30.45%.

4.0 Results

4.1 Descriptive Statistics of Variables

This table presents the descriptive statistics for the variables used in the study. Each variable is described by the number of observations (Obs), the mean, the standard deviation (Std. Dev.), and the range (Min and Max). The variables include Consumer Perceived Ethicality (CPE1 and CPE2), Word of Mouth (WOM), Purchase Intentions (PI), Free Mentality (FM).

Table 3: Descriptive Statistics of Variables

| Variable | Observations (Obs) | Mean | Std. Dev. | Min | Max |
|----------|--------------------|--------|-----------|-----|-----|
| CPE1 | 220 | 3.8939 | 0.7854 | 1 | 5 |
| CPE2 | 220 | 3.3955 | 0.7565 | 1 | 5 |
| WOM | 220 | 3.4879 | 0.8607 | 1 | 5 |

| | | | | | |
|----|-----|--------|--------|---|---|
| PI | 220 | 2.5121 | 1.0743 | 1 | 5 |
| FM | 220 | 3.7432 | 1.0028 | 1 | 5 |

4.2 Reliability and Validity Testing

Kaiser-Meyer-Olkin (KMO) (Kaiser 1970) and Bartlett's test of sphericity (Bartlett 1954) were also used for sampling adequacy. The KMO measure of sampling adequacy (0.838) indicates that the data is suitable for factor analysis, as values between 0.8 and 0.9 are considered very good. Bartlett's test of sphericity is highly significant (Chi-Square = 2442.49, $df = 190$, $p < 0.001$), suggesting that the correlation matrix is not an identity matrix and there are significant correlations among the variables.

To assess reliability, the reliability statistics for the questionnaire show a Cronbach's Alpha of 0.841 and a Cronbach's Alpha based on standardized items of 0.851 across 20 items, indicating high internal consistency and strong reliability.

For construct validity, an exploratory factor analysis (EFA) was conducted to validate the scales of the underlying variables. Item loadings for all variables were above 0.60, which is higher than the threshold value (Hair et al. 2010), except for CPE21. Additionally, FM1 had a negative Corrected Item-Total Correlation of -0.014. Consequently, FM1 and CPE21 were removed from the analysis.

Convergent validity was measured using three methods. First, the item loadings for each variable were calculated and found to be greater than 0.6. Second, the composite reliability (CR) of each variable was measured and found to be higher than the threshold value of 0.7. Third, the Average Variance Extracted (AVE) from all variables was greater than 0.5. Therefore, convergent validity for each variable was supported from all three methods. These results are presented in the below table.

Table 4: Reliability and Validity Testing Results

| | Mean | Std. Deviation | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted | Factor Loadings | CR | AVE |
|-----|------|----------------|----------------------------------|------------------------------|----------------------------------|-----------------|----|-----|
| FM1 | 3.31 | 1.188 | -0.014 | 0.342 | 0.855 | 0.773 | | |

| | | | | | | | | |
|-------|------|-------|-------|-------|-------|-------|-------|-------|
| FM2 | 3.78 | 1.118 | 0.104 | 0.493 | 0.848 | 0.853 | 0.826 | 0.703 |
| FM3 | 3.7 | 1.11 | 0.097 | 0.469 | 0.849 | 0.824 | | |
| CPE11 | 3.82 | 0.979 | 0.345 | 0.533 | 0.837 | 0.79 | 0.896 | 0.741 |
| CPE12 | 3.92 | 0.859 | 0.383 | 0.705 | 0.835 | 0.894 | | |
| CPE13 | 3.94 | 0.808 | 0.417 | 0.716 | 0.834 | 0.895 | | |
| CPE21 | 3.74 | 0.888 | 0.626 | 0.532 | 0.825 | 0.503 | | |
| CPE22 | 3.43 | 0.946 | 0.518 | 0.605 | 0.829 | 0.811 | 0.874 | 0.582 |
| CPE23 | 3.31 | 0.909 | 0.535 | 0.583 | 0.829 | 0.806 | | |
| CPE24 | 3.41 | 0.977 | 0.486 | 0.437 | 0.831 | 0.738 | | |
| CPE25 | 3.42 | 0.94 | 0.51 | 0.474 | 0.83 | 0.764 | | |
| CPE26 | 3.41 | 0.968 | 0.625 | 0.556 | 0.825 | 0.689 | | |
| WOM1 | 3.5 | 0.904 | 0.609 | 0.632 | 0.826 | 0.798 | 0.827 | 0.615 |
| WOM2 | 3.58 | 0.925 | 0.622 | 0.711 | 0.825 | 0.803 | | |
| WOM3 | 3.38 | 1.06 | 0.608 | 0.62 | 0.825 | 0.75 | | |
| Cexp1 | 3.4 | 1.175 | 0.308 | 0.419 | 0.839 | 0.871 | 0.866 | 0.764 |
| Cexp2 | 3.15 | 1.121 | 0.282 | 0.413 | 0.84 | 0.877 | | |
| PI1 | 2.66 | 1.125 | 0.514 | 0.714 | 0.829 | 0.87 | 0.920 | 0.794 |
| PI2 | 2.55 | 1.175 | 0.554 | 0.787 | 0.827 | 0.896 | | |
| PI3 | 2.32 | 1.143 | 0.538 | 0.784 | 0.828 | 0.906 | | |

The discriminant validity was evaluated using the Fornell-Larcker criterion. The square root of the Average Variance Extracted (AVE) for each construct was compared with the correlations between the constructs. This table shows that each construct's square root of AVE is greater than its correlations with other constructs, indicating discriminant validity.

Table 5: Discriminant Validity

| Variable | sqrt(AVE) | FM | CPE1 | CPE2 | WOM | Cexp | PI |
|----------|-----------|--------|-------|-------|-------|-------|----|
| FM | 0.838 | | | | | | |
| CPE1 | 0.879 | -0.083 | | | | | |
| CPE2 | 0.762 | 0.115 | 0.211 | | | | |
| WOM | 0.784 | -0.098 | 0.466 | 0.494 | | | |
| Cexp | 0.874 | 0.043 | 0.097 | 0.164 | 0.163 | | |
| PI | 0.891 | -0.115 | 0.177 | 0.37 | 0.479 | 0.246 | |

4.3 Hypotheses Testing

4.3.1 Results of Hypotheses H1, H2,H3

To test hypotheses H1, H2a, H2b, and H3, we used the following regression equation:

$$CPE1 = \beta_0 + \beta_1 FM + \beta_2 scenario1 + \beta_3 scenario2 + \beta_4 FM_scenario1 + \beta_5 FM_scenario2 + \beta_6 Cexp + \beta_7 gender + \beta_8 age + \beta_9 Region + \beta_{10} country + \epsilon^1$$

H1a, which posits that the ad-supported freemium model has a positive effect on CPE1, was not supported. The effect was insignificant ($\beta = 0.121$, $p = 0.342$). H1b, which posits that the feature-limited freemium model has a positive effect on CPE1, was supported. The effect was significant ($\beta = 0.381$, $p = 0.003$).

Table 6: Results of Hypotheses H1a and H1b

| Hypothesis | Independent-Dependent Variable | β (Path Coefficient) | Std. Err. | t-Values | p-Values | Adjusted R ² | Results |
|------------|--------------------------------|----------------------------|-----------|----------|----------|-------------------------|-----------|
| H1a | Ad-supported Model → CPE1 | 0.121 | 0.127 | 0.95 | 0.342 | 0.0841 | Rejected |
| H1b | Feature-Limited Model → CPE1 | 0.381 | 0.127 | 2.99 | 0.003 | 0.0841 | Supported |

¹ To avoid multicollinearity, FM and the interaction terms (FM * scenario1 and FM * scenario2) are centered by subtracting the mean of FM from each value.

H2, which posits that free mentality has a negative effect on CPE1, was supported. The effect was significant ($\beta = -0.260$, $p = 0.009$).

Table 7: Results of Hypothesis H2

| Hypothesis | Independent–dependent variable | β (path coefficient) | Std. Err. | t values | p values | AdjustedR ² | Results |
|------------|--------------------------------|----------------------------|-----------|----------|----------|------------------------|-----------|
| H2 | Free Mentality → CPE1 | -0.260 | 0.099 | -2.63 | 0.009 | 0.0841 | Supported |

H3a, which posits that free mentality moderates the effect of the ad-supported model on CPE1, was not supported. The interaction effect was insignificant ($\beta = 0.181$, $p = 0.160$). H3b, which posits that free mentality moderates the effect of the feature-limited model on CPE1, was supported. The interaction effect was significant ($\beta = 0.353$, $p = 0.008$).

Table 8: Results of Hypotheses H3a and H3b

| Hypothesis | Independent–Dependent Variable | β (Path Coefficient) | Std. Err. | t-Values | p-Values | Adjusted R ² | Results |
|------------|--|----------------------------|-----------|----------|----------|-------------------------|-----------|
| H3a | Moderating effect of Free Mentality between Ad-Supported model and CPE1 | 0.181 | 0.129 | 1.410 | 0.160 | 0.0841 | Rejected |
| H3b | Moderating effect of Free Mentality between Feature-Limited model and CPE1 | 0.353 | 0.132 | 2.670 | 0.008 | 0.0841 | Supported |

To ensure the robustness of our regression results, we conducted several additional analyses.

First, we performed a multicollinearity check using the Variance Inflation Factor (VIF). All VIF values were below 5, with a mean VIF of 1.75, indicating that multicollinearity is not a concern in our model. This ensures that the independent variables are not excessively correlated, which could distort the regression results.

Second, we recalculated our regression models using heteroskedasticity-robust standard errors to address potential heteroskedasticity in the data. The results confirm that Free Mentality (FM) has a significant negative effect on Consumer Perceived Ethicality (CPE1) ($\beta = -0.260$, $p = 0.001$), while the ad-supported model (scenario1) remains insignificant ($\beta = 0.121$, $p = 0.335$) and the feature-limited model (scenario2) has a significant positive effect ($\beta = 0.381$, $p = 0.001$). The interaction terms also show consistent results, confirming the reliability of the standard errors.

Finally, we reduced the number of control variables, removing gender, age, region, and country variables, and keeping only the key variables (FM, scenario1, scenario2, FM_scenario1, FM_scenario2). The results confirmed our primary findings: Free mentality negatively impacts Consumer Perceived Ethicality (CPE1) ($\beta = -0.262$, $p = 0.010$), the ad-supported model has no significant effect ($\beta = 0.156$, $p = 0.223$), and the feature-limited model has a significant positive effect ($\beta = 0.349$, $p = 0.008$). Additionally, the interaction between free mentality and the ad-supported model remained insignificant, while the interaction with the feature-limited model remained significant.

These robustness checks collectively validate the reliability and stability of our conclusions, ensuring that our findings are consistent across different model specifications and robust to potential issues such as multicollinearity and heteroskedasticity.

4.3.2 Results of Hypothesis H4

To test the H4 regarding the impact of CPE on WOM, we used the following regression equation:

$$WOM = \beta_0 + \beta_1 CPE1 + \beta_2 Cexp + \beta_3 FM + \beta_4 gender + \beta_5 age + \beta_6 country + \beta_7 region + \epsilon$$

H4, which posits that Consumer Perceived Ethicality (CPE) has a positive effect on Word of Mouth (WOM), was supported. The effect was significant ($\beta = 0.503$, $p = 0.000$).

Table 9: Results of Hypothesis H4

| Hypothesis | Independent–dependent variable | β (path coefficient) | Std. Err. | t values | p values | Adjusted R^2 | Results |
|------------|--------------------------------|----------------------------|-----------|----------|----------|----------------|-----------|
| H4 | CPE1 → WOM | 0.503 | 0.067 | 7.47 | 0.000 | 0.3722 | Supported |

To ensure the robustness of our regression results, we conducted several additional analyses. The Variance Inflation Factor (VIF) values were all below 5, with a mean VIF of 1.14, indicating no multicollinearity concerns. We also recalculated our regression models using heteroskedasticity-robust standard errors. The robust regression results confirmed that CPE1 has a significant positive effect on WOM ($\beta = 0.503$, $p = 0.000$). Even when other control variables were removed, the effect of CPE1 on WOM remained significant ($\beta = 0.510$, $p = 0.000$), indicating the robustness of the result.

4.3.3 Results of Hypothesis H5

To test the H5 regarding the impact of the effect of CPE on PI, we used the following regression equation:

$$PI = \beta_0 + \beta_1 CPE1 + \beta_2 Cexp + \beta_3 FM + \beta_4 gender + \beta_5 age + \beta_6 region + \beta_7 country + \epsilon$$

H5, which posits that Consumer Perceived Ethicality (CPE1) has a positive effect on Purchase Intentions (PI), was supported. The effect was significant ($\beta = 0.262$, $p = 0.003$).

Table 10: Results of Hypothesis H5

| Hypothesis | Independent–Dependent Variable | β (Path Coefficient) | Std. Err. | t-Values | p-Values | Adjusted R^2 | Results |
|------------|--------------------------------|----------------------------|-----------|----------|----------|----------------|-----------|
| H5 | CPE1 → PI | 0.262 | 0.0825 | 3.17 | 0.002 | 0.1605 | Supported |

Additionally, Customer Expertise (Cexp) also had a significant positive effect on Purchase Intentions) ($\beta = 0.1965$, $p = 0.004$). The negative coefficient for the country variable ($\beta = -0.3766$, $p = 0.023$) indicates that there is a significant difference in premium

upgrade intentions between consumers from Western countries (coded as 2) and Eastern countries (coded as 1).

Table 11: Significant Regression Analysis Results for Purchase Intentions (PI)

| Dependent Variable | Independent Variable | β (Path Coefficient) | Std. Err. | t Value | p Value | Adjusted R ² |
|--------------------|----------------------|----------------------------|-----------|---------|---------|-------------------------|
| PI | Cexp | 0.1965 | 0.0691 | 2.88 | 0.004 | 0.1605 |
| PI | country | -0.3766 | 0.1648 | -2.29 | 0.023 | 0.1605 |

As for the robustness check, the Variance Inflation Factor (VIF) values were all below 5, indicating no multicollinearity concerns. We also recalculated our regression models using heteroskedasticity-robust standard errors. The robust regression results confirmed that CPE has a significant positive effect on PI ($\beta = 0.262$, $p = 0.002$). Even after removing other control variables, the effect of CPE on PI remained significant ($\beta = 0.242$, $p = 0.009$), indicating the robustness of the result.

4.3.4 Results on CPE Framework Comparisons

The paired t-test comparing CPE1 and CPE2 indicates a significant difference between the two measures, with CPE1 having a higher mean (3.8939) than CPE2 (3.3955). The mean difference is 0.4985 with a standard error of 0.0653, which is statistically significant ($t = 7.6344$, $p = 0.0000$). This suggests that the two frameworks yield significantly different perceptions of ethicality.

Table 12: Paired t-test Results for CPE1 and CPE2

| Variable | Observations (Obs) | Mean | Std. Err. | Std. Dev. | [95% Conf. Interval] |
|----------|--------------------|--------|-----------|-----------|----------------------|
| CPE1 | 220 | 3.8939 | 0.0525 | 0.7854 | [3.7896, 3.9983] |
| CPE2 | 220 | 3.3955 | 0.051 | 0.7565 | [3.2949, 3.4957] |
| Diff | 220 | 0.4985 | 0.0653 | 0.9685 | [0.3698, 0.6272] |

5.0 Findings and Discussions

5.1 Impact of Freemium Models on CPE

As we expected, the study reveals that different designs of freemium models significantly influence Consumer Perceived Ethicality (CPE). The results show a notable difference between two distinct freemium models: consumers have a more positive ethical perception of feature-limited freemium models compared to ad-supported models. Additionally, the results indicate that feature-limited freemium models are perceived as more ethical than premium models.

Consumers tend to view the Feature-Limited Freemium model as more ethical because it avoids the intrusiveness associated with advertisements, which aligns with principles of fairness and respect for the user experience. This model provides a more seamless user experience, enhancing perceived fairness and ethicality. On the contrary, the Ad-Supported Freemium model, which relies on advertising revenue, is seen as less ethical due to the frequent interruptions caused by ads. This perception aligns with previous research indicating that ad-based revenue models can be viewed as prioritizing advertisers over consumers, thereby violating fairness principles (Su & Jin, 2022).

However, the Ad-Supported Freemium model was expected to be perceived as less ethical than the premium model, but the statistical insignificance suggests that while users may find ads annoying, they do not necessarily translate these interruptions into ethical judgments against the company. One possible reason is that when consumers make ethical judgments, they primarily consider a deontological perspective but also include a teleological ethics perspective (Brunk, 2010; Macdonald & Beck-Dudley, 1994). From this viewpoint, the ad-supported model might be perceived as benefiting a larger audience by providing free access to content worldwide, thus balancing the negative aspects of advertising with the positive outcome of increased accessibility. This perspective considers the overall consequences and benefits to the larger audience, potentially mitigating the negative perception of ads.

5.2 Effect of Free Mentality on CPE

The concept of "free mentality" plays a significant role in consumer ethical perceptions. The study found that a stronger free mentality, where consumers believe that digital content should be free, correlates with lower CPE for freemium models. This finding

indicates that consumers with a high free mentality are likely to view any form of monetization within freemium models as less ethical, as it contradicts their expectation of free access to digital content.

This finding is crucial for digital MNEs employing freemium models, as it highlights the importance of managing consumer expectations regarding free content. To mitigate the negative impact of a free mentality on ethical perceptions, companies need to effectively communicate the value of premium features to mitigate the negative impact of a free mentality on ethical perceptions (Lin et al. ,2013).

5.3 Moderating Role of Free Mentality on CPE

The study also examined the moderating role of free mentality on the relationship between freemium models and CPE.

For the Feature-Limited Freemium model, the study found that consumers with a strong free mentality view this model more favourably than premium model. This indicates that consumers with free mentality are more likely to appreciate the provision of essential services for free in Feature-Limited model. Companies should take into account the free mentality of their target audience when designing and promoting their freemium models. Applying a feature-limited freemium model and emphasizing the accessibility of free offerings during promotion is effective for significantly enhancing ethical perceptions.

In contrast, the study found that a free mentality does not significantly alter the ethical perception of the Ad-Supported Freemium model. Regardless of their level of free mentality, consumers consistently view the ad-supported model in the same way. For companies relying on the Ad-Supported Freemium model, it is essential to take measures to minimize the negative impact of advertisements. For example, as suggested by Lin and Jin, allocating some advertising resources to display public-service advertisements has been found to be more effective in alleviating the negative ethical effects of advertising(Su & Jin, 2021).

5.4 Influence of CPE on Word-of-Mouth (WOM)

Our study confirmed that higher Consumer Perceived Ethicality (CPE) positively influences word-of-mouth (WOM) promotion. This finding aligns with the Theory of Planned Behaviour (TPB) (Ajzen, 1991), which posits that positive attitudes (in this case, high CPE) lead to favourable behavioural intentions (such as WOM).

Consumers who view a company as ethical are more likely to share their positive experiences with friends, family, and social networks. This enhances the company's reputation and attracts new users. As word-of-mouth remains one of the most effective marketing tools (Keller, 2007), companies should prioritize ethical practices to cultivate a positive image that resonates with consumers and stimulates favourable WOM .

5.5 Influence of CPE on Purchase Intentions (PI)

The study also supports the significant impact of Corporate Perceived Ethics (CPE) on Purchase Intentions (PI) within the context of the freemium model. Specifically, it was found that consumers are more inclined to consider upgrading to a premium subscription when they perceive the company as ethical. Therefore, companies should prioritize maintaining and promoting ethical business practices to enhance their reputation and drive premium subscription conversions (Lee & Jin, 2019).

Additionally, the study finds that Consumer Expertise significantly influences premium upgrade intentions. This positive and significant effect indicates that consumers with skills and knowledge in the service are more likely to upgrade for premium versions. Consequently, companies may benefit from targeting and educating consumers to enhance their expertise, thereby increasing the likelihood of premium subscription upgrades.

The significant effect of country on PI shows that, on average, consumers from Western countries have lower premium upgrade intentions compared to consumers from Eastern counterparts, which could be due to various cultural, economic, or perceptual differences regarding the value of premium digital services.

5.6 Discussion of Different CPE Frameworks

The results obtained from these two CPE frameworks demonstrated significant differences, highlighting the importance of selecting an appropriate framework for assessing ethical perceptions in different contexts.

For researchers, the choice between these frameworks should be guided by the specific objectives of the assessment—whether a broad overview or an in-depth ethical evaluation is required. For digital MNEs, they can benefit from integrating insights from both frameworks to enhance general ethical perceptions and improve specific ethical business practices. For instance, companies can optimize the design of their freemium models to address general ethical concerns captured by the Roman framework. Simultaneously, they

can ensure fair treatment of employees and environmental sustainability, among other practices, addressing the specific ethical dimensions highlighted by the Brunk framework.

6.0 Contributions and Limitations

6.1 Contributions

6.1.1 Theoretical Contribution

This study integrates deontological and teleological ethical theories to evaluate different specific freemium models, this integration enriches the theoretical discourse by thus addressing a small gap in the literature where ethical considerations in freemium models have been underexplored.

Another key aspect of our study is the introduction of the concept of "free mentality" as a moderating factor. By exploring how free mentality influences ethical perceptions of freemium models, we add a new dimension to existing theories on consumer behaviour and ethical perceptions. This finding bridges consumer psychology and business ethics, offering a nuanced perspective on how consumer beliefs shape their ethical judgments.

Furthermore, our research offers a humble yet meaningful theoretical contribution through the expansion and application of Consumer Perceived Ethicality (CPE) frameworks within the context of freemium business models. By comparing the Roman and Brunk frameworks, we highlight the difference and the effectiveness of the Roman framework in capturing intuitive and overall ethical judgments.

Lastly, this research extends the Theory of Planned Behaviour (TPB) by linking CPE to consumer behavioural intentions, such as word-of-mouth promotion and premium upgrade intentions. By doing so, we provide a theoretical basis for understanding how ethical perceptions drive consumer actions in the digital services market.

6.1.2 Managerial Implications

The findings of this study offer practical guidelines for MNEs in designing freemium models that are perceived as ethical by consumers. Specifically, the research indicates that feature-limited freemium models are viewed more favourably compared to ad-supported models. This insight provides actionable strategies for MNEs aiming to build trust and loyalty through ethical business practices.

Highlighting the positive impact of ethical perceptions on consumer behaviour underscores the strategic importance of maintaining high ethical standards. MNEs can

leverage these insights to enhance customer satisfaction, retention, and advocacy, thus achieving a sustainable competitive advantage. By understanding the ethical expectations of their customers, managers can better align their freemium strategies with consumer values, fostering a more loyal and engaged user base.

Additionally, the cross-cultural aspect of the study reveals the necessity for tailored marketing strategies that consider regional differences in ethical perceptions. MNEs can utilize these insights to design and implement freemium models that align with the ethical expectations of consumers in various markets, thereby enhancing their global appeal and effectiveness.

6.1.3 Policy Implications

The study's findings have significant implications for policymakers aiming to promote ethical conduct among MNEs in the digital economy. By understanding consumer ethical expectations, policymakers can develop guidelines and regulations that encourage MNEs to adopt ethical business practices, fostering a fair and trustworthy digital marketplace.

Furthermore, the insights from this research can inform the creation of policies that support transparency and fairness in digital business models. Policymakers can use these findings to advocate for practices that protect consumer rights and promote ethical behaviour among MNEs and digital service providers.

Lastly, the cross-cultural insights from the study highlight the importance of international cooperation in setting ethical standards for digital business practices. Policymakers can work together to establish global guidelines that ensure ethical conduct across different markets, benefiting consumers and businesses worldwide.

By addressing these contributions and implications, this research aims to advance both the theoretical and practical understanding of the ethical dimensions of freemium models used by MNEs. It seeks to provide valuable insights for scholars, practitioners, and policymakers in the digital economy, contributing to the development of more ethical and consumer-friendly business practices.

6.2 Limitations

While this study provides some insights, it is important to acknowledge several limitations that suggest areas for future research.

Firstly, the sample size, particularly the smaller representation from Western countries, may limit the generalizability of the findings. Future research could benefit from including larger and more balanced samples across different cultural contexts to validate the results and provide a more comprehensive understanding.

Secondly, the study examines only two basic forms of freemium models: ad-supported and feature-limited. This limited scope may not represent the full spectrum of freemium strategies employed by digital platforms. Future studies should investigate other freemium strategies, such as those involving usage limits or time constraints, to provide a more comprehensive understanding of their ethical implications.

Thirdly, the research relies solely on quantitative methods, which may not capture the depth and complexity of consumer perceptions and experiences. Incorporating qualitative methods, such as interviews or focus groups, in future studies could provide richer insights and a more nuanced understanding of consumer attitudes towards different freemium models.

Lastly, ethical perceptions are dynamic and can evolve over time due to various factors such as media coverage, peer influence, and changes in corporate behaviour. This study provides a snapshot based on the current state of freemium models. Longitudinal studies are needed to examine how these perceptions change over time, offering deeper insights into their temporal stability and shifts.

By addressing these limitations, future research can build on the findings of this study to advance the understanding of the ethical dimensions of freemium models used by multinational enterprises. This will provide even more comprehensive insights for scholars, practitioners, and policymakers.

7.0 Conclusion

This study explored the ethical dimensions of freemium models in digital MNEs, addressing the gap in literature by focusing on consumer perspectives. Findings indicate that feature-limited freemium models are perceived as more ethical than ad-supported models, emphasizing the value of a clear distinction between free and premium services without intrusive ads. The concept of "free mentality" negatively impacts CPE, posing a challenge for balancing free offerings with monetization. Higher CPE was found to positively influence word-of-mouth and premium upgrade intentions. The research contributes theoretically by integrating ethical theories and practically by providing guidelines for designing ethical freemium models, with policy implications for promoting ethical digital practices. Future

research should consider diverse samples and additional freemium strategies to deepen understanding.

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Appendix

Company Description in questionnaire:

1. Company A provides an easy-to-use recipe app that includes delicious recipes from around the world. The app supports ingredient-based searches, allows users to find recipes from different countries, and supports multilingual search.

Free users can access all recipes and all features, but ads are displayed on each recipe page. For an ad-free experience, a paid premium subscription is required.

2. Company B provides an easy-to-use recipe app that includes delicious recipes from around the world. The app supports ingredient-based searches, allows users to find recipes from different countries, and supports multilingual search.

Free users can access all recipes and basic features with no ads, but personalized recommendations are not supported. For more advanced features, a paid premium subscription required.

3. Company C provides an easy-to-use recipe app that includes delicious recipes from around the world. The app supports ingredient-based searches, allows users to find recipes from different countries, and supports multilingual search.

Free users cannot access the service; all recipes and features are available only with a paid premium subscription. Subscribers can access all recipes and features with no ads.