

# A New Age of Music – User Satisfaction among Malaysian Music Streamers

Anisha Haveena Kaur, Sharmini Gopinathan

**Abstract:** A shift in the music-consumption landscape has caused on-demand music streaming to increase in popularity. That being said, the number of music streamers in Malaysia has also seen a rapid increase over the past few years. This paper aims to investigate the role of information systems quality and trustability on user satisfaction among Malaysian music streamers. Utilising the data attained from 130 respondents, the relationships in the model were examined using the Partial Least Square (PLS) approach. The results of this study revealed that information quality, system quality and trustability have significant positive effects on user satisfaction towards music streaming platforms. Service quality did not show a significant positive influence on user satisfaction. This study may be considered as one of the first to examine user satisfaction in the context of online music streaming.

**Keywords:** music streaming, on-demand, online, Joox, Spotify, Apple Music, user satisfaction, information systems success model, information systems quality, information quality, system quality, service quality, trustability

## I. INTRODUCTION

The music-listening landscape has changed over the last three decades. The existence of the Internet caused a shift in users purchasing cassettes and compact discs (CDs) to downloading MP3 files on file-sharing websites. Johansson and Werner (2017) noticed that commentators in the past would proclaim that the music industry will be threatened, if not “dead”, due to the abundance of illegal file sharing services online.

However, this gloomy scenario slowly changed in the years to come following a new pattern on how consumers listen to music. Users are more welcoming towards a refined and personalised method of attaining, managing and listening to music. At the current standpoint of advancement, users are now able to consume digital music in the form of Music as a Service (MaaS) (Dörr & Benlian, 2013), or better known as online music streaming and on-demand music streaming.

As mankind progresses towards digitisation, the music industry is slowly realising that online streaming services are able to stimulate music consumption and music sales due to its nature of being a product discovery tool (Aguar, 2017). It is indeed an astonishing feat when online music streaming made up 50% of the total revenue for recorded music in 2016 (The International Federation of the Phonographic Industry, 2017). The surge in popularity of online music streaming gives the impression that a digitised music market is the music industry’s current and only option for a sustainable business model (Giletti, 2012).

From a business perspective, users could make or break the product or services offered by an industry, including the music industry. As such, a significant indicator of success would be the satisfaction of users towards the industry. Identifying the valid determinants of user satisfaction in this fairly new music-consumption landscape is important to ensure the continuance of music streaming platforms. Ultimately, the success in music streaming platforms is a reflection of the accomplishment of the information systems. The measurement of success is vital to further understand the efficacy and value of information systems investment and management actions (DeLone & McLean, 2003).

A survey conducted by J.D. Power (2016) revealed that even though Apple Music had 17 million subscribers compared to Spotify with 40 million subscribers (with a 100 million-user total) and Pandora with 80 million listeners, Apple Music was more successful in terms of overall satisfaction score. Apple Music, launched in 2015 has made a significant impact, making it a new competitor in the music streaming pool. Overall satisfaction was measured based on factors such as reliability and performance, ease of use, service cost, content, communication and customer service.

Note that this is the first user satisfaction survey in terms of online music streaming and there are no known published journals focusing on user satisfaction for online music streaming. Previous academic studies in this area are minimal as online music streaming is a fairly new form of music-consumption. Studies then were mostly concerned on the use of streaming services as well as how it affects dimensions such as music sales, music piracy, the economy and human behaviour (Dörr & Benlian, 2013; Thomas, 2013; Cesareo & Pastore, 2014; Aguiar & Waldfogel, 2015; Borja, Dieringer & Daw, 2015; Borja & Dieringer, 2016; Wlömert & Papies, 2016; Sinclair & Tinson, 2017).

## II. LITERATURE REVIEW

The digitisation of music started way back in the early 1980s when compact discs (CD) were introduced. The consumers were able to store music in digital form in the CDs compared to the analogue form in tapes or cassettes. With the more compact format, consumers were also able to store more songs in CDs than in tapes or cassettes. In addition, the switch to CDs was a revolution because it took away all the audio noise that was associated with tapes or cassettes.

In 1982, record companies made an announcement with regard to a worldwide standard which ensured all CDs

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would play on all CD players. As a result, the first CD (Billy Joel's *52<sup>nd</sup> Street*) was released in Japan (Taintor, 2004). Fast forward a decade later, MP3s caused file downloading to be popular among the masses and it was deemed as the replacement to CDs (Knopper, 2018). Like the change from CDs to MP3s, on-demand music streaming represents yet another, and recent, paradigm shift in the way users consume music (Nancarrow, 2012). Currently, streaming accounts for almost two-thirds of the music industry's revenue, and its total revenue in 2017 grew steadily at 17% (Rosenblatt, 2018). Rosenblatt (2018) goes on to say that the 2017 growth figures attained from the Recording Industry Association of America (RIAA) implied that the music industry has now completed its transition to a new era (called the era of streaming).

The shift in music consumption methods reflects an information systems shift and development in the music industry. The increase in the number of users who patronise music streaming platforms have led to external or third parties conducting surveys to determine user level satisfaction (J.D. Power, 2016). This would eventually lead to a collection of data that could help streaming service providers to improve and enhance their respective platforms. According to DeLone and McLean (1992), user satisfaction is one of the most relevant factors which can be used to measure the success of information systems. User satisfaction has also been described as the extent to which users believe the system will satisfy their information needs (Ives, Olson, & Baroudi, 1983). Amin, Rezaei and Abolghasemi (2014) described user satisfaction as a user's overall positive experience or feelings towards the service provided.

That being said, DeLone and McLean (2003) have presented a widely accepted information systems success model which has been used in numerous literatures. This success model consists of three information systems qualities which have a significant impact on user satisfaction. The qualities include information quality, system quality and service quality. The information systems success model was also used in studies concerning knowledge management systems (Wu & Wang, 2006; Gopinathan & Raman, 2016), information systems in organisations (Sedara & Gable, 2006), e-government (Wang & Liao, 2008; Edrees & Mahmood, 2013) and many more.

Information quality is described as the quality of report (or output, in this context) which is produced and displayed by information systems (DeLone & McLean, 1992; Gorla, Somers, & Wong, 2010). The information quality dimensions considered in this research include completeness, accuracy, timeliness, relevance and ease of use. Wixom and Todd (2005) described completeness as the degree to which the system supplies all crucial information and accuracy as the perception that the information is correct. Kahn, Strong and Wang (2002) described timeliness as being the extent to which the information is up-to-date and completeness as the extent to which the information is not missing, has sufficient breadth and has adequate depth. These dimensions, including the ease of understanding were supported by DeLone and McLean (2003) in their updated information systems success model.

According to Gorla, Somers and Wong (2010), the quality of the information system processing (inclusive of data components and software) is known as system quality. Value creation through information systems is crucial, hence efficient delivery to the end users via attributes such as availability and the ease of use would ensure that the system quality is in place (Salmela, 1997). Other system quality attributes which are important for this research include adaptability, functionality and response time (DeLone & McLean, 2003; Sedara & Gable, 2004).

As for service quality, researchers such as Pitt, Watson and Kavan (1995) have commented that the measure of information systems effectiveness would usually focus on the product rather than the services of the information systems function. Thus, it is important to include service quality as part of the assessment to measure information systems effectiveness (Pitt, Watson, & Kavan, 1995; Wilkin & Hewitt, 1999). Researchers such as Kettinger and Lee (1995) and Watson, Pitt and Kavan (1998) have applied and tested SERVQUAL, a marketing measurement instrument made popular by Parasuram, Zeithaml and Berry (1991), in their information systems research. Meanwhile, DeLone and McLean (2003) acknowledged some of the sample SERVQUAL instruments used in past research such as reliability, assurance and empathy. A study on e-service quality conducted by Raman, Stephenaus, Alam and Kuppusamy (2008) revealed that the appearance and ability to customise the interface of a platform will enable the individual needs of the users to be fulfilled, often considered as two important dimensions in service quality.

An additional variable, trustability, was added to this research to enhance the findings. The concept of trust in information systems has indeed piqued the interest of researchers but presently, there are no definitive factors or dimensions of trust which researchers could work on (Vance, Elie-Dit-Cosaque, & Straub, 2008). From a marketing perspective, consumers who put their trust in a brand are more than willing to continue using the product or service. They are also willing to pay a premium price, remain loyal, purchase new releases and share information about their preferences to the brand (Chaudhuri & Holbrook, 2001; Busacca & Castaldo, 2003).

The dimensions of trust chosen for this research are payment security, availability of privacy policies, design quality and personal information security. Users would generally exert trust on an online service-providing platform if the payment system has extensive security measures such as authentication and confirmation (Hwang, Shiau, & Jan, 2007; Kousaridas, Parissis, & Apostolopoulos, 2008). Gao and Wu (2010) conducted a study on the components in trust and realised that organisations or companies which do not include privacy policies in their websites were less likely to be trusted by users. Furthermore, users would generally be more trusting towards a website if the privacy policy is made available and contained detailed explanations on what and how their data will be used by the organisation (Hann, Hui, Lee & Png, 2007; Tsai, Egelman & Cranor, 2011).

As for design quality, Eroglu, Machleit and Davis (2003) explained that the atmosphere of a site does play a role in increasing a user's positive perception towards the website. A quality site or platform atmosphere is generated by features such as colours, animations, interface, images and task-relevant cues (Eroglu, Machleit, & Davis, 2003; Park, Stoel, & Lennon, 2008). As for the personal information

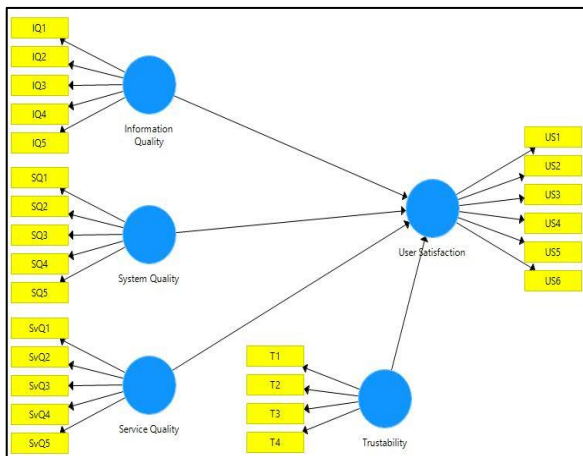


Fig. 1 Research Model.

Although there have been many theoretical frameworks examining the use of technology and user satisfaction, no known published journals have developed investigations on user satisfaction in the context of online music streaming. Thus, based on previous literatures, a research model (Figure 1) was developed to test the significance of information quality, system quality, service quality and trustability on user satisfaction towards music streaming platforms. The following hypotheses were derived based on the aforementioned literature as well:

**H1:** There is a significant positive relationship between information quality and user satisfaction among Malaysian music streamers.

**H2:** There is a significant positive relationship between system quality and user satisfaction among Malaysian music streamers.

**H3:** There is a significant positive relationship between service quality and user satisfaction among Malaysian music streamers.

**H4:** There is a significant positive relationship between trustability and user satisfaction among Malaysian music streamers.

### III. METHODOLOGY

The respondents for this study constitute of Malaysians who are actively using online music streaming platforms such as Spotify, Joox and Apple Music. A non-probability purposive sampling method was applied in this research. According to Ilker, Sulaiman and Rukayya (2016), this technique does not require underlying theories or even a strict number of participants. Researchers using purposive sampling generally set out to find people who are willing to provide information pertaining to the topic in hand (Bernard, 2006). A questionnaire was developed and deployed to 150 individuals in order to attain data for the research. Data collection was conducted via two methods, namely through individual administration and e-mail. The distribution and

security of those who use online platforms, a dimension of information security relates to user behaviour which ultimately leads to satisfaction in use. Users who take great emphasis on information security will ultimately associate it with their satisfaction (Stanton, Reaburn, & Humphries, 2004).

collection of questionnaires were conducted for a time period of one month.

A total of 142 individuals responded to the survey. Out of the 142 responses, 12 were rejected due to straight lining and incompleteness. Thus, a final total of 130 completed responses were analysed for the research. A five-point Likert scaled affixed by measurements ranging from 1 (strongly disagree) to 5 (strongly agree) was used in the questionnaire. The questionnaire was designed based on previous studies by Bailey and Pearson (1983), Baroudi and Orlikowski (1988), Parasuraman, Zeithaml and Berry (1991), DeLone and McLean (1992), DeLone and McLean (2003), Stanton, Reaburn, & Humphries (2004), Au, Ngai and Cheng (2008), Petter, DeLone, and McLean (2008), Raman, Stephenaus, Alam and Kuppusamy (2008) and Maadi, Maadi and Javidnia (2016).

In order to analyse the data attained, the Partial Least Squares (PLS) approach was employed in this research using the SmartPLS3.0 software. PLS is one of the main approaches under Structural Equation Modelling (SEM), a modelling technique which gives researchers the ability to assess a model's overall fit (Chin, 1998; Gefen, Straub & Boudreau 2000). What's more, SEM is used to examine the relationship between independent latent variables and dependent latent variable (Gefen, Straub, & Boudreau, 2000). SEM houses a family of multivariate techniques and one of its most well-known approaches is PLS-SEM. Researchers such as Hair et al. (2017) consider PLS as a second generation multivariate technique that is capable of evaluating the measurement model (constituting of the relationship between constructs and their corresponding indicators) and the structural model, all while trying to minimise error variance (Chin, 1998; Gil-Garcia, 2008, Marcoulides, 2013).

### IV. DATA ANALYSIS AND RESULTS

The research model for this study was evaluated using a two-step process, namely the measurement model evaluation and the structural model evaluation (Franco & Cataluna, 2010; Henseler et al., 2010; Urbach & Ahlemann, 2010). As explained by Urbach and Ahlemann (2010), model validation is conducted to determine whether the measurement and structural models satisfy the quality criteria needed for empirical work.

#### Measurement Model Evaluation

The measurement model (outer model) is typically derived to specify the relationship between the indicators and its respective latent variable (Henseler, Ringle, & Sinkovics, 2009).





The reliability and validity of the model must be examined by assessing the indicator reliability, internal consistency reliability, convergent validity and discriminant validity (Detmar, Boudreau, & David, 2004; Hair, Ringle, & Sarstedt, 2011).

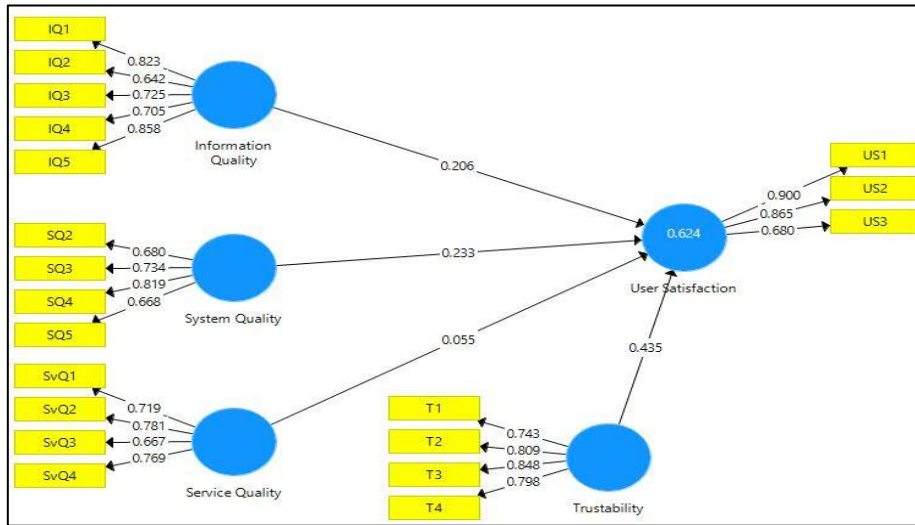


Fig. 2 Measurement Model

Indicator reliability is used by researchers to evaluate the extent to which a single variable or a set of variables is consistent with what it proposes to measure (Urbach & Ahlemann, 2010). When using PLS, the indicator reliability is assessed by referring to the factor loadings. The general rule of thumb is to accept items with factor loadings higher than 0.70 at 0.05 significance level (Chin, 1998; Hair, Ringle&Sarstedt, 2011). Regardless, lower threshold factor loadings (0.50 to 0.69) are still deemed to be satisfactory (Urbach&Ahlemann, 2010; Vinzi, Trinchera& Amato, 2010). Table 1 depicts the factor loadings after deleting SQ1, SvQ5, US4, US5 and US6 from the model. These factor loadings were deleted to increase the Average Variance Extracted (AVE) ratings (Hair, Black, Babin, & Anderson, 2014). The factor loadings for this study range from 0.642 to 0.900, and this demonstrates that there is indicator reliability. The final measurement model after deletion is depicted in Figure 2.

As for the internal consistency reliability, composite reliability (CR) was used as a measure because it takes into

account the different outer loadings of each indicator. The internal consistency reliability shall only be deemed to be satisfactory when the value of CR is at least 0.7(Hair, Hult, Ringle, & Sarstedt, 2017). Table 1 exhibits the CR for each construct in the model and the values range from 0.817 to 0.877. Thus, it can be said that all the values extracted are within the satisfactory range to conclude good internal consistency reliability.

Convergent validity is usually assessed using AVE (Fornell & Larcker, 1981). Constructs with AVE values of 0.50 or higher signify a satisfactory degree of convergent validity. Coincidentally, this means that the latent variable in a model is able to explain more than half of its respective indicators on average (Gotz, Liehr-Gobbers, & Krafft, 2009). Other criteria which come hand in hand with AVE when assessing convergent validity are factor loadings and CR(Hair, Ringle, & Sarstedt, 2011). Table 1 depicts the AVE values for the model which range from 0.530 to 0.673. Given that the AVE, factor loadings and CR are within the respective thresholds, there is sufficient convergent validity.

Table. 1 Factor Loadings, Average Variance Extracted and Composite Reliability

Constructs	Item	Loadings	AVE	CR
Information Quality	IQ1	0.823	0.570	0.868
	IQ2	0.642		
	IQ3	0.725		
	IQ4	0.705		
	IQ5	0.858		
Service Quality	SvQ1	0.719	0.541	0.824
	SvQ2	0.781		
	SvQ3	0.667		
	SvQ4	0.769		
System Quality	SQ2	0.680	0.530	0.817
	SQ3	0.734		
	SQ4	0.819		

	SQ5	0.668		
Trustability	T1	0.743	0.641	0.877
	T2	0.809		
	T3	0.848		
	T4	0.798		
User Satisfaction	US1	0.900	0.673	0.859
	US2	0.865		
	US3	0.680		

Note: SvQ5, SQ1, US4, US5 and US6 were deleted due to low loadings.

Discriminant validity is described as the extent to which the measure is distinctive or unique and not a mere reflection of other variables (Peter & Churchill, 1986). As opposed to convergent validity, discriminant validity is observed to ensure that the items within a construct do not measure something else unintentionally (Urbach & Ahlemann, 2010). Fornell and Larcker (1981) explained that

items must show stronger loadings on their own constructs compared to other constructs within the model. Table 2 depicts the matrix derived in order to examine the discriminant validity of the research model. Each construct satisfies the requirement by Fornell and Larcker, hence there is sufficient discriminant validity.

Table. 2 Discriminant Validity Matrix.

Constructs	1	2	3	4	5
1. Information Quality	<b>0.755</b>				
2. Service Quality	0.616	<b>0.735</b>			
3. System Quality	0.629	0.680	<b>0.728</b>		
4. Trustability	0.541	0.611	0.579	<b>0.800</b>	
5. User Satisfaction	0.622	0.606	0.652	0.715	<b>0.821</b>

Structural Model Evaluation

The structural model allows researchers to systematically evaluate whether the hypotheses are supported by the data attained (Henseler, Ringle, & Sinkovics, 2009; Urbach & Ahlemann, 2010). A structural model may only be assessed when the measurement model is deemed to be reliable and valid. The structural model is assessed using the coefficient of determination ( $R^2$ ) and path coefficient.

Before assessing the structural model, it is worth noting that PLS-SEM does not assume that there is a normal distribution of the data analysed (Hair, Ringle, & Sarstedt, 2011). Therefore, significance tests which are applied in regression analysis could not be used to test the significance of path coefficients. Consequently, non-parametric bootstrapping is applied to test the path coefficient for significance (Davison & Hinkley, 2000). Using this procedure, a large number of sub-samples are retrieved from the original samples alongside alternative replacements (samples drawn randomly from the study’s sample population and are later returned right before another observation is drawn). Hair et al. (2011) recommends researchers to use a bootstrap sample of 5,000. By using the bootstrapping procedure, the t-statistics will then be computed. This will be crucial in determining which hypothesis will be supported or unsupported.

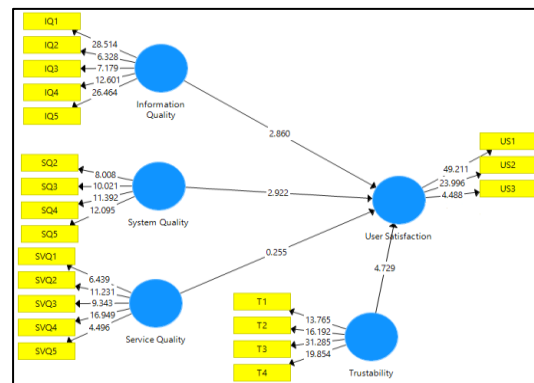


Fig. 3 Structural Model

Figure 3 illustrates the structural model of the research. Prior to assessing the path coefficient, the coefficient of determination ( $R^2$ ) was computed to evaluate the structural model’s predictive power.  $R^2$  is used to measure the percentage of total variance in the dependent variable explained by all the independent variables in the model (Urbach & Ahlemann, 2010). Since the goal of a prediction-oriented PLS-SEM approach is to explain or describe the variance of endogenous latent variables, the level of  $R^2$  ought to be high (Hair, Ringle, & Sarstedt, 2011).  $R^2$  values of 0.67, 0.33 and 0.19 in path models are considered to be substantial, moderate and weak respectively (Chin, 1998). That being said, the  $R^2$  value for this research is 0.624. This indicates that 62.4% if the total variance in the dependent variable is explained by the independent variables.

Table 3 presents the path coefficient ( $\beta$ ), t-statistics and p-values for all the paths available in the model. Based on studies conducted by Wetzels et al. (2009) and



Hair et al. (2011), the path coefficient value or beta ( $\beta$ ) value has to be at least 0.1 in order to account for an impact in the research model. In addition, t-values were also checked to confirm the hypotheses. For a t-value to be significant, it has to be equal to or greater than 1.645 at a 0.05 alpha level

(Hair, Hult, Ringle, & Sarstedt, 2017). The results from this path assessment were used to determine whether the hypotheses proposed in this research should be supported or unsupported.

**Table. 3 Beta, T-Statistic, P-Value and Hypotheses Decision**

	Relationship	Beta	T-Statistic	P-Value	Decision
H1	Information Quality -> User Satisfaction	0.206	2.103	0.036	Supported
H2	System Quality -> User Satisfaction	0.233	2.270	0.023	Supported
H3	Service Quality -> User Satisfaction	0.055	0.611	0.541	Not Supported
H4	Trustability -> User Satisfaction	0.435	5.433	0.000	Supported

From the analysis, it is confirmed that information quality has a significant positive influence on user satisfaction ( $\beta = 0.206$ ,  $t = 2.103$ ,  $p < 0.05$ ). Therefore, H<sub>1</sub> is supported. System quality has a significant positive influence on user satisfaction as well ( $\beta = 0.233$ ,  $t = 2.270$ ,  $p < 0.05$ ). As a result, H<sub>2</sub> is supported. Unfortunately, service quality does not have a significant positive influence on user satisfaction ( $\beta = 0.055$ ,  $t = 0.611$ ,  $p < 0.05$ ). Thus, H<sub>3</sub> is not supported. Finally, the analysis confirmed that trustability

has a significant positive influence on user satisfaction ( $\beta = 0.266$ ,  $t = 4.519$ ,  $p < 0.05$ ). Therefore, H<sub>4</sub> is supported.

**V. DISCUSSION**

Three out of the four hypotheses were deemed to be significant (H<sub>1</sub>, H<sub>2</sub>, H<sub>4</sub>) while H<sub>3</sub> was deemed to be not significant. Table 4 depicts each hypothesis alongside its rationale.

**Table. 4 Hypothesis and Rationale**

Hypothesis	Rationale
H <sub>1</sub> : There is a significant positive relationship between information quality and user satisfaction among Malaysian music streamers. <b>(Supported)</b>	<p>Malaysian music streamers prefer information in the platforms to be easily understandable. Information in this context include name of playlists, navigation pane labels and description of the content. With an ease of understanding on how the platforms work, they would ultimately have hassle-free browsing sessions on the platforms.</p> <p>Timeliness is also an important factor under information quality. In order for users to attain up-to-date information, streaming service providers would usually provide regular software or application updates. The updates are generally provided to users once a week.</p> <p>Users also tend to look out for accuracy when using the platforms. When prompted, they would expect the system to provide them with accurate information pertaining to their profile and account. Accurate information in this context is the retrieval of playlist or content which the user has saved under his or her profile.</p> <p>Additionally, completeness contributes to the success of information quality as well. Users expect the system to provide them with complete information pertaining to their account such as personal details and payment details (if the user is a subscriber).</p> <p>In terms of relevancy, users of these platforms tend to be satisfied when the information is curated based on their browsing and listening habits.</p>
H <sub>2</sub> : There is a significant positive relationship between system quality and user satisfaction among Malaysian music streamers. <b>(Supported)</b>	<p>Out of the five items which made up the construct of system quality, only four were deemed to be significant. Availability was not significant to users as all three music streaming platforms had weaknesses in terms of the content made available to users.</p> <p>Ease of use was one of the items which contributed to the significance. System quality is deemed to be in place when users could seamlessly navigate between content and playlists.</p> <p>Additionally, response time was also considered to be important as users preferred their loading and requesting time (for content) to be minimal. A system which has a long loading time would not be preferred by users.</p> <p>Furthermore, the performance of the system has to be up to the expectations of the users. The streaming service providers have to ensure that the system is created in such a way that there would be minimal (or no) lags and buffering times. Occasionally, there tend to be bugs in the system and this has previously caused users to be upset as the content would take minutes to load instead of just a few seconds.</p> <p>Adaptability in creating playlists is also an important factor. A good system is usually designed in such a way that people could easily adapt to it within the first few minutes of usage. Users in this context are able to navigate their way in the music streaming platform and save the preferred content in their playlists with just a click of a button.</p>



<p>H<sub>3</sub>: There is a significant positive relationship between service quality and user satisfaction among Malaysian music streamers. <b>(Not Supported)</b></p>	<p>Service quality does not play a role in user satisfaction. The appearance of the platform and empathy shown by the platforms are deemed to be unimportant to the users. The assurance of receiving content is also not an issue as both subscribers and non-subscribers receive the same content regardless of their subscription status. Reliability in terms of receiving the same content as promised in advertisements (by the music streaming platforms) might not be an issue as well because users know what to expect from the platforms, given the success each platform has established worldwide.</p>
<p>H<sub>4</sub>: There is a significant positive relationship between trustability and user satisfaction among Malaysian music streamers. <b>(Supported)</b></p>	<p>The safety of personal information is highly regarded by users. Music streaming service providers should ensure and affirm that none of the information stored would be distributed to third parties. Many multinational companies have done this behind the backs of their users in the past. A situation like this would breach the trust of users. Payment security is also a factor of trust which is not taken lightly by subscribers. However, given the reputation of all three music streaming platforms, users strongly believe that the system uses a secure payment method. Moreover, the availability and presence of privacy policies tend to give Malaysian music streamers assurance in using the system. Platforms that make their privacy policy known and readily available to the general public are able to attain their trust easily, even though not many tend to read the content of the privacy policies. Additionally, the design quality of music streaming platforms gives users the confidence to use the system. Professionally designed applications and software will also give the service providers an upper hand in attaining a higher number of satisfied users.</p>

### VII. LIMITATIONS AND FUTURE RESEARCH

The study found that there is a lack of current literature pertaining to user satisfaction in the context of on-demand music streaming. Studies on this topic have yet to emerge, thus a research model had to be developed using past literatures and was then modified for relevance. The research was also conducted within a very limited time period with minimal respondents. The findings were generalised based on 130 respondents and do not reflect the entire population of Malaysians who use music streaming platforms. Furthermore, the study was only limited to three online music streaming platforms, namely Joox, Spotify and Apple Music. These are the main platforms available in Malaysia as of the time of this research. This research may not apply to countries which have platforms such as Tidal, Amazon Music, Deezer, Napster, Pandora and many more.

The inclusion of trustability in the information systems success model is believed to be a major contribution from this paper. Hence, the model developed in this study may be used and replicated in various other studies. Since not much has been done on this subject matter, models containing different constructs which affect user satisfaction could be developed by researchers. Future research on how music streaming platforms could improve from their current standpoint (based on users' perspectives and opinions) could also be developed. Users may be satisfied now but with the ever-so-constant change in technology, more features will need to be improved or included in order to maintain user satisfaction.

### VIII. CONCLUSION

The increase in popularity and usage of music streaming platforms in Malaysia has brought about the motivation to conduct this research. The need to conduct this research was certain as there were no past studies on user satisfaction towards music streaming platforms. The information systems success model by DeLone and McLean (2003) was adopted to examine the role of information systems quality on user satisfaction. The variables examined in this research include information quality, system quality and service quality. An additional relevant variable, trustability, was added to the model. Results of this research verified the significant positive effects that information quality, system quality and trustability have on user satisfaction. Trustability was the most significant predictor of user satisfaction even though it has not been adopted or used by previous researchers in their studies concerning the information systems success model.

The music-listening landscape will continue to evolve but right now, the main focus is affixed on online music streaming platforms. Researchers are urged to continue studying the components which could affect user satisfaction towards these platforms. There might be a plethora of other factors which may be tested or incorporated in the information systems success model. The findings could ultimately lead to the development of features within the music streaming platforms which could enhance user satisfaction and experience.

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