



ROLE OF BIG FIVE PERSONALITY TRAITS IN ACCEPTANCE OF OTT PLATFORMS

Tripti Kumari 1*, Navjit Singh 1

1 University School of Business, Chandigarh University, Mohali, India

* Corresponding author: email: tripti_kumari9@outlook.com

Declaration and statement

Funding: Not applicable

Ethical Approval: Not applicable

Conflict of interest: The authors do not have any conflict of interest.

Data availability statement: Data is available and will be provided at the editor's request.

Author Contributions: The authors have contributed to writing, designing, compiling, and editing the final manuscript.

Abstract

Over-the-top (OTT) platforms deliver on-demand entertainment over the Internet. The current research combines OTT with the TAM and the Big Five Personality Traits (BFPT). PU and PEOU impact user happiness and behavioural intention (BI), which is influenced by content quality, cost, convenience, and subjective standards. The hypothesized data from 500 participants were analyzed using structural equation modelling (SEM) in a structured survey. The measurement model's good construct validity and internal consistency were validated using confirmatory factor analysis (CFA). The TAM paradigm is supported by the SEM findings, which show that subjective norms, content quality, affordability, and convenience have a considerable impact on PU and PEOU. The results on BFPT were not consistent. The study concludes that the TAM framework effectively explains user acceptance of Over-the-Top (OTT) platforms, where PU and Ease of Use (EOU) are significantly influenced by subjective norms, content quality, affordability, and convenience, although the impact of Behavioural Intention to Perform (BFPT) remains inconsistent.

Keywords: OTT platforms, Technology Acceptance Model, personality traits, user satisfaction, structural equation modelling.

1. Introduction:

Over-the-top (OTT) platforms offer streaming services directly over the Internet, disrupting the conventional media industry, including traditional broadcast and cable television. (Brown, 2024). Users may access on-demand Movies, series, and live broadcasts on a variety of personal or home-based devices, including smart TVs, tablets, and smartphones, through these platforms. Therefore, the popularity of such platforms has increased, and the number of users is growing, as evidenced by the success of platforms like Disney+, Amazon Prime Video, and Netflix worldwide. (Song, 2021). In comparison to traditional media channels, OTT platforms offer ease of use (EOU), a cost-effective option for users, and a personalised viewing

experience, making them an integral part of the current digital ecosystem. (Yamini, 2022). The use of digitalization has increased user engagement and reliability, with advanced features including unique digital content, customizable package options tailored to user requirements, and content recommendation algorithms. (Drivas et al., 2021). For example, during the emergence and subsequent worldwide lockdowns due to COVID-19, the use of digitalization and OTT platforms has been boosted by personalized content recommendations tailored to user demands (Sharma and Lulandala, 2023). Industry analysts estimated that OTT generated \$121 billion in 2022 and predicted that OTT will generate \$210 billion by 2026, driven by consistent customer engagement and satisfaction. (Baptista, 2024).

Other platform, including Video-sharing platforms like YouTube, Daily Motion, and Vimeo, provide user-generated or mixed content to engage customers, whereas specific content tailored to users' demands relies heavily on ad-based revenue in the premium category (Ha, 2019). Other than that, social media platforms like Facebook, Instagram, and TikTok provide a limited or short duration of user-generated content for worldwide interaction by using features like live streaming and reels to resemble OTT content delivery (Nguyen and Veer, 2024). Similar live streaming platforms, such as Twitch and YouTube Live, emphasise sharing real-time content and engaging with a live audience, particularly for gaming and online events, including educational, entertainment, and political events (Brewer et al., 2023). Additionally, online TV streaming services, such as Hulu Live and Sling TV, have reduced the use of traditional cable TV by offering live broadcasts and a vast array of channels (Sanson and Steirer, 2019). In contrast, live or saved music streaming platforms like Spotify and Apple Music focus on delivering audio content, but are also based on subscription-driven revenue models (Hracs and Webster, 2021).

Additionally, E-learning platforms, including Coursera, EdX, and MasterClass, are based on video-based educational content, which also shares similarities with OTT (O'Sullivan et al., 2020). Similarly, cloud gaming platforms like Xbox Game Pass and Stadia provide interactive content based on user demand, and their subscription models and infrastructure are similar to those of OTT services (Chung, 2022). Each of these platforms serves a unique purpose. In this context, OTT platforms aim to deliver professionally produced, short and long video content, as well as personalised viewing experiences.

The Technology Acceptance Model (TAM), developed by Fred Davis in 1989, is a theoretical framework, aims to determine how users will accept and use a technology (Davis, 1989). The TAM identifies that two key factors influence user adoption: Perceived Usefulness (PU), defined as the degree to which a user believes that a system will enhance their performance, and Perceived Ease of Use (PEOU), which refers to a user's belief that the technology is effortless or easy to use. In the current world, the TAM is widely accepted in newly developed technologies, such as mobile apps for general and personalized use, e-learning platforms, e-commerce or business systems, and live streaming services (Marikyan and Papagiannidis, 2024). In the context of OTT platforms like Netflix, Amazon Prime, or Disney+, TAM is highly relevant for adopting OTT services. This is highly influenced by users' perception of its usefulness (e.g., convenience, high quality, on-demand entertainment) and EOU (e.g., intuitive interfaces, seamless streaming experiences) (Wu et al., 2024). Both TAM and OTT platforms aim to adopt the experience and factors that drive technology adoption for users, such as accessibility, personalisation, and performance. TAM provides a valuable framework for

analysing the impact of OTT services on users compared to traditional media, offering insights into improving platform design, user engagement, and customer satisfaction. Venkatesh and Davis et al. have theoretically extended the TAM model to TAM2 to investigate the adoption of digital media in organizational settings (Venkatesh, 2000, Venkatesh and Davis, 2000). Previous studies have shown that users' views of usefulness are highly influenced by both work relevance and output quality (Camilleri and Camilleri, 2022). These findings demonstrate that while the fundamental concepts of TAM continue to affect the user, new aspects associated with the user environment may provide a deeper understanding of adoption.

Understanding the variables that impact the acceptability and reliability of users has become crucial in the rapid growth of OTT services. A strong framework for studying the factors that lead to the adoption of OTT platforms is the TAM (Basha and Reddy, 2024). In this study, the TAM was employed to investigate the factors influencing the adoption of OTT services in the modern Internet age.

Users of advanced technology are always seeking a flexible and personalised platform that offers on-demand content. In this context, the use of OTT has increased due to the widespread adoption of internet use, the development of personalized smart media devices, and content tailored to users' demands (Kamei, 2019). OTT offers a personalised and tailored platform with enhanced viewing experiences (Khanna et al., 2024). At the same time, the use of OTT services has increased in India and the United States, as evidenced by the rise of Disney+, Hulu, and Netflix, by more than 30% between 2020 and 2022, primarily due to the COVID-19 pandemic (Biswas, 2024). The use of OTT in India has increased significantly due to low-cost data rates, the widespread use of smartphones and related devices, and the availability of vast content (Sharma and Lulandala, 2023). It is estimated that the OTT industry had a valuation of \$1.5 billion in 2021 and is projected to increase to \$4.5 billion by 2025, making it one of the fastest-growing marketplaces globally (Sharma and Lulandala, 2023, Kumar, 2022).

The TAM technology has the potential to emerge as a viable model for analyzing user behaviour on OTT platforms based on PU, PEOU, and associated Big Five personality traits (BFPT), including Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience, about social influence and satisfaction. Additionally, personality characteristics such as extraversion, openness, and conscientiousness are relevant in TAM-based models for OTT adoption, as shown in Table 1. However, minimal there has been research specifically investigating personality dimensions.

In contrast, there are gaps, including economically and culturally diverse settings, in which OTT platforms have not been highlighted in the literature to date. (Chen et al., 2023). The current research employs the TAM approach to investigate the factors that drive the adoption of OTT platforms. Specifically, it aims to understand users' perceptions of the performance, satisfaction, convenience, and EOU's impact on their business intelligence (BI) to utilise OTT services.

The current study aims to investigate the significant dimensions of the TAM, including PU, PEOU, user attitudes, satisfaction, Behavioural Intention (BI), and consistent (prolonged) engagement with OTT platforms. Furthermore, this research aims to provide an understanding of the patterns of user behaviour and preferences prevalent across various personality subgroups, as identified by Devis et al. (Davis et al., 1989). The hypothesis of the current study is as follows.

- H1: Content quality positively influences the perceived usefulness of OTT platforms.
H2: Convenience positively influences the PEOU of OTT platforms.
H3: Cost positively influences the perceived usefulness of OTT platforms.
H4: Subjective norms positively influence the perceived usefulness of OTT platforms.
H5: Perceived usefulness positively influences user satisfaction with OTT platforms.
H6: PEOU has a positive influence on user satisfaction with OTT platforms.
H7: User satisfaction positively influences behavioural intention to use OTT platforms.
H8: The BFPT, including Extraversion, Agreeableness, Neuroticism, Openness to Experience, and Conscientiousness, moderates the relationship between:
- a. PU and user satisfaction.
 - b. PEOU and user satisfaction.
 - c. User satisfaction and BI.

Methodology

A total of n=500 questionnaires were distributed to both the users of OTT and TAM. The questionnaire was designed to determine the most suitable method for this research project on the adoption of OTT platforms, incorporating the TAM and the Business-Facility-Process-Technology (BFPT) framework. This strategy assures representation of the demographic population, i.e., age, gender, and economic level, to collect various user behaviours. These demographic factors are used to distribute the population into multiple strata; such methods of sampling are known as stratified random sampling. This method enhances the generalisability of the analysis and reduces the likelihood of sample bias by ensuring proportionate representation. The process provides a reliable approach in line with structural equation modelling (SEM) analysis, which requires larger sample sizes to ensure dependability. The current study evaluated the constructs in the TAM and the Business-to-Frontline Personnel Theory (BFPT) to generate reliable data. The 'Strongly Disagree' to 'Strongly Agree' was the starting/ending point for the seven-point Likert scale was used to assess all characteristics. Furthermore, confirmatory factor analysis (CFA) was employed to determine the validity and reliability of the measurement model. This method was followed for the study of the hypothesis.

Based on the modified three-item measures, we were able to assess both the PEOU and the PU of the product. These objects were designed to represent user interactions with OTT platforms, emphasising the clarity and simplicity of usage, as well as the practical benefits of connecting with such services. To verify that these scales fulfilled the reliability requirement (Cronbach's α greater than 0.80), the internal consistency of these scales was evaluated.

Another factor, the social influence, was quantified with a three-item scale, modified to fit the context of OTT platform adoption. To ensure that it correctly represents the degree to which consumers are affected by social circles and cultural norms in deciding to use an OTT service. The scale demonstrated a high level of internal reliability, were measured with Cronbach's $\alpha \geq 0.85$.

The users' satisfaction and BI were assessed using existing measures, which consisted of three items for the former and two items for the latter. The overall happiness of users with OTT platforms was captured by these elements, as was their desire to continue using the platform or to suggest it to others. The results of reliability tests indicated that both measures had a high

degree of internal consistency, as shown by Cronbach's α values ≥ 0.85 for satisfaction and α values exceeding 0.80 for BI.

The BFPT, like agreeableness, neuroticism, extraversion, conscientiousness, and openness to experience, was evaluated using a modified version of the International Personality Item Pool (IPIP). The current research confirmed that the psychometric properties were robust and customised to account for their effects on technology adoption. This was accomplished by using a restricted set of questions that were validated through confirmatory factor analysis (CFA). The internal consistency of each trait scale was found to be acceptable to strong, with Cronbach's α values (ranging from 0.70 to 0.78). Therefore, the results showed that the trait scales are reliable in capturing individual variations.

The measurement model that was finalised underwent validation using CFA, which demonstrated satisfactory construct validity and fit indices meeting the set requirements ($CFI > 0.90$, $RMSEA < 0.08$). In order to ensure that the constructs were correctly assessed to evaluate OTT platform adoption. Therefore, these measures were selected and modified based on their relevance and experience of past uses in research on the adoption of technology and user behaviour.

Results

OTT Factors and TAM

The concept of OTT factors is based on content, convenience, pricing, and subjective norms, operating as independent variables that affect the components of the TAM. These contents pertain to the diversity, pertinence, and quality delivered to users on demand in OTT platforms. Previous studies have shown that (independent variable) content diversity and exclusivity substantially affect PU, as the users' sustainability is based on distinctive and tailored material. (Ma, 2023). A high-quality and diversified collection of content is essential to improve the PU of a platform, as per the requirements and users' preferences and expectations. (Chen et al., 2020). The accessibility of favoured material significantly affects users' perception of the platform's worth, consequently influencing the users' pleasure and maintaining sustainability. Another factor, convenience, pertains to the accessibility of the platform via various devices, intuitive interfaces, or on-demand availability. Convenience significantly impacts user impressions. Studies have shown that accessibility and cross-device compatibility improve the perceived EOU, as consumers prefer systems that provide seamless, on-demand watching experiences (Kathuria et al., 2021). Convenience is essential in today's digital environment, as people anticipate adaptable and user-centric services (Motamedi and Tkalčič, 2023). Convenience is closely related to PEOU, as people are more likely to adopt platforms that are easy to use and accessible on multiple devices (Bhattacharjee et al., 2024). Improving usability enhances convenience, which favourably influences user pleasure and eventually cultivates loyalty and recurring engagement with the platform.

Cost is a crucial consideration, especially in price-sensitive businesses. Users often assess the value of an OTT service by comparing its cost with the advantages it offers, thereby affecting perceived value (PU). Previous studies emphasize the cost, which significantly influences the sustainability and adoption due to user demand and subscription value. Therefore, it cost-effectively influences user satisfaction based on the quality of service. Additionally, cost is a significant factor in determining OTT adoption in low- and middle-income regions. Therefore,

it can be assumed that affordability and perceived value may enhance the appeal of low-cost utilities.

Subjective norms play a crucial role in determining the societal pressures that significantly influence users' decisions to use OTT platforms. For example, user influences are based on the suggestions and/or actions of peers, acquaintances, social norms, and cultural trends. When the acceptability of users increases among competent peers, it may be regarded as a worthy and valuable platform that ultimately enhances the chances of adoption. Subjective norms are a key societal factor in understanding the acceptance and adoption of OTT platforms. Previous studies have stressed that user attraction and adoption choice purely rely on recommendations received from friends and family (FnF), especially in collectivist countries. (Landmann, 2018).

Conceptual Framework for the Adoption of OTT Platforms

Possible relationships between the TAM and the Big Five Personality Traits are depicted in Figure 1, which shows how both interact to explain the use of over-the-top (OTT) platforms among users. It highlights personality dimensions as the most influential determinants of perceived usefulness, ease of use and Behavioural Intention towards OTT adoption.

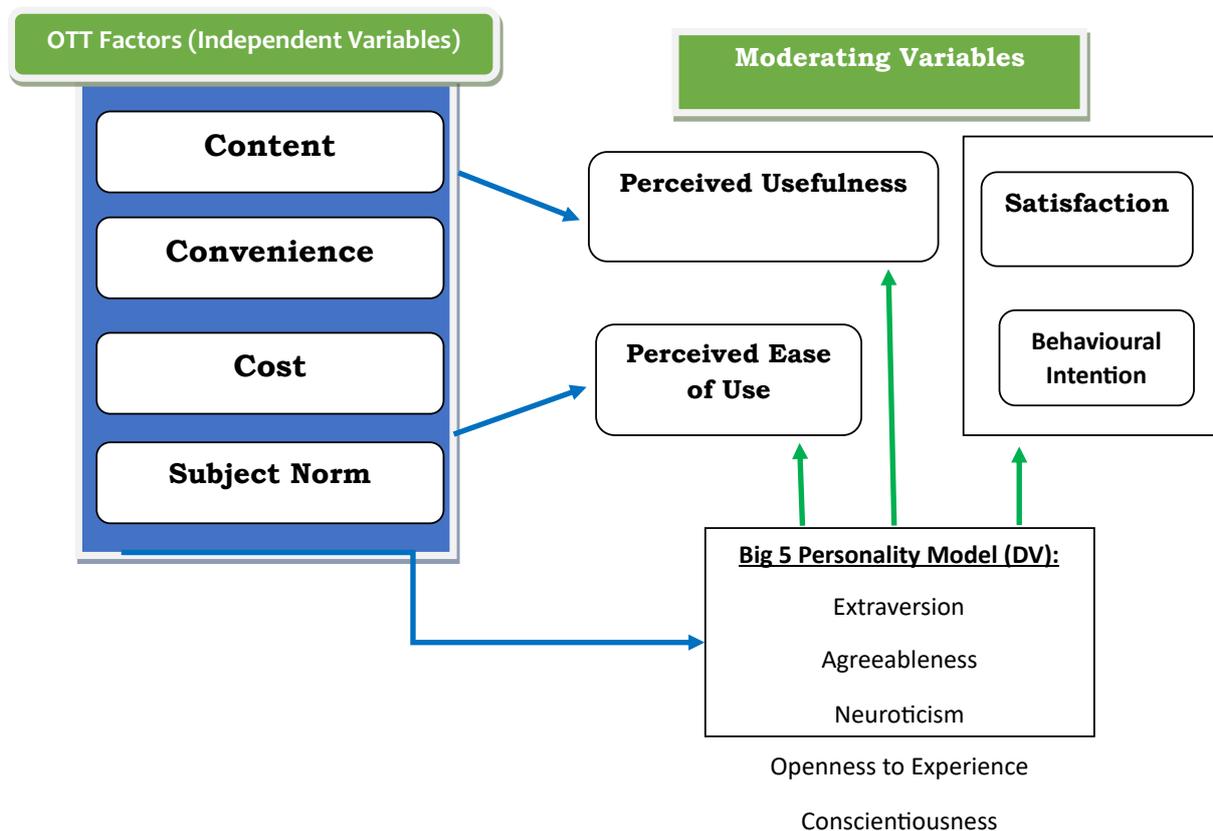


Figure 1: "Conceptual Framework for the Adoption of OTT Platforms: Integrating Technology Acceptance Model and Big 5 Personality Traits"

The TAM and the BFPT are included in the conceptual framework to investigate the variables that influence the adoption of OTT platforms.

PU, PEOU and User Satisfaction

The TAM categories of PU and PEOU serve as mediating variables that relate OTT elements to user satisfaction and intentions to engage in different behaviours. The platform's usage will enhance its users' entertainment experience. On the other hand, PEOU refers to the degree to

which users evaluate how easily they can navigate and utilise the platform (Davis et al., 1989). There is considerable evidence that demonstrates the significance of these components in the technology adoption process. For example, previous studies have shown that the perceived usability (PU) of a digital technology, as well as its simplicity of use, are essential factors in determining whether it will be accepted by users of various digital technologies (Purnomo et al., 2022).

The theory proposes that perceived usefulness and simplicity of use are two factors that have a direct impact on the level of satisfaction users experience. The possibility that users would continue to use or suggest the platform is referred to as BI, and satisfaction acts as a prelude to what is known as BI. In consumer behaviour models, studies assert that the level of user happiness has a significant influence on the BI shown by consumers. (Xu et al., 2017). It is more likely that satisfied users will develop a positive attitude towards the platform, which will increase their likelihood of continued use. Previous studies have shown that digital streaming (favourable) services have more influence in attracting attention to PU, which is a powerful predictor of customer satisfaction. The attitude of users towards a platform is favourable if they perceive efficient supply according to their needs, such as entertainment. Similarly, it has been demonstrated that the perceived EOU has a significant impact on users' satisfaction and intention. The simplicity of navigation and the short learning curve are two key factors that contribute to increased satisfaction among OTT consumers. Platforms utilize a lower amount of irritation experienced by users to increase the likelihood that users will continue to use the service. These results underscore the importance of making user interfaces clear and increasing the number of OTT users. (Kim et al., 2024).

User Satisfaction and Behavioural Intention

One of the most critical outcome variables is user satisfaction between PU, EOU, and BI. It has been previously shown that consumers who are satisfied with the service are more likely to demonstrate loyalty and promote it. Another study found that contentment is a significant predictor of continued use in the OTT sector. (Gupta and Singharia, 2021). Positive word-of-mouth and higher user retention are two factors essential for the expansion of OTT platforms, ultimately leading to satisfaction. (Soren and Chakraborty, 2023).

BI metric measures the chance that users will continue to utilize or suggest a similar platform. BI is a good predictor of actual use behaviour. OTT platforms need to cultivate a strong BI among their users to establish a sustainable user base.

Moderating Role of Big Five Personality Traits (BFPT)

The BFPT, like Extraversion, Agreeableness, Neuroticism, Openness to Experience, and Conscientiousness, is incorporated into the framework as a moderating factor, as shown in Figure 1. That affects the degree to which TAM categories are interrelated. Every personality feature has the potential to influence consumers' perceptions and engagement with OTT services. A study showed that users who are strong in extraversion may put a larger value on promoting social interactions. Therefore, these factors have strengthened the impact on the influence of PU's subjective norms. The user's satisfaction and BI prioritised by EOU, as well as cost-effectiveness, ultimately influence the happiness and platform subscription. Previous studies have shown that extraversion has a direct influence on social behaviour due to the opportunity for social interaction on the platform. Extraverts are highly attracted to platforms that offer opportunities for social interaction.

Another factor, personality characteristics, is an essential contributor to user preferences and enhances or reduces the impact of PU, pleasure, satisfaction, and BI. In this context, a previous study reported that the significance of personality in determining user behaviour characteristics, for example, openness to experience, may encourage users to use advanced technologies concerning EOU, PU, and adoption of the OTT platform. Also, agreeableness has a positive role in users' happiness. A reliable source like OTT tends to be more cooperative in use. Whereas elevated neuroticism may be considered more sensitive to negative experiences in this regard, it may therefore have an impact on the PEOU, PU, and overall satisfaction of the users.

The user's tendency to investigate agreeableness in accepting new advanced technologies is influenced by openness to users' experiences and readiness. At the same time, openness is directly associated with experiencing the advanced and innovative OTT platforms. In contrast, conscientious users prefer to assess the cost-effectiveness and convenience of using the platform before adopting it.

Both the descriptive statistics and the correlation matrix are shown in Table 2. Table 2 provides valuable insights into the correlations between the significant factors investigated in the research on the adoption of OTT platforms. The mean values for the variables suggest that user assessments are typically positive. Variables such as content quality (Mean = 5.40, SD = 1.02), convenience (Mean = 5.65, SD = 0.94), and PU (Mean = 5.80, SD = 0.88) are examples of factors that represent positive user impressions. Users who find OTT platforms simple to use also see them as helpful, which is an essential component in technological adoption models. The correlations demonstrate strong positive relationships between perceived usefulness and PEOU ($r = 0.59, p < 0.05$), underscoring the fact that users who find OTT platforms easy to use also view them as beneficial. The correlation between user happiness and perceived usefulness ($r = 0.56, p < 0.05$) and PEOU ($r = 0.55, p < 0.05$) is quite substantial, highlighting the significance of these factors in determining the amount of satisfaction experienced by users. There is a significant correlation between BI and continued use of OTT platforms and user happiness ($r = 0.61, p < 0.05$). This suggests that users who are content with these platforms are more inclined to interact with them for a more extended period. Among the BFPT, the trait of conscientiousness exhibits a positive correlation with user satisfaction ($r = 0.28, p < 0.05$) and BI ($r = 0.32, p < 0.05$). This suggests that conscientious individuals may have a greater tendency to appreciate and continue to utilize structured and valuable services. On the other hand, neuroticism is shown to have negative relationships with perceived usefulness ($r = -0.11, p < 0.05$) and BI ($r = -0.15, p < 0.05$). This suggests that greater degrees of emotional instability may have a detrimental impact on positive perceptions and intentions. Taking everything into consideration, these correlations shed light on the complex interactions that exist between perceived platform attributes, user happiness, behavioural intents, and individual personality traits. As a result, they provide a more nuanced view of the behaviours associated with OTT adoption.

With regard to the factors that are of relevance in this investigation, the descriptive statistics and correlations are shown in Table 2. For the purpose of putting the hypotheses to the test, we used structural equation modelling (SEM) using Amos 24.0TM. When it comes to mediation testing, structural equation modelling (SEM) was selected because of its capacity to estimate measurement and structural models concurrently, handle many dependent variables, and offer

reliable error term estimates. These capabilities are advantageous in comparison to standard OLS regression.

At first, CFA was used to validate the measurement model. CFAs were carried out for both endogenous and exogenous constructs by the two-step methodology. The CFA method guarantees an accurate assessment without the presence of confounding variables. Dependent variables, the coefficient of determination (CFA), gave good fit statistics like $\chi^2(30) = 65.453$, $p < 0.001$, CFI = 0.975, IFI = 0.976, GFI = 0.955, and RMSEA = 0.059. The dependability of the factor was shown by the fact that the standardized loadings for every item were considerable.

CFA gives the results on acceptable fit indices for independent variables, for example, 35 items across seven latent constructs. The resulting fit indices were as follows: $\chi^2(680) = 1328.753$, $p < 0.001$, CFI = 0.892, IFI = 0.894, GFI = 0.835, and RMSEA = 0.051. The results showed that every single item loaded considerably into its respective structures. In addition, a comprehensive CFA was carried out based on both endogenous and exogenous factors. This allowed for the co-variation of error terms, connected. The model exhibited a satisfactory fit, like $\chi^2(1055) = 1985.475$, $p < 0.001$, CFI = 0.901, IFI = 0.902, GFI = 0.823, and RMSEA = 0.048. These results suggest that the model is adequate for hypothesis testing.

Further, the current study evaluated the hypothesized correlations using SEM. A decent fit was exhibited by the model: $\chi^2(1123) = 2132.87$, CFI = 0.895, IFI = 0.896, GFI = 0.815, and RMSEA = 0.050, with a confidence range of (0.046; 0.054) for the 90% confidence level. These fit indices were consistent with the standards that are generally recognized in SEM.

A significant number of the major hypotheses were validated by the study. Support was given to hypotheses 1 through 4, which were derived from the TAM framework. These hypotheses confirmed that perceived usefulness and ease of use are favourably influenced by factors such as content quality, convenience, cost, and subjective norms. Not only were the path coefficients for these associations statistically significant ($p < 0.05$), but they also highlighted the major significance that these interactions play in moulding user views and attitudes towards OTT platforms.

For the second group of hypotheses, the moderating effects of the BFPT were the primary research emphasis. A considerable positive impact on user satisfaction and actual usage was found to be associated with conscientiousness, as shown by the fact that hypothesis 5 was supported. It was not possible to get statistical evidence for Hypothesis 6, which predicted that openness to experience would have a positive impact on user happiness and BI. The link between the two variables was not significant. In this study, hypothesis H7, which hypothesized a negative association between neuroticism and user satisfaction and actual usage, was validated. Path coefficients showed that the effects of actual use were larger than those of happiness. Hypothesis H8 about extraversion received some support; the results of the experiment suggested that extraversion had a substantial link with user happiness, but the results of the experiment indicated that extraversion had a negative association with PEOU. There was no evidence to support hypothesis H8c, which proposed that there is a direct connection between extraversion and BI.

The fact that the BI did not operate as a mediator in the correlations between the Big Five personality characteristics and actual use is shown by the fact that the indirect routes in H8a, H8b, and H8c were not statistically significant. This indicates that whereas personality qualities

such as neuroticism and conscientiousness had a direct impact on perceived and actual usage, the effects of these traits were not substantially mediated by BI.

Through the use of post-hoc regression analysis, control factors such as age and gender were analyzed and appraised. The moderating effect of age on the connection between effort expectation and user satisfaction was found to be statistically significant ($p < 0.05$), even though the total change in R² was not substantial. Within the framework of the hypothesized model, gender did not play a significant role in moderating any of the correlations. The findings provided further evidence that SEM's results were reliable.

Detailed Summary of CFA Results

Conducted Factor Analysis on Dependent Variables: The constructs, including pleasure and behavioural aspects of user intention, were part of the dependent variables. This model's output includes the following fit indices: $\chi^2(30) = 65.453$, $p < 0.001$, CFI = 0.975, IFI = 0.976, GFI = 0.955, and RMSEA = 0.059. Further, the validity and reliability of the constructs were confirmed by the substantial loadings displayed by every item within the dependent variables. The findings showed that the dependent variable measurement scales were valid and reliable, with strong item loadings indicating construct validity.

Content Factor Analysis (CFA) for Independent Variables: The content quality, convenience, cost, subjective norms, and the Big Five personality characteristics were all part of the independent variables. A total of 35 items spanning seven latent categories were included in the CFA. The CFI was 0.892, the IFI was 0.894, the GFI was 0.835, and the RMSEA was 0.051. The analysis yielded $\chi^2(680) = 1328.753$, $p < 0.001$. Both the CFI and the IFI have shown a perfect score of 0.90.

The combined model's overall CFA: In order to integrate internal (dependent) and external (independent) variables into one measurement model, a total CFA was conducted. The results of the whole measurement framework and the correlations between the various components showed a CFI of 0.901, an IFI of 0.902, a GFI of 0.823, and an RMSEA of 0.048. The overall CFA showed a satisfactory fit: $\chi^2(1055) = 1985.475$, $p < 0.001$. With these fit indices falling within reasonable limits, we can say that our measurement model is good enough to test hypotheses. The model's construct validity was confirmed by the substantial loadings of all items, and the internal consistency was confirmed by Cronbach's α values for each scale that was higher than the required threshold of 0.70.

Validity and Reliability: The item's substantial loadings onto their respective factors were > 0.60 in the CFA. Further, to prove discriminant validity, AVE for each concept was higher than the squared correlations between them. Strong internal consistency and reliability were shown by Cronbach's α values, which range from 0.70 to 0.94 for all constructs.

Making Adjustments and Improving the Model: Theoretically, it was permissible to let the error terms of comparable items (such as perceived and actual usage) co-vary to enhance the model's fit. The model was refined using this method, which allowed for an acceptable amount of parsimony while still retaining theoretical significance. Although the core structure of the measurement model was left unchanged, modification indices were also used to find possible places for small alterations.

5. Discussion

Several important insights regarding the adoption of OTT platforms were uncovered by the primary SEM results of this research. First, the results confirmed the validity of the Technology

Acceptance Model's (TAM) assumptions H1–H4, which state that subjective norms, cost, convenience, and content quality all have a positive impact on how helpful and easy something is to use, as shown in Table 3. Users' perceptions towards OTT platforms are shaped by these associations, which were shown to be significant ($p < 0.05$).

According to the results, conscientiousness is one of the BFPTs that has a favourable impact on user happiness and actual usage. (Charoenkul and Chanchalor, 2021). This means that conscientious people are more likely to use OTT services regularly. Furthermore, H7 was confirmed, showing that neuroticism negatively affected both user satisfaction and actual usage, with the latter showing much higher negative impacts. (Oliveira et al., 2013). On the other hand, there was no statistical evidence for H6, which predicted that openness to experience would have a beneficial impact on user engagement. Several of the predictions made by H8—namely, that extraversion would have a direct correlation with BI—were not borne out. On the other hand, H8a showed that extraversion significantly impacted user pleasure, and H8 b indicated that extraversion had a negative correlation with PEOU, in contrast with (Bouwman et al., 2014) and similar to H8c did not (Bouwman et al., 2014).

In addition, the non-significant mediation routes in H8a, H8b, and H8c show that BI did not mediate the associations between the personality factors and actual use. This points to the fact that BIs did not regulate the relationship between personality factors like neuroticism and conscientiousness, which in turn affected perceived and actual usage. (Svensen et al., 2013). Age moderated the association between effort expectation and user satisfaction to a small extent, but neither gender nor the control factors had a statistical. Significant impact on the amount of variation that could be explained. (O. Pappas et al., 2014). Taken together, these results highlight the intricate relationship between OTT users' perspectives, character quirks, and technology adoption.

The combination of TAM with the BFPT, the current research sought to examine the elements impacting the uptake of OTT platforms. PU and usability are influenced by content quality, simplicity of use, cost, and subjective standards, according to the SEM findings (Lin, 2013). The results of the current study have a major impact on user happiness and BI, proving that TAM categories are useful for understanding OTT platforms.

These results are significant and recommended for future studies that OTT service providers use when they want to increase customer satisfaction and loyalty. The elevated engagement of users may be achieved by tailoring the marketing strategies and platform features to be suitable for various personality profiles. For example, it's possible to obtain good outcomes by catering to users with organized, precise material and offering the necessary tools that encourage consistency and dependability (Berchet and Habchi, 2005). Users who are more prone to neuroticism might have fewer bad experiences if their requirements are met via improved customer assistance and more user-friendly features.

Further, online video service providers may fulfil the needs of a varied user base by gaining a deeper understanding of the many elements that impact user happiness and BI (Chen et al., 2012). Therefore, the current study recommends creating platforms that are more engaging, inclusive, and tailored to individual required tastes. In a highly competitive industry, including TAM and OTT, the personalized strategy may help to understand and keep users sustained and attract other users as well.

Conclusion

The current study concluded that neuroticism has a negative association with both user happiness and actual use. Conscientiousness also showed the opposite effect. The extraversion Showed no effect on BI. Further, it did have a negative influence on PEOU and a favourable correlation with the pleasure or satisfaction of the users. Whereas personality qualities are equally important in this setting. As such, openness to experience did not show a significant influence on user engagement.

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Table 1 Illustrative recent studies on OTT incorporated directly into TAM or based models

Study (Author & Year)	Theoretical Framework	Primary Dependent Variables	Additional Constructs	Sample	Summary of Findings
(Tsai et al., 2023)	TAM + Entertainment & Convenience	Use intention	Entertainment, Content Diversity	254 OTT users in Taiwan	Entertainment and convenience were found to significantly impact perceived usefulness and ease of use.
(Rosli et al., 2022)	TAM + Sustainability	Technology adoption in higher education	Self-efficacy, Subjective Norms, Enjoyment	104 publications reviewed	Enjoyment and subjective norms were key factors in TAM applications during the pandemic, especially for sustainable education.

(Natarajan et al., 2024, Scherer et al., 2019)	TAM + Uses and Gratifications Theory	Behavioral intention to use	Hedonic & Utilitarian Gratifications	Mixed sample (varied)	Users sought both emotional and practical benefits from OTT platforms, reinforcing the hedonic-utilitarian appeal.
(Cebeci et al., 2019)	TAM + Personality Traits	OTT platform selection	Knowledge and self-efficacy	251 responses from Istanbul	self-efficacy is related to PEOU and knowledge is related to both PEOU and PU

(Camilleri and Falzon, 2021)	TAM + COVID-19 Impact, gratifications theory (UGT)	OTT usage and satisfaction	intention, Risk Perception	NA	users' perceptions, ritualized and instrumental motivations on their intentions to continue watching movies, series and broadcasts through online streaming technologies.
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Table 2: Descriptive Statistics and Correlations

SD: Standard Deviation

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	
1. Content Quality	5.40	1.02	1											
2. Convenience	5.65	0.94	0.45	1										
3. Cost	5.20	1.10	0.39	0.42	1									
4. Subjective Norm	4.90	1.15	0.31	0.29	0.34	1								
5. Perceived Usefulness	5.80	0.88	0.52	0.48	0.45	0.37	1							
6. PEOU	5.75	0.91	0.47	0.50	0.42	0.32	0.59	1						
7. User Satisfaction	5.70	0.95	0.40	0.41	0.38	0.36	0.56	0.55	1					
8. Behavioral Intention	5.85	0.97	0.35	0.38	0.31	0.29	0.53	0.49	0.61	1				
9. Extraversion	3.60	0.70	0.12	0.15	0.10	0.09	0.13	0.14	0.16	0.18	1			
10. Neuroticism	3.55	0.68	-0.09	-0.06	-0.04	-0.03	-0.11	-0.10	-0.12	-0.15	0.25	1		
11. Conscientiousness	3.75	0.75	0.20	0.22	0.19	0.15	0.24	0.23	0.28	0.32	0.30	-0.05	1	
12. Openness to Experience	3.82	0.72	0.17	0.18	0.15	0.12	0.20	0.21	0.22	0.25	0.26	0.02	0.34	1

Note: Correlations greater than 0.11 are significant at $p < 0.05$.

Table 3: Summary of Hypotheses, Findings, and Standardized Path Coefficients

Hypotheses	Findings	Standardized Path Coefficient
H1: Content quality positively influences perceived usefulness.	Supported	0.52
H2: Convenience positively influences PEOU.	Supported	0.50
H3: Cost positively influences perceived usefulness.	Supported	0.39
H4: Subjective norms positively influence perceived usefulness.	Supported	0.37
H5: Conscientiousness positively affects user satisfaction and actual use.	Supported	0.28 (user satisfaction), 0.32 (actual use)
H6: Openness to experience positively affects user satisfaction and behavioral intention.	Not supported	0.08 (user satisfaction), 0.10 (behavioral intention)
H7: Neuroticism negatively influences user satisfaction and actual use.	Supported	-0.21 (user satisfaction), -0.26 (actual use)
H8a: Extraversion influences user satisfaction.	Partially supported	0.14
H8b: Extraversion influences PEOU.	Not supported	-0.11
H8c: Extraversion influences behavioral intention.	Not supported	-0.08