

Trust As Mediating Effect on The Factors of Technology Adoption in Hotels

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Abstract

The purpose of this study is to explore the effect of perceived usefulness, perceived ease of use, and perceived credibility as independent variables, on the mobile application adoption in the Malaysian hotels as dependent variable. To further explore the relationships in this study, the research introduced Trust as mediating variable in the middle between perceived usefulness, perceived ease of use, and perceived credibility on the mobile application adoption. In addition, the researcher reviewed the recent published literature alongside five underpinning theories about technology adoption and behavioral studies, and that was in order to define the research gap that this studying is intending to fill. Moreover, the researcher has followed the quantitative research methodology, by selecting 196 hotels as research sample out of 388 hotels in Selangor and Kuala Lumpur. The researcher adopted a semi structured questionnaire from the published literature. In this study, the researcher has used IBM SPSS as mean of data analysis, in addition to IBM AMOS for testing the goodness of the model fit. The research has found strong and significant relationship between perceived usefulness, perceived credibility and Trust with mobile application adoption, while the findings revealed that perceived ease of use observed to be insignificant with mobile application adoption. Furthermore, the researcher found that Trust played a significant mediating role between perceived usefulness, perceived ease of use, and perceived credibility on the mobile application adoption. Finally, the researcher discussed the findings of this study in light with the published literature and presented the implications of this study practically and theoretically, alongside the future research recommendation.

Keywords:

perceived usefulness, perceived ease of use, perceived credibility, mobile application adoption, Malaysia, Hotels

1 Introduction

The technology acceptance and adoption model has been studied previously in Malaysia, but not sufficiently, especially in the past decades. TAM model was mainly implemented in the customer-focused studies, but rarely on an organization point of view (Bakar & Bidin, 2014; Jan et al., 2019; Wong et al., 2014). Furthermore, Hotels in Malaysia have a lot of technological aspects that deserve to be studied (e.g. online booking, payment systems, security systems, guests' data, hotel mobile applications...etc.) but were not clearly discussed holistically in an empirical-academic study (Rodz et al., 2016; Ujang et al., 2016).

As mediating effect, Trustworthy services and systems is among the factors that affect the adoption of any technology. There were few studies focusing on the mediating role of trust between the elements of Technology model acceptance and adoption. A holistic empirical study could explore expanding the model and including trust among the factors that predict the relationship between TAM elements (namely Perceived usefulness (PU), Perceived ease of use (PEOU), and Perceived credibility (PC)) (Hernandez-Ortega, 2011; Jungsun & Bo, 2014; Mcknight et al., 2011; Miller & Evgenieva, 2015; Montague et al., 2013; Shaw, 2014).

Therefore, the main purpose of this study is to explore the effect of perceived usefulness, perceived ease of use, and perceived credibility as independent variables, on the mobile application adoption in the Malaysian hotels as dependent variable. To further explore the relationships in this study, the research introduced trust as mediating variable in the middle between perceived usefulness, perceived ease of use, and perceived credibility on the mobile application adoption.

2 Literature Review

The hospitality industry is expanding with an ever-evolving technology adoption process and novel possibilities of adoption of new technologies are constantly being explored. In this section, the researcher will review the recent published literature on the Technology acceptance and adoption's literature, in the field of Hotels and tourism industry.

The paper of Jungsun & Bo (2014) aimed to extend the technology acceptance model (TAM) to explore the factors influencing a hotel customer's intention to use a fingerprint system instead of a traditional keycard system and the moderating factors (i.e. gender and age) on the relationships between the proposed factors and the customer's intention to use fingerprint technology (Jungsun & Bo, 2014). This study found seven factors (i.e. perceived usefulness, perceived ease of use, subjective norm, perceived convenience, perceived data security, perceived property security and personal concerns) which significantly influence a hotel customer's intention to use fingerprint technology. Gender and age played important moderating roles in the relationships between some of these factors and the intention to use.

The study of Kaushik, Agrawal, & Rahman (2015) extended the utility of technology acceptance model (TAM) through analysis of additional antecedent beliefs in order to predict tourists' attitude towards self-service technologies (SSTs) in the offline hospitality context. The paper further examines the impact of trust and subjective norm on consumers' (1) attitude and (2) behavioral intention towards adopting self-service hotel technologies (SSHTs). Results indicate that trust has a more significant impact on tourists' attitude, though both trust and subjective norm considerably affect tourists' behavioral intention towards adopting new technologies (Kaushik et al., 2015).

Another paper set out by Kim (2016) with aim to examine whether a customer's perceptions of hotel tablet apps serve as determinants of customers' behavioral intention in terms of the app's ease of use, usefulness, credibility and subjective norm. It also explored age and gender as moderators of the relationships between these determinants and customers' behavioral intention as well as customers' likelihood of using specific app functions across age and gender. The results showed that three of the four proposed determinants positively influenced customers' behavioral intention toward hotel tablet apps. Neither gender nor age played significant moderating roles in the relationships between the four determinants and the behavioral intention (J. Kim, 2016).

Furthermore, the purpose of the study published by Miyoung & Hailin (2014) is to propose a refined technology acceptance model (TAM) to examine the relationship between factors that affect travelers' use of hotel self-service kiosks. Results suggested that all external variables (i.e. perceived usefulness, perceived ease of use, compatibility, and perceived risks) have significant direct effects on travelers' attitude toward using hotel self-service kiosks. However, perceived usefulness and perceived ease of use did not have significant effects on travelers' satisfaction. Specifically, compatibility was the most important factor that influences travelers' attitude toward using hotel self-service kiosks, followed by perceived ease of use. Further, perceived risks have a significant influence on travelers' satisfaction, followed by compatibility. (Miyoung & Hailin, 2014).

2.1 Technology acceptance and adoption in Hotels and tourism industry

Hotels have begun to be using ICT apps in Malaysia as a significant strategic asset. From time to time, ICT has been quickly updated or upgraded and several hotels spend a lot of cash to insure they have the new technologies. (Kamaruddin & Ahmad, 2012). In this context, many studies have considered the Malaysian case in technology adoption, not only in the hospitality industry, but also in all of sectors.

The paper of Rodz et al. (2016) suggested a computational structure by adding three determinants in the original TAM as exogenous factors, which are compatibility, information quality, and e-service quality. Via perceived ease of use and perceived usefulness, these variables are processed. The aim is to explore the factors that affects the usage of mobile hotel booking by hotel customers. This paper found that the

mentioned variables have a significant influence over mobile hotel booking usage mediated by perceived ease of use and perceived usefulness (Rodz et al., 2016).

Moreover, Ujang et al. (2016) aimed to address the variables affecting the intention of consumers of using SSTs in the tourism and hospitality sector. In this study, it was observed that perceived ease of use, perceived reliability, perceived usefulness, and perceived interactivity were some of the variables hugely explored by past study (Ujang et al. , 2016), referring to previous research on TAM and SSTs.(Ujang et al., 2016).

Kamaruddin & Ahmad (2012) examined the use levels of ICT apps being used hotels in Malaysia's Room Division and Food and Beverage Section. Using random stratified sampling, 350 respondents from 28 five-star hotels in Kuala Lumpur were addressed by self-administered questionnaires. The room division department seems to have the greatest level of ICT apps (Kamaruddin & Ahmad, 2012).

Therefore, one could hypothesize the following:

H1 Perceived usefulness (PU) significantly affects Mobile Applications Adoption (MAA)

H2 Perceived ease of use (PEOU) insignificantly affects Mobile Applications Adoption (MAA)

H3 Perceived credibility (PC) significantly affects Mobile Applications Adoption (MAA)

H4 Trust (TU) significantly affects Mobile Applications Adoption (MAA)

2.2 The mediating role of Trust in technology acceptance model

Trust in technology has been of interest to researchers and practitioners for a while. Trust in technology is defined as a belief that a specific technology has the attributes necessary to perform as expected in a given situation in which negative consequences are possible (Mcknight et al., 2011). Most of the research on trust in technology focuses on the relationship between trust and technology adoption, trust in automation, and trust in technology-delivered services such as e-government, e-banking, and e-commerce (Miller & Evgenieva, 2015).

Trust in technology is important; it is linked to crucial outcomes such as appropriate/inappropriate technology use, acceptance/rejection of technology, and technology over/under-reliance. Additionally, trust in an e-vendor is linked to consumer intentions to complete a transaction with that e-vendor (Montague et al., 2013).

Speaking of the mediating role of Trust in the relationship between technology adoption model elements, many researches have studied the effect of trust. First, the aim of the paper carried out by Hernandez-Ortega (2011) is to shed light on the role of trust in the acceptance of a technology once the firm has already used it (post-use trust). The researcher examined the drivers which encourage the firm to trust in a

technology, and studied the consequences of trust in terms of firm performance and intentions to continue to use the technology. The drivers involve (1) perceptions experienced by the firm during the employment of the technology, (2) the influence of the firm's trading partners and (3) the importance of the IT manager's attitude towards the technology. The findings clarify the relationship between trust and technology acceptance and have important implications about trust-building structures that could improve the application of technologies that are in the early stages of implementation (Hernandez-Ortega, 2011).

Another paper authored by Srivastava, Singh, & Srivastava (2013) studied the need to integrate trust and Technology acceptance model (TAM) to understand the behavior intention of the customer to use mobile banking. This paper focused on trust related antecedents and technology related constructs and its influence on customer decision. It covers disposition to trust, institution-based trust, cognitive-base trust, security and privacy as five potential antecedents of trust. The study concluded that two technology attributes which are perceived ease of use and perceived usefulness to be beneficial for the usage of mobile banking. It suggested an integrated model that incorporates the five trust antecedents and two technology-related antecedents on its influence on customers' decision to use mobile banking (Srivastava et al., 2013).

Furthermore, Belanche, Casaló & Flavián (2012) analyzed the adoption of e-government services and proposes that trust and personal values contribute to better understand such adoption. Specifically, this study proposes an integration of trust into the TAM, due to the online context characteristics. Results reveal the mediating role of trust into the TAM framework which is confirmed by a rival model's analysis. Besides, citizens' personal values moderate the influence of some antecedents of the intention to use e-government services, which suggests some interesting implications for public administration strategic marketing (Belanche et al., 2012).

Moreover, the research model in the study published by Shaw (2014) is based on the Technology Acceptance Model, which posits that consumers will accept the mobile wallet when they perceive usefulness. The model in this studied is extended with trust constructs and empirically tested with a sample of Canadian consumers. The results, which show that perceived usefulness is a key influencing factor and that informal learning is mediated by trust, are of value to researchers and practitioners (Shaw, 2014).

In addition, paper authored by Egea & González (2011) explains physicians' acceptance, in terms of usage intentions, of a central component of health information technology. For this purpose, the original version of the Technology Acceptance Model (TAM), which included perceived usefulness, perceived ease of use, attitude towards usage, and usage intentions, was extended by the researcher with trust and risk-related factors such as physicians' perceptions of institutional trust, perceived risk, and information integrity. The results stress the special importance of attitudinal factors (attitude towards usage and perceived institutional trust) and cognitive instrumental processes (mainly, usefulness perceptions) in determining physicians' intention to use

the systems. Perceptions of institutional trust exerted strong direct effects on physicians' perceived usefulness, perceived ease of use, and attitude towards the use of the systems. In addition, trust fully mediated the influences of perceived risk and information integrity perceptions on physicians' acceptance of the systems (Egea & González, 2011).

On the other hand, a paper published by Sumedha (2015), with purpose of this paper to understand the acceptance of mobile-money (m-money) among target populations, i.e. below-poverty-line citizens in India, using the technology acceptance model (TAM). The m-money service is a major initiative that can enable the provision of low-cost and speedy money transfer through mobile phones, especially in developing countries such as India. The findings imply that the trust and the core constructs of TAM such as perceived usefulness, trust and attitude towards usage contribute in influencing the intention to accept m-money (Sumedha, 2015).

Therefore, one could hypothesize the following (The research framework is illustrated in Figure 1):

H4a Trust (TU) mediates the relationship between Perceived usefulness (PU) and Mobile Applications Adoption (MAA)

H4b Trust (TU) mediates the relationship between Perceived ease of use (PEOU) and Mobile Applications Adoption (MAA)

H4c Trust (TU) mediates the relationship between Perceived credibility (PC) and Mobile Applications Adoption (MAA)

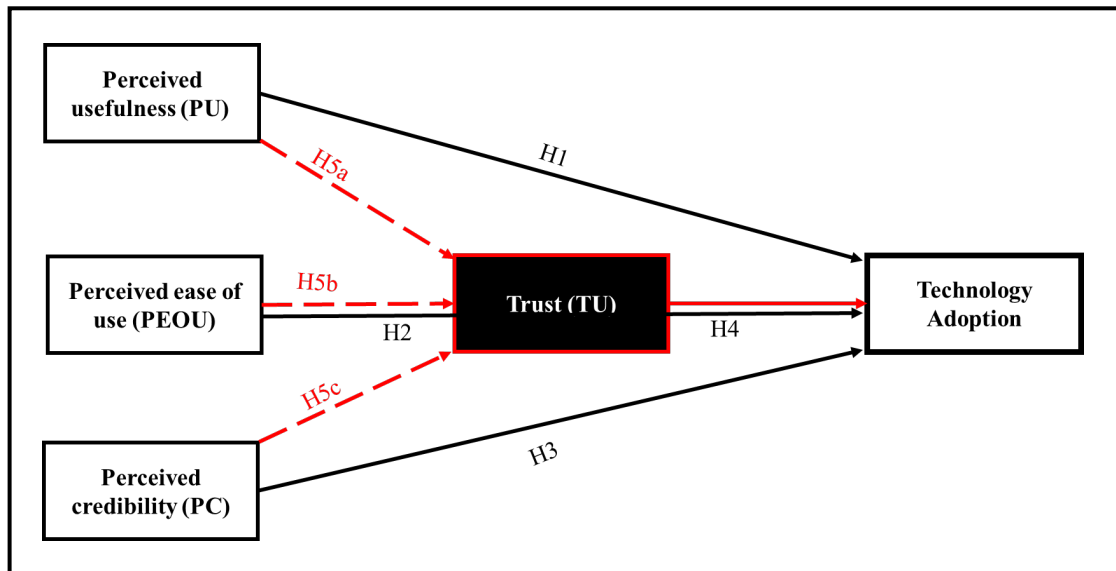


Figure 1: Research Framework

3 Methodology

In this study, the research will follow the quantitative research methods. Quantitative research produces objective data that can be clearly communicated through statistics and numbers. The researcher will use the mean of survey questionnaire. Questionnaires are popular research methods because they offer a fast, efficient and inexpensive means of gathering large amounts of information from sizeable sample volumes.

Primary data was collected from 254 employees working for five- and four-stars hotels in Malaysia. The researcher contacted the HR of hotels through emails, personal visits and telephone and acquired permissions to obtain data collection. Therefore, simple random sampling was utilized and 254 questionnaires were distributed to the employees on the basis of their willingness to participate in the study. Further, they were informed that results of the survey would be available to them upon request.

The development of instruments was carefully executed in order to reflect the nature of this study. As such, the questionnaire was designed to include 35 items and the variables were measured using the five-point Likert scale, with five standing for 'Strongly Agree' and one standing for 'Strongly Disagree'. Due to the fact that the respondents were Arabic speakers, it was vital for the questionnaire to be precisely translated from English to Arabic. Therefore, a back translation was performed which is a procedure extensively applied to test the precision of the translation in a cross-cultural survey (Brislin, 1970). Furthermore, the validated instruments shown in Table 1 are adopted from related previous studies to measure the variables of this study.

Table 1: Research Instrument Development

| Variable | Items | Reference |
|-----------------------------------|-------|------------------------|
| Perceived usefulness (PU) | 5 | (Ashoori et al., 2015) |
| Perceived ease of use (PEOU) | 5 | (Isaac et al., 2016) |
| Perceived credibility (PC) | 5 | (Li et al., 2011) |
| Trust (TU) | 5 | (Yan et al., 2011) |
| Mobile application adoption (MAA) | 5 | (Uğur & Turan, 2019) |

4 Findings

4.1 Respondent Profile

The current study has assessed the proposed model in two steps consisting of the assessment of the measurement model (outer model) and the assessment of the structural model (inner model). However, prior to these two steps, a brief explanation is given regarding the respondents' profiles. In the demographic information section, respondents in the Saudi Electricity Company were categorized by their Gender, Age group, Employment Level, as displayed in Table 2.

Table 2: Respondent Profile

| | | Frequency | Percent |
|-------------|--------------------|-----------|---------|
| Gender | Male | 157 | 61.8 |
| | Female | 97 | 38.2 |
| Department | Room service | 11 | 4.3 |
| | Marketing | 76 | 29.9 |
| | Booking | 58 | 22.8 |
| | Front Desk | 62 | 24.4 |
| | IT | 30 | 11.8 |
| | Other | 17 | 6.7 |
| Staff level | Registrar | 133 | 52.4 |
| | Assistant | 39 | 15.4 |
| | Head of Department | 51 | 20.1 |
| | Middle Management | 20 | 7.9 |
| | Top Management | 11 | 4.3 |
| experience | 1-3 Years | 107 | 42.1 |
| | 4-5 Years | 51 | 20.1 |
| | 5-10 Years | 73 | 28.7 |
| | 11 Years and above | 23 | 9.1 |
| Stars | 3 Stars | 34 | 13.4 |
| | 4 Stars | 105 | 41.3 |
| | 5 Stars | 115 | 45.3 |

4.2 Reliability of the scales

As mentioned and addressed in the previous segment, the outcomes of factor analysis prove the validity of the construction of all five variables. For this study, each scale reliability score is then measured and rechecked, utilizing the reliability test. The next stage, then, is to measure each factor's internal accuracy, using the alpha of Cronbach.

The reliability of the scales is calculated by an iterative process: if the removal of certain objects improves the reliability of the measure, the object will be omitted and measurement will be done again; on the other side, deletions have not been made, as suggested by Nunnally and Bernstein (1994), resulting in marginal rises. The degree to which a variable or group of variables is compatible with what it is supposed to calculate (Nunnally & Bernstein, 1994). No item is removed in this analysis as the alpha values are greater than 0.7 for all variables, as can be seen in Table 3.

Table 3: Reliability test

| Variables | Cronbach's Alpha | N of Items |
|------------------------------|------------------|------------|
| Perceived usefulness | .874 | 5 |
| Perceived ease of use | .863 | 5 |
| Perceived credibility | .745 | 5 |
| Trust | .875 | 5 |
| Mobile applications adoption | .832 | 5 |

4.3 Hypothesis Testing

The multiple regression analysis is conducted in the sake of tests the impact among the variables in the proposed research framework. All hypotheses testing includes some impacts among variables.

To test and validate the independence of error assumption, Durbin-Watson statistics were utilized. According to Coakes and Ong (2011), if the value of Durbin-Watson came between (1.50) and (2.50) it means that no violation in the independence of error term. In Table 4, the Durbin-Watson value is presented. It shows that value came between the satisfactory levels indicating that no auto-correlation problems occurred. The findings can be shown in Table 4 below.

Table 4: R Square analysis

Model Summary^b

| Model | R | R ² | Adjusted R ² | Std. Error of the Estimate | Change Statistics | | | | | |
|-------|-------|----------------|-------------------------|----------------------------|-----------------------|----------|-----|-----|-------------|-----------------|
| | | | | | R ² Change | F Change | df1 | df2 | Sig. Change | F Durbin-Watson |
| 1 | .778a | .606 | .599 | .391 | .072 | 45.288 | 1 | 254 | .000 | 2.111 |

a. Predictors: (Constant), PC, PEOU, PU, TU

b. Dependent Variable: MAA

As illustrated by Hair et al., (2014), the coefficient of determination (R^2) is used when the researcher is planning to test the fraction of the total variance of the dependent variable with respect to its mean described by the independent variables or the predictor variables. If the R^2 value obtained is adequate, then, the regression model's prediction power will be good. In this case, (see Table 5 and Table 6) the regression model R^2 value obtained for the dependent variable Mobile applications adoption (MAA) is .606. This indicates that 60.6% of the total variance in Mobile applications adoption (MAA) is explained by the regression model. In addition, the score obtained (.606) is considered as adequate. As well as, the regression model's power is considered as good. This implies that the model is significant statistics-wise ($F=95.449$, $p<0.05$). Further, the regression coefficients' scores and their significance, establishes the factors comprised in the model.

Table 5: One-way ANOVA

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|-----|-------------|--------|-------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 51.787 | 3 | 17.262 | 95.449 | .000b |
| | Residual | 45.214 | 250 | .181 | | |
| | Total | 97.002 | 253 | | | |
| 2 | Regression | 58.746 | 4 | 14.686 | 95.590 | .000c |
| | Residual | 38.256 | 249 | .154 | | |
| | Total | 97.002 | 253 | | | |

a. Dependent Variable: MAA

b. Predictors: (Constant), PC, PEOU, PU

c. Predictors: (Constant), PC, PEOU, PU, TU

The researcher presents the summary of Research Hypothesis in this section. Initially the summary is presented in a tabular form as shown in Table 6 below.

Table 6: Results of Multiple Linear Regression

| H | Path | Unstandardized Coefficients | | Standardized Coefficients | | T-value | P-value | Decision |
|----|------------|-----------------------------|------------|---------------------------|--|---------|---------|-----------|
| | | B | Std. Error | Beta | | | | |
| | (Constant) | .967 | .247 | | | 3.917 | .000 | |
| H1 | PU → MAA | .470 | .056 | .462 | | 8.436 | .000 | Supported |
| H2 | PEOU → MAA | .068 | .038 | .079 | | 1.810 | .071 | Rejected |
| H3 | PC → MAA | .391 | .061 | .356 | | 6.458 | .000 | Supported |
| H4 | TU → MAA | .472 | .070 | .465 | | 6.730 | .000 | Supported |

As shown in Table 6, for H1 the p-value and Beta value of Perceived usefulness (PU) in Mobile Applications Adoption (MAA) were .000 and .462 respectively. It means that Perceived usefulness (PU) has 46.2% positive impact on Mobile Applications Adoption (MAA). Therefore, Perceived usefulness (PU) is concluded to be significant for Mobile Applications Adoption (MAA). Thus, H1 was supported.

In addition, the p-value and Beta value of Perceived ease of use (PEOU) in Mobile Applications Adoption (MAA) were .071 and .079 respectively. It means that Perceived ease of use (PEOU) has 71.5% negative impact on Mobile Applications Adoption (MAA). Therefore, Perceived ease of use (PEOU) is concluded to be insignificant for Mobile Applications Adoption (MAA). Thus, H2 was rejected.

Moreover, the p-value and Beta value of Perceived credibility (PC) in Mobile Applications Adoption (MAA) were .000 and .356 respectively. It means that Perceived credibility (PC) has 35.6% positive impact on Mobile Applications Adoption (MAA). Therefore, Perceived credibility (PC) is concluded to be significant for Mobile Applications Adoption (MAA). Thus, H3 was supported.

Finally, the p-value and Beta value of Trust (TU) in Mobile Applications Adoption (MAA) were .000 and .465 respectively. It means that Trust (TU) has 46.5% positive impact on Mobile Applications Adoption (MAA). Therefore, Trust (TU) is concluded to be significant for Mobile Applications Adoption (MAA). Thus, H4 was supported.

4.4 Mediating effect of Trust

As presented in Table 7, the result showed that there was a significant relationship between Perceived usefulness (PU) and Mobile Applications Adoption (MAA) in the absence of Trust (TU), with the standardized total effect of Beta was .674 and the P-value was .000. Thus, the total effect of Perceived usefulness (PU) as IV on Mobile Applications Adoption (MAA) as DV without the inclusion of Trust (TU) as MV was statistically significant at 0.05 level.

This relation was turned into significant after inclusion Trust (TU) into the model, with the standardized direct effect of Beta was .257 and the P-value was .000. Thus, the direct effect of Perceived usefulness (PU) as IV on Mobile Applications Adoption (MAA) as DV with the inclusion of Trust (TU) as MV was statistically significant.

As depicted in Table 7, the effects of Perceived usefulness (PU) as IV on Trust (TU) as MV (path b) was statistically significant at 0.05 level, with the standardized effects of beta was .755.

At the other side, the effects of Trust (TU) as MV on Mobile Applications Adoption (MAA) as DV (path c) was statistically significant at 0.05 level with the standardized effects of beta was .746.

These results indicated that Trust (TU) mediates the relationship between Perceived usefulness (PU) and Mobile Applications Adoption (MAA). The degree of mediation was Partial Mediation since all paths were statistically significant. The phenomenon supported the hypothesis H4a. Further, the result revealed that there is a mediating effect of Trust (TU) on the relationship between Perceived usefulness (PU) and Mobile Applications Adoption (MAA).

The result showed that there was an insignificant relationship between Perceived ease of use (PEOU) and Mobile Applications Adoption (MAA) in the absence of Trust (TU), with the standardized total effect of Beta was .079 and the P-value was .071. Thus, the total effect of Perceived ease of use (PEOU) as IV on Mobile Applications Adoption (MAA) as DV without the inclusion of Trust (TU) as MV was statistically insignificant at 0.05 level.

This relation was turned into significant after inclusion Trust (TU) into the model, with the standardized direct effect of Beta was .090 and the P-value was .026. Thus,

the direct effect of Perceived ease of use (PEOU) as IV on Mobile Applications Adoption (MAA) as DV with the inclusion of Trust (TU) as MV was statistically significant.

The effects of Perceived ease of use (PEOU) as IV on Trust (TU) as MV (path b) was statistically significant at 0.05 level, with the standardized effects of beta was .128.

At the other side, the effects of Trust (TU) as MV on Mobile Applications Adoption (MAA) as DV (path c) was statistically significant at 0.05 level with the standardized effects of beta was .746.

These results indicated that Trust (TU) mediates the relationship between Perceived ease of use (PEOU) and Mobile Applications Adoption (MAA). The degree of mediation was Full Mediation since all paths were significant except path (a) Direct Effect of IV on DV with MV, which was not found as statistically significant. The phenomenon supported the hypothesis H4b. Further, the result revealed that there is a mediating effect of Trust (TU) on the relationship between Perceived ease of use (PEOU) and Mobile Applications Adoption (MAA).

As presented in Table 7, the result showed that there was a significant relationship between Perceived credibility (PC) and Mobile Applications Adoption (MAA) in the absence of Trust (TU), with the standardized total effect of Beta was .629 and the P-value was .000. Thus, the total effect of Perceived credibility (PC) as IV on Mobile Applications Adoption (MAA) as DV without the inclusion of Trust (TU) as MV was statistically significant at 0.05 level.

This relation was turned into significant after inclusion Trust (TU) into the model, with the standardized direct effect of Beta was .200 and the P-value was .001. Thus, the direct effect of Perceived credibility (PC) as IV on Mobile Applications Adoption (MAA) as DV with the inclusion of Trust (TU) as MV was statistically significant.

As depicted in Table 7, the effects of Perceived credibility (PC) as IV on Trust (TU) as MV (path b) was statistically significant at 0.05 level, with the standardized effects of beta was .710.

At the other side, the effects of Trust (TU) as MV on Mobile Applications Adoption (MAA) as DV (path c) was statistically significant at 0.05 level with the standardized effects of beta was .746.

These results indicated that Trust (TU) mediates the relationship between Perceived credibility (PC) and Mobile Applications Adoption (MAA). The degree of mediation was Partial Mediating since all paths were statistically significant. The phenomenon supported the hypothesis H4c. Further, the result revealed that there is a mediating effect of Trust (TU) on the relationship between Perceived credibility (PC) and Mobile Applications Adoption (MAA).

Table 7: Results of Mediating Analysis

| DV = Mobile applications adoption (MAA) MV = Trust (TU) | Independent variables | | |
|--|---|--|--|
| | Perceived usefulness (PU) Beta (P-value) | Perceived ease of use (PEOU) Beta (P-value) | Perceived credibility (PC) Beta (P-value) |
| Total Effect of IV on DV without MV (path a) | .674 (.000) | .079 (.071) | .629 (.000) |
| Direct Effect of IV on DV with MV (path a') | .257 (.000) | .090 (.026) | .200 (.001) |
| Indirect Effect of IV on DV through MV (path bc) | .552 (.000) | .756 (.000) | .604 (.000) |
| Effect of IV on MV (path b) | .755 (.000) | .128 (.042) | .710 (.000) |
| Effect of MV on DV (path c) | .746 (.000) | .746 (.000) | .746 (.000) |
| Mediation Path | PU → TU → MAA | PEOU → TU → MAA | PC → TU → MAA |
| Mediation Effect | Yes | Yes | Yes |
| Degree of Mediation | Partial Mediation | Full Mediation | Partial Mediation |
| Hypothesis Result | H4a Supported | H4b Supported | H4c Rejected |

5 Conclusion

The primary objective of this study is to investigate how perceived usefulness, perceived ease of use, and perceived credibility, serving as independent variables, impact the adoption of mobile applications in Malaysian hotels, which acts as the dependent variable. To delve deeper into the connections within this study, the research incorporated Trust as a mediating variable positioned between perceived usefulness, perceived ease of use, and perceived credibility concerning the adoption of mobile applications.

The p-value and Beta value of Perceived usefulness (PU) in Mobile Applications Adoption (MAA) were .000 and .462 respectively. It means that Perceived usefulness (PU) has 46.2% positive impact on Mobile Applications Adoption (MAA). Therefore, Perceived usefulness (PU) is concluded to be significant for Mobile Applications Adoption (MAA). Thus, H1 was supported. The obtained findings are in consistent with many researches.

Carlota, Efthymios and María-del-Carmen (2011), published a study aimed at researching factors impacting the adoption of social networking sites (SNS), examining the behaviors and attitudes of consumers in these contexts and determining the acceptability of SNS in The Netherlands has been released. The author observed that expected utility has a major positive impact on the intention to use (Beta .483, p value < 0.01) (Carlota et al., 2011).

Moreover, the p-value and Beta value of Perceived ease of use (PEOU) in Mobile Applications Adoption (MAA) were .071 and .079 respectively. It means that Perceived ease of use (PEOU) has 71.5% negative impact on Mobile Applications Adoption (MAA). Therefore, Perceived ease of use (PEOU) is concluded to be insignificant for Mobile Applications Adoption (MAA). Thus, H2 was rejected. The obtained findings are in consistent with many researches.

The purpose of the study by Muchran and Ahmar (2019) author is to see the app of the modified TAM model as a mitigation variable by joining the experiential variable to see one 's intention in the use of technology, particularly internet banking. The authors discover that the perceived ease of use has no bearing on the intention of utilizing internet banking (Muchran & Ahmar, 2019).

In addition, the p-value and Beta value of Perceived credibility (PC) in Mobile Applications Adoption (MAA) were .000 and .356 respectively. It means that Perceived credibility (PC) has 35.6% positive impact on Mobile Applications Adoption (MAA). Therefore, Perceived credibility (PC) is concluded to be significant for Mobile Applications Adoption (MAA). Thus, H3 was supported. The obtained findings are in consistent with many researches.

Kim and Song (2020) the customers' perceived credibility of authenticity claims depending on the authenticator claiming legitimacy, type of company ownership, and past of company. The researchers limited the route linked to the relation between the perceived credibility of the plan to buy. A substantial chi-square difference will imply the value of the constrained route and thus endorse the conceptual framework (J.-H. Kim & Song, 2020).

Moreover, the p-value and Beta value of Trust (TU) in Mobile Applications Adoption (MAA) were .000 and .465 respectively. It means that Trust (TU) has 46.5% positive impact on Mobile Applications Adoption (MAA). Therefore, Trust (TU) is concluded to be significant for Mobile Applications Adoption (MAA). Thus, H4 was supported. The obtained findings are in consistent with many researches.

The objective of the study by Jamaludin and Ahmad (2013) It is to investigate the factor that affects the intent of the buyer to buy online (dependent variable). Trust in using the website is an independent factor. Trust proved to be a major indicator of intent to shop online in this study. The greater the trust of the respondents on the platform, the greater the intention to shop online (Jamaludin & Ahmad, 2013).

In this study, three hypotheses have been tested to assess the mediating role of Trust on the relation between Perceived usefulness, Perceived ease of use, and Perceived credibility, with Mobile Applications Adoption, as follows:

Therefore, the results of the data analysis through mediating decision tree, Trust has a significant and partial mediating role on the relationship between Perceived usefulness and Perceived credibility with Mobile Applications Adoption. In addition,

Trust has a significant and full mediating role on the relationship between Perceived ease of use Mobile Applications Adoption.

This study holds significant potential, and several avenues for further exploration could enhance its scope and applicability for future researchers. A key consideration is the expansion of the study beyond Malaysian Hotels to encompass various industries and staff in different countries, thereby broadening the generalizability of the outcomes. Increasing the sample size could provide more robust options for analysis and yield richer results, contributing to a more comprehensive understanding of the factors influencing mobile application adoption. Additionally, investigating the customer's perspective would offer a valuable addition to the research, providing insights into user preferences and expectations.

While this study delves into the mediating role of Trust, there is an opportunity for future research to explore alternative mediating variables between factors and Mobile Application Adoption, thereby introducing additional dimensions to the study framework. Notably, the exclusion of subjective norms and experience as independent or mediating variables represents a gap in the current research. Addressing this gap could contribute to the existing body of literature, aligning with studies that have highlighted the need to explore the effects of subjective norms and experience on factors influencing Mobile Application Adoption. These considerations open avenues for future research endeavors to build upon and extend the insights generated by the current study.

6 Theoretical and Practical Implications

This study holds practical implications for the Technology Adoption within the hospitality industry, particularly in Malaysian hotels. The findings underscore the importance of perceived usefulness in influencing the decision to adopt mobile applications. The study suggests that hotels in Malaysia stand to benefit tangibly and intangibly by considering the perceived usefulness of mobile applications. Perceived credibility emerges as another significant factor encouraging hotels to embrace mobile applications, while perceived ease of use is observed to have an insignificant relationship with adoption. Trust in technology is identified as a key driver for mobile application adoption, emphasizing the need for hotels to build and maintain trust in technological solutions for effective implementation.

In practical terms, Malaysian hotels are advised to view technology adoption, specifically mobile applications, as a strategic marketing tool with the potential to enhance business performance. Recognizing and emphasizing the perceived usefulness is crucial, as it emerges as a pivotal predictor for mobile application adoption. Additionally, understanding the credibility and trustworthiness of the technology is paramount for successful adoption. This study urges organizations contemplating mobile application development to consider these factors to optimize their performance.

The theoretical implications of this study revolve around the relationships between perceived usefulness, perceived ease of use, perceived credibility, trust, and mobile application adoption. Notably, trust emerges as a mediator in the relationships between these variables. The study aligns with prior literature by establishing significant correlations between perceived usefulness, perceived credibility, trust, and mobile application adoption. However, it deviates from previous findings by highlighting the insignificance of perceived ease of use in this context. The introduction of trust as a mediator adds nuance to the understanding of the interplay between these factors.

Methodologically, the study contributes by applying established theories such as Theory of Reasoned Action, Planned Behavior Theory, Unified Acceptance and Use Technology Theory, Technology Acceptance Model, and the Elaboration Likelihood Model. The research employs quantitative techniques, including surveys, pilot studies, and statistical analyses like Cronbach's alpha and factor analysis, to ensure the reliability and validity of the research model. The results are analyzed using multiple regression analysis and correlation, providing a robust evaluation of the theoretical hypotheses.

7 References

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