

Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) of Information Technology Application Towards Managerial Productivity in Fast Food Chain Outlets

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Abstract: The usage of information technology in fast food chain outlets is to be pervasive and compulsory to improve organizational performance and strategic competitiveness. However, having technology available is not enough, it must be accepted and used appropriately by its target user group in order to realize anticipated productivity gains. Therefore, this study aims to examine the relationship between perceived ease of use (PEOU) and perceived usefulness (PU) of information technology application towards managerial productivity of managers who are attached in the fast food chain outlets in the Klang Valley area. A random survey with questionnaire method was conducted as a quantitative data collection on 326 managers from participating food chain outlets with regard to their acceptance of IT application leading to their productivity. The findings indicated that perceived usefulness (PU) have significant (positive) relationship on managerial productivity (MP). In contrast, ease of use (EOU) has insignificant (negative) relationship on MP. It has been concluded that perceived usefulness of IT application was influences the productivity of managers and on the other hand, the ease of use not influence manager's productivity in today's work environment. Based on the findings, it is hoped that this study will further enhance knowledge in the human resources field and training, with respect to managers' attitude and awareness towards IT application in restaurant operations.

Key words: Perceived ease of use (PEOU) • Perceived usefulness (PU) • Information technology (IT) application • Managerial productivity • Fast food chain outlets

INTRODUCTION

Nowadays it is known that IT provides many advantages and benefits to an organization not only for productivity gains but also for competitive advantages. This is supported by a large body of literature on the adoption of IT and productivity in various fields such as manufacturing and service industries [1-6]. However, thus far there is no empirical research that has attempted to investigate the relationship and effect of perceived ease of use (PEOU) and perceived usefulness (PU) of IT application on managerial productivity (individual level of productivity) in the hospitality and specifically foodservice industries. Most of the prior researches in the hospitality industry studied the effect of IT at the organizational level of productivity, as had been done by Whitaker [7], Peter *et al.* [8] and Wang and Qualls [6].

In addition, Brynjolfsson [9] highlighted that productivity is the fundamental economic measure of a technology's contribution. Moreover, Peter *et al.* [8] argued that it is not technology itself that provides the productivity and competitive advantage in a firm since it can be easily acquired and copied, but rather how IT is implemented and used within a firm (i.e. what people do with it). Within the contexts of this study, the researcher believes that the PEOU and PU of IT application will help the managers to achieve the productivity as expected by using IT in performing their tasks.

Therefore, the researcher believe that having technology available is not enough, it must be accepted and used appropriately by its target user group in order to realize anticipated productivity gains. The review of previous literatures on antecedents to technology acceptance and usage is important for a better

understanding of how particular variables impact technology application in the workforce. The researcher agrees with Knight and Pearson's [10] opinion, where the use of technology within an organization can have a dramatic effect not only on the success and failure of the organization, but also on the overall work life of its employees. They further noted that there were at least two issues associated with organizations investing in IT. It is whether employees will accept the technology and whether the employees will be more productive with the new technology. The following discussions relate to the review on antecedents to technology acceptance and usage that focuses on how two important elements in the Technology Acceptance Model (TAM) which are: PEOU and PU have been adopted as factors of managerial productivity.

The purpose of TAM is to explain and predict user acceptance of information system (IS). TAM explains the causal links between beliefs (usefulness and ease of use) and users' attitudes, intentions and actual usage of the technology. According to Leong [11] from a practitioner perspective, TAM is useful for predicting whether users will adopt new information technology.

In addition, acceptance is a key to successful software choice and use [12]. The theoretical insights of TAM provide a strong basis from which to examine factors contributing to users' acceptance of technology. Although providing insights into the user acceptance of technology [13], research focused only on the determinants of usage. Further noted, Hong *et al.* [14] stated that usage includes the concepts of ease of use and usefulness. Davis *et al.* [13] defined perceived usefulness as the degree to which a person believes that using a particular system would enhance his or her performance. Perceived ease of use, in contrast refers to 'the degree to which a person believes that using a particular system would be effort free'.

In addition, the study by Leong [11] used and tested the system quality as factor that affects usage directly rather than indirectly through perceived usefulness and perceived ease of use. In contrast, this study tests the usage and application of IT by testing the elements of PEOU and PU as a direct influence on manager's productivity. From a researchers' point of view, the usage of IT becomes more pervasive and compulsory in the fast food outlets understudied. Therefore it is necessary to know or to test the managers' productivity through IT investment by the company. The model for this study appears in Figure 1. It illustrates the proposed relationships among the PEOU and PU on Managerial Productivity (MP).

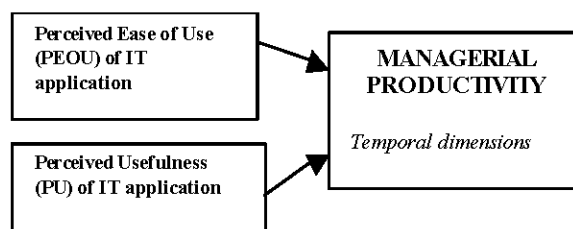


Fig. 1: Theoretical Framework

The majority of studies based on TAM have been conducted in environments where application was voluntary, as noted by Brown *et al.* [15] and Me Lone [16]. Such environment is very different from the IT application in fast food settings, where IT usage is characterised as mandatory for its user. In the mandatory context, one generally does not have the choice not to use the system [17], regardless of their attitude and mental acceptance of the system. In the mandatory environment, the decision to adopt and implement on IT systems are often made by the management wherein end users are mandated to use the system to carry out their tasks [18]. There is a need to know whether the managers in the fast food chain outlets have accepted and fully utilized the IT adopted by their organization. It is very important to ensure whether the IT adopted is playing a role in increasing manager's task performance or vice versa.

Thus, it is necessary to study the manager's PEOU and PU of IT application and the relationship it has on managerial productivity which would influence organizational performance.

Methodology

Research Design: A cross sectional study was conducted where the data were gathered via a questionnaire administered to the sample just once over a period of study in order to answer the research questions.

Sampling: As this study attempts to investigate managerial productivity, the target population in this study is managers of fast food chain outlets in Klang Valley. In the context of this study, three levels of managers within the restaurant operation were elucidated. They consist of restaurant managers, assistant restaurant managers and shift managers (first line manager) who are attached of the fast food outlets. Indeed, the choice of these managers is based on recommendation by Miller *et al.* [19] who pointed out each of the managers (restaurant manager, assistant restaurant manager and shift manager) will take over the job of each other if they are off duty.

Respondents were selected using convenience sampling. By using the convenience sampling technique, the questionnaire was randomly allocated and distributed to any four of the managers in each respective outlet namely restaurant manager, assistant restaurant manager and shift manager.

Instruments: The questionnaire has been divided into two sections that enable the objectives to be answered. The first section consisted of questions on the manager's perceived ease of use and perceived usefulness. Whereas the second section of the questionnaires was included questions of managerial productivity. The questions have been organised based on the extensive literature review, for example, the work of Venkatesh [20] Spacey *et al.* [21], Thompson *et al.* [22], Wixom and Todd [23], Huber [24], Doll and Torkzadeh [25], Schribber and Gutek [26] and Kvassov [27]. Respondents were asked to indicate the extent to which they agree with the statements on a four-point Likert scale response format '1= strongly disagree', '2= disagree', '3=agree' and '4=strongly agree'. The chosen of four-point Likert scale is based on Pearson's website article [28] indicated that it is worth considering how familiar the respondents with the issues addressed by the researcher in the survey. In the context of this study, the researcher believes that the managers are the people familiar with and use the IT for their daily operations. From that point, it is not necessary to include the midpoint "Neither Agree nor Disagree" between the two extreme scale. Scores in the middle region could be due to lukewarm response, lack of knowledge or poor attitude in the respondent [29]. Oppenheim [29] further mentioned that the neutral point would be difficult to locate and even more difficult to interpret.

Data Collection: In the process of data collection, two approaches were taken by the researchers in collecting the data from the respondents. The first approach is the researchers administered directly the questionnaires to the respective respondents based on the permission from the companies' headquarters. The second approach is the researchers only sent the set of questionnaires based on the amount requested by the companies' headquarters of the respective respondents. The human resource department of the companies involved distributed the questionnaires randomly to their different managers namely restaurant manager, assistant restaurant manager and shift manager. For the second approach, the respondents were also given one week for completing the survey and were required to return it to their headquarters.

After that, follow up calls were made before the deadlines to ensure the respondents answered the questionnaires. In order to increase the response rate, two weeks after the deadlines, a follow up call was made to non respondents, stressing the value of the surveys and the importance of their participation in this study. This approach was in line with what was recommended by Moser and Kalton [30] that "re-calls" show increase in response rate. A total of one hundred and seventy one (171) responded, indicating a response rate of 52.45 per cent and utilised for further analyses.

Statistical Data: Data obtained from the study was analysed quantitatively. The data analysis process was done by using SPSS software version 12.0. The analyses involved were mean comparison and standard multiple regression.

RESULTS AND DISCUSSION

Perceived EOU of IT Application: In order to determine the respondents' overall perception on perceived ease of use of IT, the mean scores and standard deviations of the four statements regarding the managers' perceptions on the ease of use of IT were reported in Table 1.

The mean ratings of statement ranged from 2.35 to 3.25 with standard deviations ranging from .587 to .844. The negatively worded items were reverse coded, so higher scores represented a more positive attitude. Based on the results, all the mean scores of perceived ease of use on IT adoption were between 2 (Disagree) and 3(Agree), except for EOU2 (3.25), EOU4 (3.07), EOU5 (3.08) and EOU6 (3.05). However, all the mean scores were between (2= Disagree) and (3=Agree) and are closed to "Agree", except for EOU13 which shows the lowest of mean scores (2.35).

From these results it can be concluded that, the managers' opinion on the perceived ease of use of IT is in the average level. It is based on the results that showed 9 out of 13 items had mean scores ranged from 2.35 to 2.96. It is proven when generally the managers are moderately disagree with the statement that saying it was an impossible to use IT without help ($M=2.35$, $SD=.714$), IT application takes a lot of mental effort ($M=2.56$, $SD=.775$), IT application is often frustrating ($M=2.65$, $SD=.738$). However, they are slightly disagree with the statement saying that they do not need to take much effort to be skilful in IT ($M=2.72$, $SD=.671$), IT application is difficult to use ($M=2.88$, $SD=.825$), IT application is understandable to use ($M=2.96$, $SD=.603$), IT takes the complexity out of their jobs ($M=2.96$, $SD=.631$) and

Table 1: Mean and Standard Deviations for Perceived Ease of Use Items

Variables (Items)	Label	Mean	SD
IT takes the complexity out of my jobs.	EOU1	2.96	.631
Learning to use IT would make easy for me to do my work.	EOU2	3.25	.602
Working with IT is so complicated; it is difficult to understand what is going on. (R)	EOU3	2.74	.844
It is easy to get the system to do what I want it to do.	EOU4	3.07	.600
IT application in my restaurant is easy to use.	EOU5	3.08	.633
IT application in my restaurant is easy to operate	EOU6	3.05	.587
IT application in my restaurant is difficult to use. (R)	EOU7	2.88	.825
IT application in my restaurant is often frustrating.(R)	EOU8	2.65	.738
It is easy to remember how to use IT application in my restaurant	EOU9	2.96	.698
IT application in my restaurant takes a lot of mental effort.(R)	EOU10	2.56	.775
IT application in my outlet is understandable to use.	EOU11	2.96	.603
I do not need to take much effort to be skillful in IT.	EOU12	2.72	.671
It is impossible to use IT for my job without help.(R)	EOU13	2.35	.714

Note: Scale: 1=Strongly Disagree; 2=Disagree; 3=Agree; 4=Strongly Agree, (R) =reversed coded

Table 2: Mean and Standard Deviations for Perceived Usefulness Items

Variables (Items)	Label	Mean	SD
Using IT application would allow me to increase my productivity / performance.	PU1	3.11	.604
Using IT application increases my quantity of output for the same amount of effort.	PU2	3.08	.588
Using IT application increases my effectiveness on the job.	PU3	3.16	.601
Using IT application keeps me close to "what is going on" in the restaurant.	PU4	3.18	.546
Using IT application improves my ability to make good decisions.	PU5	3.08	.553
Using IT application increases the speed at which I make decisions.	PU6	3.11	.589
Using IT application helps me to evaluate operational efficiency.	PU7	3.14	.597
Using IT application helps me to understand better, the reason for some problem that happened in my restaurant. e.g: shortage of raw materials, profit and loss.	PU8	3.23	.587
Using IT application helps me to track outlet progress leading towards company's goals.	PU9	3.15	.564
Using IT application helps me to anticipate /predict problematic areas.	PU10	3.05	.545
Using IT application helps me to accomplish tasks quickly.	PU11	3.12	.540
Using IT application supports critical aspects. e.g: requisition of raw materials.	PU12	3.09	.583
Using IT application makes my job easier.	PU13	3.17	.554

Note: Scale: 1=Strongly Disagree; 2=Disagree; 3=Agree; 4=Strongly Agree

it is easy to remember how to use IT application (M=2.96, SD=.698). Based on those results, it shows that there is no one of the IT application is extremely difficult or extremely easy to use. Therefore, more effective training can help them to be proficient with the IT applications and help them to improve their productivity.

Perceived Usefulness of it Application: In order to determine the respondents' overall perception on perceived usefulness of IT in their fast food chain outlets, the descriptive mean scores and standard deviations of the 13 statements regarding the managers' perceptions on the usefulness of IT are displayed in Table 2. The mean ratings ranged from 3.05 to 3.23 with standard deviations ranging from .540 to .604. The mean for all statements were above 3 (Agree).

Nevertheless, the means score of "using IT application helps them to anticipate or predict a problematic area" shows the least means score (M=3.05, SD=.545) for the variables in perceived usefulness. It gives an idea that possibly more advance and suitable technology is needed to resolve and predict a problematic area in the fast food chains outlets. On the other hand, majority of managers agrees that IT help them to understand better, the reason for some problem that happened in their fast food chain outlets (M=3.23, SD=.587). Therefore, it still shows that all the managers perceived that IT application in fast food chain outlets is useful to improve their effectiveness and job functions.

Managerial Productivity: Table 3 presents the mean and standard deviations scores of the 20 statements on the possible impact of current IT usage in the fast food

Table 3: Means and Standard Deviations for Managerial Productivity Items

Variables (Items)	Label	Mean	SD
With IT adoption, the activity is better planned according to short term deadlines.	MP1	3.70	.820
With IT adoption, the activity is better planned according to long term deadlines.	MP2	3.70	.781
With IT adoption, time is under control and is managed as a resource.	MP3	3.78	.815
With IT adoption, all of my work is finished before the deadline, according to the schedule.	MP4	3.69	.835
IT reduces the duration of tasks.	MP5	3.75	.805
IT reduces work overload.	MP6	3.61	.835
I have enough time to get everything done, by using IT.	MP7	3.59	.865
With IT adoption, I finish my job on time.	MP8	3.62	.848
With IT adoption, I can postpone my work.	MP9	3.19	1.155
IT increases the speed in doing my job.	MP10	3.71	.884
IT helps me to complete several tasks within the deadline given.	MP11	3.73	.868
IT helps me become more productive in completing tasks.	MP12	3.71	.872
IT helps me become more efficient in completing tasks.	MP13	3.76	.732
IT allows more time for me to undertake non managerial task.	MP14	3.55	.834
With IT, it is easy to reschedule unexpected work or task.	MP15	3.53	.762
With IT, I have freedom to use my time, as long as the job is done within the deadline.	MP16	3.46	.869
With IT, I feel that time had been used ineffectively on task assigned to me.	MP17	3.17	.988
IT increases my performance in doing various jobs simultaneously.	MP18	2.46	.791
I can complete several tasks by myself within the deadline when using IT.	MP19	3.62	.712
When using IT, I manage my tasks effectively.	MP20	3.73	.812

Note: Scale: 1=Never; 2=Seldom; 3=Sometimes; 4=Often; 5=Always

Table 4: Results of Multiple Regressions of the Perceived EOU and PU towards the Managerial Productivity of Fast Food Chain Outlets Manager.

Predictors	Model 1 Std. β
Perceived Ease of Use (EOU)	-.034
Perceived Usefulness (PU)	.376***
R ²	.25
Adj. R ²	.24

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

outlets on temporal dimension or time of managerial work, which might influence the managerial productivity. The mean ratings of statements ranged from 2.46 to 3.78 with the standard deviations ranging from 0.712 to 1.155. The mean for all statements were above 3 (Sometimes) except for MP18 (2.46). From those responses, majority of managers felt that almost often of their work will be finished before the deadline according to the schedule ($M=3.69$, $SD=.835$). On the other hand, all the managers proves that IT are seldom in increasing their performance in doing various job simultaneously ($M=2.46$, $SD=.791$).

From those responses, it indicated that managers perceived that IT adoption can help improve their work productivity, but they still need to undergo some training to increase performance in doing various jobs simultaneously.

Hypotheses Testing: To test the postulated hypotheses, perceived ease of use variables and perceived usefulness were regresses onto managerial productivity. Table 4 presents the regression results of these analyses.

From Table 4, the perceived ease of use and perceived usefulness were able to explain 24 percent ($R^2=.24$) of the observed variations in the productivity of fast food chain outlets managers in Klang Valley. Perceived usefulness was significantly contributed to the prediction of the managerial productivity. Perceived usefulness ($\beta = .376$, $p < 0.001$) had the impact on levels of productivity. As perceived usefulness was found significantly and positively influence the managerial productivity. The result implies that high perception of usefulness of IT influence managers to higher levels of productivity in their work. For example “Using IT application helps them to understand better, the reason for some problem that happened in their restaurant (e.g: shortage of raw materials, profit and loss)” ($M=3.23$, $SD=0.587$) was the strongest perception on the usefulness of IT in fast food chain outlets understudied. This relationship is consistent with the findings of Adam *et al.* [31] and Venkatesh [19]. From the present study, it could be said that if managers perceived that the IT applications adopted in their restaurant are useful to their job, they are likely to be more productive. As a result, it shows that usefulness of IT application is very important

factors that should be highlighted by the company when the replacement of existed technology or adopt new technology is needed for the future.

On the other hand, perceived ease of use ($\beta = -0.34$) found insignificant and negatively influence the managers productivity in fast food chain outlets understudied. The study findings contradicted to the earlier work of Doll and Torkzadeh [25], who found that ease of use, was the primary determinant of satisfaction or productivity. One possible explanation for this inconsistent result is that ease of use is no longer a factor in the current situation; because all the IT applications adopted in the fast food chain outlets are user friendly and easy to use. On the other hand, the negative relationship between ease of use and productivity in this study might imply the situation where managers are obligated to use IT as they did not have other alternatives in accomplishing their jobs.

CONCLUSION

This study has shown that perceived usefulness of IT application has a significant factors affecting managerial productivity. On the contrary, the perceived ease of use of IT application is no longer significant in today's operations to ensure the productivity of managers. This indicates that in this era of globalization, IT plays a crucial role in ensuring the smooth running of an organization's operation. Thus most of the IT applications adopted in the foodservice organization today are user friendly. On the other hand, the more the managers perceived IT to be useful and the IT applications are of pertinent quality to their tasks, their productivity will be increased.

In conclusion, it is hoped that findings of the study may offer some insights to Human Resources and Training areas to better understand the causes and factors that contribute to managerial productivity that leads to productivity of the organizations. More to the point, it also may offer some directions in choosing the IT applications to be adopted in the organizations. Its nature should be useful and commensurate with quality in order to sustain or increase the productivity of the users as well as the organizations.

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