Beyond Taste: Exploring the Allure of Hedonistic and Pragmatic Factors in Malaysian OFDS Repurchase Intentions

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Abstract: The online food delivery industry has become an integral part of modern-day markets. However, the sustainability of what is known as online food delivery services (OFDS) remains ambiguous. Despite this, there is currently no definitive consumer behavior model applicable to OFDS consumers. Recently, the concept of User-Centered Design (UCD) has gained popularity in UI/UX design and implementation for digital products and services like OFDS. Alongside this trend, insights from hedonic and pragmatic attractions have emerged, along with research implications of consumer traits and values that may influence the OFDS consumer market. Multiple linear regression analysis revealed that all proposed UCD elements were not significant predictors of repurchase intentions among OFDS consumers. Conversely, hedonic attractions emerged as a significant predictor of repurchase intentions, whereas pragmatic attractions did not demonstrate such significance. Furthermore, consumer traits and values did not significantly moderate the relationships leading to repurchase intentions within the proposed model. These findings underscore that, for Malaysian OFDS consumers, UCD elements do not strongly predict repurchase intentions. However, hedonic attractions significantly influence repurchase intentions, indicating that Malaysian OFDS consumers respond more positively when their hedonic needs are met through UI/UX design. Conversely, pragmatic attractions do not play a significant role in repurchase intentions for Malaysian consumers. Additionally, consumer traits and values do not impact repurchase intentions within the OFDS market in Malaysia.

Keywords: OFDS, UCD, Hedonic Attractions, Pragmatic Attractions, Repurchase Intentions

1. INTRODUCTION

In recent years, the online food delivery industry has seen tremendous growth (Dsouza & Sharma, 2021) in Malaysia, which is one of, the highest tech-adopting nation within the ASEAN region (Erh, 2021). With that said, the recent pandemic has provided a significant market growth and adoption of online food deliveries, with physical consumerism markets being restricted (Poon & Tung, 2022) – particularly evident in Malaysia, with a market adoption increase by 45.9% in the first pandemic year alone (Tan, Lim & Yeo, 2021).

OFDS is an exclusively digitalised platform, and highly dependent on the continued consumer/user experience that caters to the needs and demands of the target audience. In this regard, the application of a user centred design, or UCD can closely relate to OFDS apps, from its design, to its usage features (Goffe et al., 2021;

Garg, 2022; Hueting, Giogi & Capaccioli, 2023). Within the framework of UCD, the UI/UX of OFDS apps and the manner with which its appeals to the target consumers, could be integral to the continued adoption and growth of the OFDS market. Most importantly, the factors that may influence repurchase intentions amongst Malaysian consumers for OFDS remains to be a pertinent point of apprehension (Ariffin et al., 2021; Nor et al., 2022; Poon & Tung, 2022).

As consumers become more aware of, and have become exposed to tech-based OFDS, the role of UI/UX in determining, influencing and affecting consumer behaviour, such as repurchase intention, is starting make traction within scholarly work (Dewi, Rohman & Hapsari, 2022). With regards to these digital/online products/services (Chin, Callaghan & Allouch, 2019), UCD is highly applicable for real-world user/consumer needs and demands.

By taking this opportunity presented by the circumstances of the post-pandemic market, there is a highly suitable research potential that could examine and uncover these determinants of repurchase intentions where: a) many Malaysians have used or have been exposed to OFDS during the pandemic, b) many becoming repeat customers, c) have adapted to and are able to provide key insights and d) the urgency with which the OFDS market in Malaysia, in terms of its long-term sustainability can be addressed by taking this research approach that examines the OFDS consumer behaviour via UCD.

2. USER CENTRED DESIGN

Prior to the pandemic, there was already a healthy growth of OFDS market penetration in Malaysia (Pitchay et al., 2022), which saw a surge of growth as markets locked down and physical consumerism became restricted. Conversely, it remains to be seen, as to the continued market adoption in the post-pandemic markets, and if so, what the reasons are for this consumer behaviour (Poon & Tung, 2022).

Over the years, the concept of a user centred design has become popular, focusing on meeting the nuances and consumer needs of the user, via the design process (Dreyer et al., 2019). In other words, a user centred design (henceforth, UCD), is a framework of design processes that explicitly takes into account the users in question, the tasks involved, and the environment in which the user navigates. On that note, the implicit relationship between UCD and that of repurchase intention is plausible for digital products/services such as OFDS (Cha & Lee, 2021).

In the area of user experience, there are also two major elements that have become a focal point for developers and designers: the hedonic/pragmatic model (Tong et al., 2022). In relation to UCD, the hedonic/pragmatic framework is relatable and overlaps. For OFDS, it is important to understand how these hedonic/pragmatic preferences can impact the way products/services are perceived, preferred and leads to repurchase intentions (Castro-Lopez, Vazquez-Casielles & Puente, 2019). By consolidating UCD, alongside hedonic/pragmatic paradigms, a clearer understanding of factors influencing repurchase intentions for online food delivery services in Malaysia could be attempted.

In reflection of UCD, there is also some merit towards understanding the traits and values of potential target consumers. As the overall concept of UCD is to take into account the users/consumers and their preferences towards the usage/utility of digital products/services, there should also be some consideration towards how user/consumers think, believe, and behave (Shahab et al., 2021). These traits and values can potentially impact the dynamics of consumer

behaviour in the sense that the hedonic/pragmatic framework could be pre-empted, or that UCD could be pre-determined. By gaining some insights towards consumer traits and values, there is a potential for a more refined design and development of UI/UX and UCD (Zhang, Leng & Liu, 2020).

Online Food Delivery Services

The market for OFDS began at least a decade ago in Malaysia, with Food Panda taking the lead, followed by Grab Food. With a market penetration of 81% and 70% respectively (Statista, 2022), these OFDS brands have enjoyed a highly responsive and adaptive market in Malaysia. While the exact figures may vary, there are nearly 7 million OFDS users/consumers in Malaysia, making up 21% of the total population, valued at $192 million in 2023, and expected to reach $370 million by the following year (MMR, 2023).
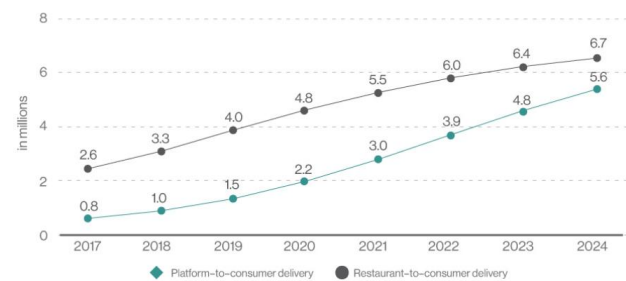

Figure 1. Projected userbase for OFDS in Malaysia
(Source: The ASEAN Post, 2020)

The onset of the pandemic saw a surge of market adoption for OFDS, by as much as a 45.9% increase in the first year alone (Tan, Lim & Yeo, 2021), which has steadied to around 17.9% growth annually since. Even so, it cannot be ignored that the sudden growth of the OFDS market was induced largely by the pandemic and its associated market restrictions on physical stores and consumer channels (Poon & Tung, 2022). From the rate of growth that has been observed since the pandemic, it is also clear that the adoption rate has slowed down, and may not necessarily remain as pivotal for the coming years (Ariffin et al., 2021). The long-term sustainability of OFDS, now that it has become 'normalised' within the Malaysian consumer market, should not be overlooked too lightly. In order to offset any untoward contraction or market shifts in relation to OFDS, it is imperative that consumer behaviour determinants, factors and trigger points are examined and addressed.
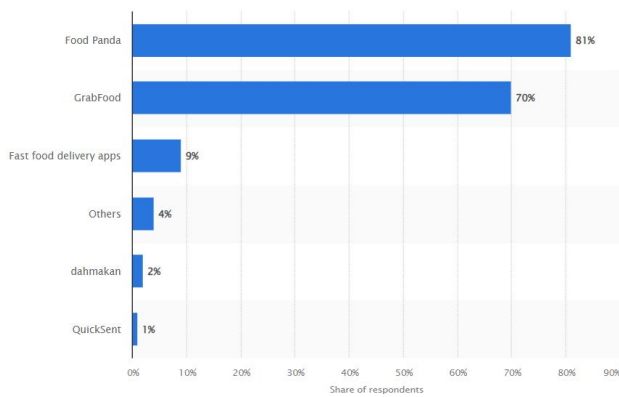
Figure 2. Most used OFDS brands in Malaysia (Source: Statista, 2022)

Even prior to the pandemic, there has been a number of concerns that were raised by OFDS users/consumers, with respect to OFDS and its potential 'limitations'. From trust, to customer service, to quality control, to safety, numerous challenges can be associated with OFDS and its 'roadblocks' towards market adoption/penetration (Hooi, Leong & Yee, 2021). With that said, the artificial surge of market adoption for OFDS becomes even more concerning for the future of the industry as these issues and challenges remains relevant still – and may lead to market disruptions in the future.

With regards to OFDS apps, the utilization of a user centred design could be a potential solution (Goffee et al., 2021). Conceptually designed to intercept user/consumer needs and demands, based on an iterative process of users/consumers feedback, the implementation of UCD could resolve many of the ongoing issues with OFDS markets in Malaysia. Ensuring that the users/consumers are happy with the overall design, enabling these users/consumers to gain a user experience that satisfies their needs, empowering users/consumers by providing solutions are just some of the major areas that can be addressed via UCD.

Outside of the more 'human' aspects of OFDS, user experience within a positive framework for Malaysian consumers (Yeo et al., 2021), there are also factors outside of market agents' control. How consumers may perceive, react and respond to market trends, or how quality assurances are affected, from vendors to delivery supply chains are some of the areas of the OFDS industry that is outside of the scope and control of UCD. However, by meeting the needs and demands of users/consumers, taking into account their concerns and challenges, UCD may provide a user experience and environment that better caters to the growing consumer base in Malaysia.

Considering the increasing usage applications like OFDS, the consumer perspectives on the effect of UI/UX continues to grow in importance. Thus far, these perspectives remain relatively unknown for Malaysian

markets. The interplay between UI/UX and that of repurchase intentions could provide key insights as to where/how UI/UX can be improved, arresting setbacks on the market adoption/penetration in the post-pandemic market for OFDS in Malaysia. Essentially, by taking a more in-depth examination of UI/UX and its relationship with repurchase intentions for OFDS, the continued market growth of OFDS can be strategically developed based on quantifiable data, relevant to the consumers at hand.

The more recent research directions in online consumer behaviour studies lends more weight to the examination of research directions through user experience or concepts such as attraction-points, traits and values. Adding the nuances of traits and values may aid and add to the effectiveness and efficacy of the UCD. Moreover, the literature on the differences between hedonistic versus pragmatic consumers have become more dependable (towards consumer market segmentation, profiling etc.) of late – areas that are generally lacking in past research directions for Malaysian (online) consumers, and even more so for OFDS. The hedonic/pragmatic framework in particular, is a well-utilized and well-known user experience model in developing and designing products/services that meets consumer needs/demands. Taking these perspectives into account when developing and designing UI/UX for OFDS can have significant benefits for the industry, and may provide a boost towards positioning, penetration and adoption.

In terms of the understanding and investigating the impacts and effects of UI/UX, quite a bit of focus has been given to UCD in recent years, covering the areas of interface layout, content, tech, services and safety, as viewed from the perspective of consumers – however, other extraneous factors leading to these views and perspectives also necessitate some degree of investigation, from the traits and values of the consumers, to attraction-points, and how it impacts these views. Nonetheless, the true value of UCD is that it will allow designers, developers and marketeers to understand where one can best focus on and improve on, in order to meet the real-world consumer/user demands and needs. By understanding not just consumers/user needs, but by providing what they need/want and improving on them, a much more consumer behaviour friendly (i.e., centric) environment can be developed.

Studying online consumers in countries like Malaysia through traits and values represents a distinctive research avenue not commonly pursued. Consequently, there exists a scarcity of research data in this domain. Literature on trait and values, in relation to repurchase intentions, whilst limited, have shown to have some potential, as consumer repurchasing intentions are intricately linked with how they (the consumers) think

and behave. Similar approaches have been applied across various commercial brand-consumer relationships, ranging from luxury brands to everyday consumer goods. The same principles can be effectively applied through UI/UX design and UCD.

While there is generally, a lack of local (Malaysian) studies on the subject of repurchase intentions of OFDS via the perspective of UCD, UI/UX, this should no longer be overlooked subject matter. While these considerations are valid, it is also not to say that leveraging on consumer traits and values have not been conducted commercially before. Successful branding of commercial products/services have taken varying liberties with respect to leveraging and meeting consumer needs and demands. At most, the leverage one gains from understanding consumers' needs via their traits and values are of great utility, not just to brands, but also to consumers – the connection, if any, between such traits and values with that of repurchase intentions for OFDS is a relatively unknown area of research, and should be considered in research directions.

According to the latest consumer reports, to market reports, to government reports – there has been a significant uptake in online consumerism, especially with respect to OFDS in Malaysia – however, the sustainability of this market remains to be seen. The Malaysian market observed some healthy growth towards this end for OFDS, prior to the pandemic. The sudden and artificial growth of the pandemic-induced markets however, is a matter of ambiguity at best for OFDS. Nonetheless, as a study that is focused on examining the factors influencing repurchase intentions for online food delivery services in Malaysia, these ambiguous market growths can at least be answered for, with a consideration towards how Malaysian consumers view and feel about OFDS.

There are limited studies on the relationship between UI/UX and repurchase intentions for the subject of OFDS, which is the primary aim of this current study. In order to maintain a clarity on this relationship, a UCD approach will be utilized. All of these areas, from UI/UX to UCD are relatively novel for the Malaysian market, with regards to these research directions.

On top of the subject of UI/UX and its impact on repurchase intentions, there are also other limitations in research such as the examination of hedonistic and pragmatic consumers on online consumerism – which are considerably significant research scopes that may have vital impacts on the OFDS market. Within the literature for user experience, the hedonic/pragmatic model has been shown to be of particular interest, as it allows UI/UX developers and designers to cater to these particular needs more efficiently – all leading to their interaction with the designed UI/UX.

Despite the growth of the OFDS market, there remains to be a lack of clarity towards the determinants and drivers of these online consumer behaviour, particularly from areas such as UI/UX. Already an understudied concept, the applicability and utility for effective UI/UX development and design could have a wider impact for OFDS. By having an understanding of, and being able to implement UI/UX designs that are best suited for the Malaysian market, future UI/UX implementations could be improved upon and designed more efficiently.

UCD and Repurchase Intentions

While food deliveries have been commonplace for many decades, the concept of online food delivery systems became far more prevalent in the early 2000s (Ahuja et al., 2021). The appeal of OFDS came hand in hand with the accessibility and advancement of mobile technology, particularly, of smartphones and "apps". Usability, ease and especially, user-focused designs gained prominence, with OFDS apps competing with one another for market adoption (Annaraud & Berezina, 2020). The implications for UCD and its overlap with the OFDS design and implementation can be argued for, with users or consumers, being the focus, and the manner in which these apps are adopted by the market as that noted by Khoa (2022) or Yeo et al. (2021).

OFDS have not only become common, but have continued to grow – however, there is much to explore with regards to how consumers respond and react to the OFDS brands, as noted by Purnomo (2021), in designing food-related apps and taking repurchase intentions into consideration. Despite showcasing positive market adoption and growth, there remains to be many aspects of design that can be improved in order to provide users/consumers with features that would incite a higher degree of repurchase intentions. Purnomo (2021) made the case that design of OFDS apps must not forgo the user and their preferences when developing OFDS apps, satisfying as many areas of user-centred, or user-focused features as possible, and to continually aim for improvement and adaptation to user/consumer needs.

A useful frame of perspective when it comes to OFDS apps is the repeatability of usage and consistency of app-to-user interactions. In other words, user/consumers of OFDS apps are warranted to interact with these apps many times, at which point, within the time frame in between each interaction, these users/consumers will be afforded time to consider their interactions and experiences, in turn, determining future consumer behaviours. These 'cyclical' interactions and dynamics of OFDS consumers are very much suited to the iterative nature of UCD, with respect to their follow-up actions, post-experience, as addressed by Seong-Soo and Mee-Hye (2021). In this paper on the emotional responses of

OFDS consumers, Seong-Soo and Mee-Hye (2021) noted the importance of ensuring that the post-experience for users/consumers remain positive enough repurchase intentions, which were directly related with how they 'felt', if their experiences were 'good' and if the OFDS app in question served their 'purpose' – all intangible factors, in line with the principles of UCD.

In Malaysia, Yeo et al. (2021) explored how the OFDS brands like Food Panda, gained associated with the overarching principles of UCD (Mofoken, 2022; Berger et al., 2022; Cho, Park & Lim, 2020). Food Panda ensured that their layouts/designs met the needs of their target consumers, while keeping and/or updating their content to be 'clear'. There were consistent improvements made, while the service provided by Food Panda has remained relatively positive in the Malaysian market. Competitors like Grab have taken a similar route, fast becoming the market leader for OFDS in Malaysia as noted by Tan et al. (2022). The onset of the pandemic, while disruptive for the most part, also provided the OFDS market with a tremendous incentive for growth. When reviewing the changes and adaptations made by brands like Grab in the pandemic-years, it can be observed that UCD principles were applied effectively, always seeking improvements that met user needs, providing solutions for users that were relevant, focusing on user feedback and communication, and also ensuring that the outcome of the user experience was user-centred.

The transferable gains and benefits of UCD within the scope of online food delivery apps, is manyfold and has quantifiable evidence to indicate potential (Yeo et al., 2021; Khoa, 2022; Alail & Pertiwi, 2022). As a service app/platform for the ordering and delivery of food, OFDS apps such as Grab are intricately user-focused (Tan et al., 2022). The features that are commonly found withing OFDS apps like Grab, would include, but not limited to, convenient and easy-to-use interface layouts, eye-grabbing, quality content, functional and useful tech, quality and in-demand services, alongside safety features that reassures its users (Nayan & Hassan, 2020; Eu & Sameeha, 2021; Wiastuti et al., 2022). OFDS apps like Grab has had many iterations since they first launched in Malaysia, adapting to and updating their design cyclically – very apt of the philosophy under UCD (Thongsri et al., 2022). By putting its users/consumers 'first', these OFDS apps have captured a significant swath of the Malaysian market, essentially hosting as much as 21% of the total population thus far (MMR, 2023). For a tech-savvy market like Malaysia, with a penetration rate of 94.8% for smartphones (MCMC, 2022), these metrics for OFDS market penetration and adoption showcases tremendous potential – how much of this is contributed by UCD, or rather, how much gains can be made through UCD, remains ambiguous at best, but literature points to a closely associated link. In short, the applicability of UCD

is evident – a testament to the importance of a human-centred approach.

Hedonic and Pragmatic Attractions

Within the framework of UI/UX, hedonic and pragmatic attractions or qualities have become a point of reference towards how design processes should be considered, with the aim of meeting both (hedonic/pragmatic) qualities that can best satisfy the target user/consumer (Minge & Thüring, 2018) – while there is no standardisation towards how hedonic/pragmatic attractions are defined, they can be understood roughly as task- and non-task-oriented qualities

The hedonic/pragmatic paradigm of attraction can also be divided into "do-goals" and "be-goals" as according to Scholleová (2021) – what this means is that hedonic attractions or qualities are the 'non-task-oriented' features of the design, such as the more 'emotional' or 'sentimental' aspects, such as how 'pretty' a design is, or how 'welcome' it makes one feel when using it, as compared to the 'task-oriented' features under pragmatic attractions, such as how 'useful' a design is, or how 'straightforward' it is.

Both of these hedonic/pragmatic qualities have been found to be crucial in determining the overall user experience and user behaviour in design, as noted by Nakamura et al. (2022). It was also determined that by addressing a balance of both hedonic/pragmatic qualities in UI/UX design, the rate of user adoption, user satisfaction and overall, positive user behaviours (i.e., purchase/repurchase intentions), can increase across the board, making note of the importance of knowing how to develop/design based on these hedonic/pragmatic qualities

According to Van de Sand et al. (2020), while both hedonic/pragmatic qualities can determine overall user behaviour, there remains to be debate towards which end of the spectrum is much more impactful. Moreover, there has been much research implications that consumer-centric models of design are far more important, even when considering the impact/effect of hedonic/pragmatic qualities – in other words, while it is important to provide sufficient hedonic/pragmatic qualities in design, without understanding the target audience properly, these qualities may not matter as much as addressing these user/consumer needs/demands/wants

When applied in real-world cases, such as online food deliveries, Alail and Pertiwi (2022), found that a) it was indeed, important to showcase both hedonic/pragmatic qualities in design, but also that b) developing/designing with reference to target audience/users/consumers was just as, or even more important, and that c) extraneous variables, such as buyer/user/consumer personalities/traits, or their backgrounds can also play a

crucial role in their user experience and user behaviour online. In short, there is no standardised protocol as to how design should be implemented with regards to both hedonic and pragmatic features, but it is imperative that both types of attractions are met, in order to appeal to the overall masses or consumers.

3.   METHODOLOGY

For this present study on the determinants of repurchase intentions for OFDS consumers in Malaysia, a quantitative research design was chosen. In this instance, the exploratory, quantitative research design will explore the relationship between UCD components, hedonic/pragmatic attractions, and that of repurchase intentions. Traits and values were proposed to be moderators for the relationship between the attractions and repurchase intentions. For the purpose of this study, there were a total of 7 UCD components (interface layout, content, technology, services, safety, checkout and payment process, and tracking features) and 2 attraction components (hedonic and pragmatic attractions), which made up a total of 9 IVs. Alongside there were also 5 traits (extraversion, agreeableness, openness, conscientiousness and neuroticism) and 10 values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security), which were proposed to moderate the relationship between attractions and repurchase intentions. Repurchase intentions were proposed as the DV for this study, which will be determined by the UCD and attraction components proposed. The scope of this study in turn, was that of Malaysian consumers of OFDS in order to examine the determinants of repurchase intention for OFDS within the framework of UI/UX design, with UCD and attractions being the focus, using a quantitative research design. Limitations in this case were if there were factors that have driven these consumers towards OFDS that were not been covered within the scope of UI/UX, UCD and attractions.

One of the most commonly used and relied upon methods for determining sample size is that of G*Power (Lakens, 2022), which takes into account the effect size, probability error, and number of predictors/variables into account, and has been noted to be a highly reliable, statistical tool for sample size determination. With that said, with 9 IVs, the G*Power sample size, with an effect size of 0.15, with an alpha probability of error at .05, and a power of 0.95, and taking into account the predictors, a minimum sample size of 166 was determined.

The sampling technique chosen for this present study was that of purposive sampling, which will take into account a set of criteria set by the researcher that would best represent population of OFDS app users in Malaysia. And with that said, in order to conduct purposive sampling, all target sample/respondents were a)

Malaysian, b) above the age of 18, and c) have used food delivery services at least once a month in the last 1 year.

As a study that is focused on OFDS apps, it was deemed appropriate to conduct the sampling exclusively online, via social media such as that of Facebook, and/or through direct contact of the researcher student. In turn, the itemised surveys that were developed for this study were presented via Google Form, which allows for easy access to all target respondents that fulfilled the required criteria that was established above. The itemised surveys that were developed for this study were fully adapted from previously published academic papers, which have already been tested for the statistical validity and reliability, however, a pilot study was also conducted in this present study, to double confirm these statistical features, prior to the main study.

4.   RESULTS

The demographics were collected based on age groups, ethnicity, education and income levels, number of years having used OFDS, the frequency with which OFDS is consumed, how much is normally spent on OFDS per month, and the preferred device with which the sampled data utilizes OFDS.

With that said, it can first be observed that unlike the conventional market research findings (Statista, 2022), the age group within this sampled data were more evenly distributed, across a wider range from 18 years old, to 44 years old, with each category (18 – 24, 25 – 34 and 35 – 44) making up roughly 1/3 of the total sampled pool. This deviates from the findings from Statista (2022), which states that 25 to 34 years old, accounted for 81% to 70% of the total population of OFDS users in Malaysia.

Similarly, the overall distribution of ethnic groups within this sampled data were also roughly, evenly distributed from Malays (25.1%), to Chinese (27.6%), to Indians (23.2%) and Others (22.7%). Both of these distributions of age and ethnic groups could be due to the fact that the current study researcher has used his own, personal network, both offline and online, in order to gain an even distribution of responses from all walks of life within the Malaysian population (or as much as was available to the student researcher), without taking any particularly biased opinion from specific groups or categories.

With that said, when it came to education levels, this lack of bias may not have been as stringent, as roughly half of the sample were diploma/degree holders, while the other half were master holders – possibly due to the fact that the student researcher is also a master student and therefore, many of his personal network are of similar academic background.

In terms of income levels, most of the sample earned between RM 2.5k to RM 5k, making up 53.7% of the sample, followed closely by those that earned RM 5k to

RM 10k (44.3). Based on this information on income levels, it can be observed that the sample ranged from both relatively lower income groups, to relatively higher income groups.

With reference to the number of years of OFDS usage, there was a wider distribution across the sampled data, from 1 year (15.8%) to 2 years (28.6%), to 3 years (27.6%), and finally, to 4 yeas (26.6%). Given this distribution, it can be observed that the sampled data have mostly started using OFDS over the pandemic years (2 to 3 years), more in line with the findings from Tan, Lim and Yeo (2021), who noted a market adoption increase by 45.9% in the first pandemic year alone.

Based on the sampled data, there was also a relatively even distribution of the frequency of OFDS usage, from daily, to several times a week (2 – 3), to just once a week, with all groups falling within, roughly, a third of the total sample for each category. When referring back to the income level distribution, to the age groups (which were mostly composed of young adults), these frequency distributions are quite reflective of the market reports (Statista, 2022).

And as for the average amount of money spent on OFDS, there is also a similar distribution of 1/3 for those that spent below RM 100, to those that spent between RM 100 to RM 300, to those that spent between RM 300 to RM 500. When taking into account the frequency of OFDS usage per week as mentioned above, these figures are relatively realistic representation of the data, just as the sampled data showcased that the preferred device for ordering OFDS was through smartphones.

When taking all of the demographic distribution into account, it can be observed that the skewness and kurtosis fell within acceptable ranges of ±2, indicating that they were normally distributed for the most part. This also indicates that whilst there were certain categories that leaned more towards one end or another (e.g., half were master holders, or that all OFDS orders were conducted via smartphones), the statistical skewness and kurtosis still held true in showcasing a more or less, normally distributed set of data with regards to demographics.

Multiple Linear Regression

For the purpose of examining the relationship found between the proposed IVs and that of the DV, a multiple regression analysis was conducted, using the step-wise method, which is a feature of SPSS that allows the program to eliminate any predictor variables (IVs) that were not statistically significant. With that said, the main inferential statistical analyses, highlights first the correlations, followed by the model summary and that of the coefficients. The correlation table will indicate the potential relationships that can be found, not just with the IVs and the DV, but across the wider scope of the all the

variables involved. The model summary, using the step-wise method, showcases the degree of the effects on the DV that can be associated with the relevant IV or predictor(s) involved. And finally, the coefficient table showcases the prediction of the impact from the IV to the DV, if any. With that said, based on the regression analysis, using the step-wise method to eliminate any predictor variables that were not significant to the model, the following findings were found.

TABLE 1. DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	N
Repurchase Intentions	15.8650	2.11165	200
Interface Layout	20.4600	2.59462	200
Content	17.9800	1.46641	200
Technology	22.2600	1.68123	200
Services	17.6950	1.67511	200
Safety	22.4950	1.11183	200
Checkout and Payment	20.8550	2.19043	200
Tracking Feature	21.6350	2.04270	200
Hedonic	16.1750	2.03348	200
Pragmatic	22.4150	1.16169	200

Based on the correlation table, only tracking feature from UCD and hedonic attractions were found to be statistically significant, with p-values less than 0.05. As according to the established statistical standards, p-values of more than .05 cannot be considered to be statistically significant, and therefore, the correlation table indicates a brief, and largely, a loose relationship that can be found across the proposed IVs (predictors) with the DV. In this regards, tracking features was negatively related with repurchase intention with $r(200) = -0.121$, $p < 0.05$, alongside hedonic attractions which was also negatively related with repurchase intention with $r(200) = -0.166$, $p < 0.05$. Taking this into account, this showcases that, of all the UCD items, only tracking features had any statistically significant relationship with repurchase intention, and for attractions, only hedonic attractions had statistically significant relationship with repurchase intention.

TABLE 2. CORRELATIONS

Pearson Correlation	Repurchase Intentions	1.000								
	Interface Layout	-.006	1.000							
	Content	.059	.002	1.000						
	Technology	-.024	.032	-.041	1.000					
	Services	.062	.058	.059	.046	1.000				

	Safety	-.053	-.067	-.022	.089	.044	1.000				
	Check out and Payment	-.055	.049	.002	.003	.017	-.063	1.000			
	Tracking Feature	-.121	.086	.018	.091	-.074	-.035	-.029	1.000		
	Hedonic	-.166	-.008	-.048	.035	.050	.046	.017	-.050	1.000	
	Pragmatic	.033	.093	.002	.068	-.069	-.140	-.012	.015	-.169	1.000
Sig. (1-tailed)	Repurchase Intentions	.									
	Interface Layout	.466	.								
	Content	.203	.486	.							
	Technology	.368	.325	.284	.						
	Services	.191	.208	.204	.258	.					
	Safety	.229	.172	.381	.104	.269	.				
	Check out and Payment	.218	.246	.488	.481	.408	.187	.			
	Tracking Feature	.044	.113	.402	.101	.149	.311	.343	.		
	Hedonic	.009	.457	.251	.311	.242	.259	.406	.242	.	
	Pragmatic	.320	.095	.489	.169	.166	.024	.434	.414	.008	.

However, as is the case with multiple linear regression, it is imperative that the model summary is taken into account, which highlights the degree of the impact of the proposed predictors on the DV. In this case, using the step-wise method, only statistically significant predictors are taken into account under the regression analysis, and therefore, it was found that tracking features from UCD was no longer accounted for. With that said, using the step-wise method of elimination, only hedonic attractions were found to be a significant predictor, which in turn, also only accounted for 2.8% (or 2.3% when r-square is adjusted) of the difference in the variance of the DV, repurchase intention. What this indicates is that, while hedonic attractions may have been a statistically significant predictor, it plays a highly minor part in the framework of predicting repurchase intentions amongst the sampled population of Malaysian OFDS users. In other words, there are much larger and more significant variables at play when considering the prediction of repurchase intentions that are not covered by the proposed framework of this current study.

TABLE 3. MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
					Change Statistics					
1	.166ᵃ	.028	.023	2.08743	.028	5.645	1	198	.018	1.559

a. Predictors: (Constant), Hedonic
b. Dependent Variable: Repurchase Intentions

TABLE 4. COEFFICIENTS

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1 (Constant)	18.662	1.186		15.732	.000		
Hedonic	-.173	.073	-.166	-2.376	.018	1.000	1.000

a. Dependent Variable: Repurchase Intentions

And finally, with hedonic attractions found to be statistically significant as a predictor, the coefficient table showed that it was significant with p < 0.05, with a beta-value of -0.173 and a constant value of 18.662. According to these findings, the following regression formula can be developed for predicting repurchase intentions:

Repurchase intentions = 18.662 - 0.173 (hedonic attractions)

What the above formula indicates is that for every point of repurchase intention (in accordance to the itemised survey that was utilized by this current study), by adding 18.662 to the hedonic score, and subtracting the hedonic score that is multiplied with (-0.173), one can then roughly predict the final repurchase intention. For example, if one were to score '12' on the hedonic score (which is the medium score for hedonic), then repurchase intentions for this individual will be as follow:

Repurchase intentions   = 18.662 – (0.173 x 12)
= 18.662 – 2.076
= 16.586

In order to ascertain the potential role of traits and values, a pilot test was also conducted prior to the final

data collection, of which only 7 values and 1 trait was found to have any relevant role (in varying degrees). To examine this, a multiple regression analysis was also conducted, whereby the traits and values were utilized as moderators to attractions, alongside the original proposition of UCD items (together with attractions). This particular moderated multiple linear regression was mainly focused on the role of traits and values within the framework of the originally proposed relationships between the main IVs and DV, provided that the moderators had any statistically significant role to begin with.

With that said, after applying the step-wise method of elimination for the potentially significant predictors within this model, none of the traits and values were found to any significant role, only the correlations found can be reported as such. According to the correlation table, just as the findings prior (from the first regression analysis), tracking feature and hedonic attractions were significantly related to repurchase intention. Additionally, in the case of the moderated relationships, V7H (benevolence moderating hedonic attraction to repurchase intention) was the only significantly related pathway, with r (200) = -0.157, where p < 0.05. As benevolence is understood to be a value that focuses on helpfulness and responsibility, it can then be said that when hedonic attractions are moderated by benevolence, there is an inverse relationship with repurchase intention. However, when used as a predictor, this moderation was not found to be significant, therefore, was ultimately dismissed within the framework of this current study.

5.   DISCUSSION

Of the UCD elements proposed, only tracking feature was found to have any relations with repurchase intentions, while from attractions, only hedonic attractions showcased any form of impact on repurchase intention. However, when tested under regression analysis, it was noted that tracking features from UCD were no longer able to predict repurchase intention, leaving only hedonic attractions, and inversely at that. This then leads to observed phenomenon based on the sampled respondents, that UCD elements do not have statistically significance within the framework of repurchase intentions. Meanwhile, hedonic attractions, while found to be significant as a predictor, was inversely related to repurchase intentions, whereby it was shown that lower levels of hedonic attraction would lead to higher level of repurchase intentions. This showcases the fact that based on the current study of Malaysian consumers, hedonic attractions played a much larger role for design, as compared to UCD. In other words, design features that appeals to the users' sense of the 'non-task-oriented' features of the design, such as the more

'emotional' or 'sentimental' aspects, such as how 'pretty' a design is, or how 'welcome' it makes one feel when using it, are far more important for Malaysian consumers of OFDS.

By this end, it can be said that all of the major research questions proposed have been answered, whereby the main determinant of repurchase intention on OFDS for Malaysian consumers are inversely related to their hedonic attractions. However, when looking into UCD elements, there was no significant influence on OFDS repurchase intentions. On the other hand, for attractions, only hedonic attractions played an inverse role in shaping Malaysian consumers repurchase intention, although pragmatic attractions did not play as significant of a role. These findings implies that UCD elements are not as profound when contrasted with attractions, hedonic attractions in particular, with which, much more attention could be paid towards future endeavours in terms of design for OFDS.

As a supplementary condition, traits and values were also taken into account, with regards to how they might moderate the relationships leading to repurchase intentions. Based on the findings however, both traits and values were not found to have any significant predictive capacity, both as moderators and/or direct predictors, on repurchase intention of OFDS for Malaysian consumers. This can allow the researcher to disregard the roles of traits and values, at least for Malaysian consumers of OFDS within the scope of UI/UX design, while focusing more on the factors that were found to be significant, that of hedonic attractions.

When looking more closely into the model summary for the regression analysis, it was noted that even when accounting for the statistically significant predictor (hedonic attractions) into account, it only played a minor part for determining repurchase intentions for Malaysian consumers. This indicates that there is a largely overlooked area of determinants that were not taken into account within the current paper's framework, which may pose a much more significant role within the context of UI/UX design. Nonetheless, the findings were able to showcase the role of hedonic attractions within the scope of the proposed model – therein lies some potential towards hedonic attractions playing a larger role within the scope of UI/UX design.

With reference to the latest consumer reports there has been a significant uptake in online consumerism, especially with respect to OFDS in Malaysia – however, the sustainability of this artificial growth via the pandemic market, remains to be seen and therefore, areas of research such as repurchase intentions for OFDS as shown by the findings from this current study, there is still much to be explored, to properly understand the complexity and nuances of consumer behaviour that can be considered as 'determinants' of repurchase intention

for OFDS. Even with the proposed framework of this current study, the matter of ambiguity for OFDS repurchase intentions remains prominent – even with an inverse predictive relationship between hedonic attraction and repurchase intention, some might argue that it was not good enough of an indicator to be considered a 'determinant'. The implication here is that there are unknown factors that are at play when determining repurchase intention of Malaysian consumers in this regard, which should be noted in future studies.

Based on market research reports such as that released by Erh (2021), it is well known that Malaysian is one of the highest tech-adoption and tech-acceptance markets within the ASEAN region. This in turn, could go on to explain why the UCD elements as proposed within this current study's framework may not play as much of a pivotal role – there is a strong familiarity and to some extent, a sense of normality and exposure within the consumer market. Moreover, there is also the case that there was already a healthy growth of OFDS market penetration in Malaysia (Pitchay et al., 2022), which has contributed to this sense of familiarity and proficiency amongst consumers of OFDS. Both familiarity and user experience could have played a crucial role when taking UCD elements into account – as consumers become more familiar with the already present UCD elements, they can then be considered to be 'market norms', which are 'expected' from OFDS services.

While authors such as Dreyer et al. (2019) may have propositioned the importance of UCD, alongside the those like Cha and Lee (2021) on the supposed relationship between UCD and that of repurchase intention, it is important to note that potential determinants for repurchase intentions can be much more complex and nuanced, including but not exclusive to just UCD elements and/or attractions (or even traits and values). In this sense, those like Castro-Lopez, Vazquez-Casielles and Puente (2019) stated that it is just as important to understand how attraction-types, may determine usability and preferences, leading to repurchase intentions. Others like Shahab et al. (2021) took into account some consideration towards how user/consumers think, believe, and behave – which can also be traced to repurchase intention. The dynamics of repurchase intention for the OFDS industry in Malaysia may not necessarily reflect some of these papers from abroad, but the proposed concept of determinants remain pertinent – as found in this current study, which showcased the role of hedonic attractions, but not necessarily that of UCD elements, or traits and values.

Given the limited studies locally on repurchase intentions with respect to matters such as UI/UX, or UCD elements, or attraction-types, or even traits and values, the issue of OFDS and its market response remains to be a wide research gap. The pandemic has taught us that the OFDS market is one that is not only resilient, but has great potential for growth – and yet, the future of the industry, from the perspective of consumer behaviour remains vague to say the least. Subjects such as UI/UX and its impact on repurchase intentions remaining limited, and with support from findings such as that of this current study, this issue remains to be the case, and will benefit from further, in-depth inquiry. With the case of hedonic attractions, it may very well be that for Malaysian consumers, this is much more important within the scope of design, rather than or on top of UCD elements, which should not be overlooked when designing UI/UX.

Conclusion

The OFDS market in Malaysia has become a long-established proponent within the local consumer culture, and thus, have been subject to updates and evolutions on their design over time. With that said, a sense of familiarity and user experience has also been established within the market here in Malaysia, which provides a healthy market environment for examining how UI/UX design can be better adapted to the market at hand. On that note, given the history of OFDS products and services, and therefore, the UI/UX designs that have been utilized over the years, the findings from this current study indicates that hedonic attractions play a crucial role in determining repurchase intentions of Malaysian consumers. With that said, there is much more potential that can be relegated to establishing hedonic experiences with regards to UI/UX design for the OFDS market here in Malaysia.

In just the last few years, the online food delivery industry has seen tremendous growth, both globally and here in Malaysia (Erh, 2021). The recent pandemic has also provided a significant market growth and adoption of online food deliveries – this was particularly evident in Malaysia, with a market adoption increase by 45.9% in the first pandemic year alone (Tan, Lim & Yeo, 2021). However, the momentum with which the online food delivery services have grown, its market adoption, penetration and continued utility, remains to be of great concern – more so with the concept of UI/UX design and how it can be improved for the purpose of repurchase intentions. Any and all parties that have a stake within the OFDS market are more or less concerned about the long-term sustainability of OFDS within Malaysia, particularly, with its long-term sustainability.

As an exclusively digitalised platform, the OFDS industry is highly dependent on the continued consumer/user experience that caters to the needs and demands of the target audience. Most importantly, from the perspective of the consumers of OFDS industry, the factors that may influence repurchase intentions amongst Malaysian consumers for OFDS must not be overlooked

when designing UI/UX – including but not limited to the role of hedonic attractions for example, on top of the usual UCD elements.

As the market continues to digitalise, the importance of understanding how repurchase intentions can be developed online has also become a crucial point of research (Mofoken, 2022; Berni et al., 2023; Huarng & Yu, 2019). As consumers become more aware of, and have become exposed to tech-based products and services like OFDS, the input of UI/UX in determining, influencing and generally, affecting repurchase intention, warrants further examination. For the case of Malaysia, the role of UCD elements may have very well become a 'market norm' that Malaysian consumers have become 'used to' and therefore, could be underappreciated.

Without ensuring that these OFDS apps are developed and designed to suit, appeal, and service the real-world needs and demands of the target consumers in Malaysia, there remains a major risk towards the OFDS industry. With more users/consumers, and a wider market penetration in just the last few years, there is also, more nuanced and exacting consumer demands and needs that needs to be fulfilled. Examining the factors that would lead to repurchase intention within the OFDS industry at large is imperative, and acknowledging the role of market nuances such as hedonic experiences playing a role within the scope of UI/UX design, on top of UCD elements is just as important.

By taking into account the role of hedonic attractions and user experiences, alongside that of the already established UCD elements in UI/UX design, there remains to be some optimism in maintaining or even advancing market sustainability of OFDS products and services here in Malaysia. There is a good opportunity for establishing determinants of repurchase intentions via appropriate UI/UX design that takes into account hedonic user experiences, in order to meet the current market needs of Malaysians. There are several caveats of the Malaysian consumer market that must not be overlooked such that a) many Malaysians have used or have been exposed to OFDS, especially because of the market pivoting towards a digital economy during the pandemic, and therefore, have been exposed to the established UCD elements in design and considers these UI/UX designs to be the norm, b) many of them have become repeat customers, through their experience as consumers over the years, and therefore would have a more nuanced perspective and insight towards how future UI/UX designs will be appreciated by the current market, c) and thus, they are also more adapt and able to provide key insights that would be of use in research, such as the role of hedonic attractions, and most of all, d) the urgency with which the OFDS market in Malaysia needs to be addressed, by taking current study's findings that examined the OFDS consumer behaviour via UCD and hedonic attraction, while also expanding on the philosophy of UI/UX design in relation to these insights.

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