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Integrating Delone and Mclean and Task Technology Fit Models to Evaluate the Influence of E-CRM on Individual Performance

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Abstract Electronic customer relationship management (E-CRM) is a growing technology that has already captured the attention and focus of researchers. The important development in end-user use, users' satisfaction, and performance outcomes have been one of the most welcome significant developments in E-CRM. The objective of the research is to assess the influence of E-CRM on employees. We propose a framework that integrates the DeLone and McLean Information System (IS) success model with the Task Technology Fit (TTF) framework. The empirical approach is based on 300 open questionnaires. The findings show that utilization and users' satisfaction are major predictors of individual performance, as well as the significance of TTF's modulating influence on employee performance. User satisfaction is favorably impacted by system quality, information quality, and service quality.

Keywords: DeLone and McLean, task technology fit, E-CRM, employee satisfaction, individual performance, user adoption.

1. Introduction

Information technologies (IT) are extremely being advocated as answers to system concerns, for highlighting demographic issues, and for supporting the growth of new modalities of operator sector delivery. Although the benefits of integrating IT in the operating domain have indeed been widely established, there still existed various variations in the satisfaction level reported by the operating company domain (Kasliwal en Singh, 2017). An employee's skilled environment is key in the development of technology acceptance (Abu-Shanab en Anagreh, 2015; Management, 2016), but the effect continues to be an important component that impacts IT employees' decision-making . The main distinctions existed between the study of E-CRM and major developments in users' key questions concerning IT's influence on employee workflows and staff satisfaction(Tam en Oliveira, 2016). In general, it is necessary to make it easier to retrieve vital information, evaluate employees, promote the business, and organize programs . These features are important for individuals because they contributed to the system (Ramayasa, 2015) by combining advanced and acting as supports in teamwork(Saifullah et al., 2015; Alina en Ismail, 2016). Additionally, the adoption of E-CRM is a complex transition that develops gradually and in steps. Acceptance has seemed to be a requirement for fully understanding the comparative advantages of a system(Nevertheless, the level of implementation differs from institution to processing center, limiting integration. To aid this critical change, it is essential to determine and employ key variables.

The purpose of this research was to look at causal variables for nurses' adoption including the use of electronic records in an organization, as well as employee satisfaction. The study objectives were as follows: (1) employee impressions of the compatibility of self-efficacy towards acceptance of the (2) immediate use of the E-CRM, and (3) satisfaction. An updated version of DeLone and McLean proposed five dimensions as factors impacting IT intention and behavior utilize: perceived ease, behavioral intention, behavioral control, and facilitating conditions. These concepts are concerned with users' perceptions of the system's effectiveness in improving their skills, the ease with which they might know and understand to utilize the system, the play of key individuals in the job performance in influencing end-user behaviors, and, finally, the assessments needed to strengthen modification. These dimensions are comparable to the categories of perceived usefulness, perceived ease of use, approach to the behavior, and behavior purposes (Howes et al., 2017). However, some links that are regularly examined in TTF to assess system acceptance and use have not been modeled in UTAUT. This is true for the essential relationships between effectiveness prediction and effectiveness assumption, as well as between influencing and performance outcomes.

Our findings revealed that both sorts of characteristics have a considerable impact on user behavior. Three main contributions of this paper are listed as follows.

1. Existing research on employer acceptance depends on employer perceptions of advanced technologies and rarely analyses the impact of tasks technology fits. This study attempts to address this void by combining Updated DeLone & McLean and TTF to describe implementation behaviors.
2. This study discovered that task technology fit impacts not just user acceptance and further system quality. This demonstrates the significance of task-technology integration.
3. When compared to the individual TTF and Updated DeLone & McLean methods, the combined framework illustrates more differences in user acceptance, demonstrating the combined model's description benefit.

2. Theoretical Background

Researchers analyzed E-CRM and an emerging service, via the lenses of trustworthiness, the Technology Acceptance Model, & the Theory of Planned Behavior. Investigated the impact of early trustworthiness on E-CRM with user uptake. They discovered satisfaction and loyalty drivers such as the relative effectiveness of digital record structural confirmations, business repute, and an employer's confidence proclivity.

2.1. Task technology fit (TTF)

According to Selamat (2016), user satisfaction, perceived simplicity, performance expectancy, perceived self-efficacy, and perceived benefits are among these criteria (anaam et al., 2022). Aside from believability, optimistic projections and demographic variables have a clear impact on adoption. The TTF concept is the topic of this study. TTF contends that users will indeed integrate information technology if it is relevant to their activities and improves productivity (Varajão en Cruz-Cunha, 2016; Vallabh, 2017); (Goodhue en Thompson 1995). TTF has been frequently utilized & integrated with many other theories like TAM to understand the human acceptance of knowledge since its debut. TTF has recently times used to understand user acceptance of developing Online services including such reviews(Kasiri et al., 2017). Empirical research indicates that the combination of purpose and technology issues influences peoples' evaluation of blogs, which in turn influences their utilization (Šebjan, Bobek en Tominc, 2014). TTF is now utilized to illuminate individual acceptance of technologies including availability systems and virtual security (El-fitouri, 2015). (Hosseinianzadeh, 2015). Geographic sensitivity (task characteristics), floatable, and accessibility (technology features) influence task technology fit, which influences team performance while utilizing (Pinion et al., 2017). Individual factors like technology expertise and self-efficacy, in combination with task and technology features, influence the task technologies to fit PDAs in assurance tasks (Mansouri, 2020). The TTF model is depicted in Figure 1. As illustrated in the image, task features, and system quality both influence task technology fit, which in turn influences user

skill & usage behavior. Suggested updating DeLone & McLean Mode (IS) as an extension to (FFT-IS) in 2003. They discovered that four elements of frequency were increased adoption and application of information technology: facilitating conditions, performance expectancy, perceived usefulness, and user satisfaction.

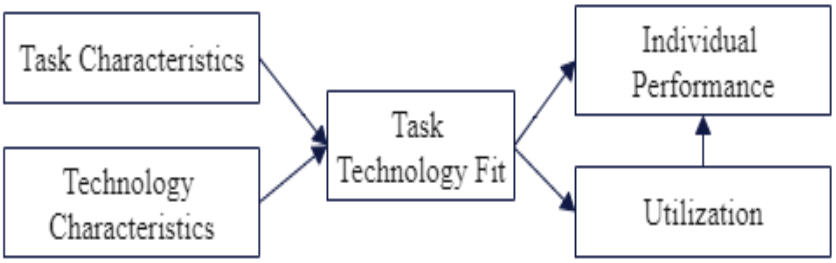

Fig. 1: FFT theory.

The FFT and the PC utilization theory served as the foundation. The Theory has recently been further updated to investigate the adoption of E-CRM. Trust, privacy, convenience, and affordability, in addition to the current drivers, have been demonstrated to influence intentions and behavior (Demographics and education also have important moderating impacts on user uptake(Garcia-Herrero et al., 2017). is built on wireless networks that use technologies such as GPRS and CDMA. Among the major features of electronic records is that its fixed-income securities with assistance programs are both accessible and immediate. Thus, is more desirable for record customers who seem to be continuously on the move as compared to conventional and Internet-based record services, leading to a greater task technology fit. A complicated work, on the other hand, might reduce the task technology fit, however, according to TTF (Goodhue & Thompson, 1995). Differently in different terms, as responsibilities get more challenging, technology may struggle to meet them (Danielle en Fredrick, 2019). An earlier study has discovered the influence of task and ethnology's features on task technology fit. Found that the perceived task technology fit is determined by tasks & understanding organization system qualities. It shows users' perceptions of enhanced performances through E-CRM, like quick transaction, quick reaction, and service efficacy

2.2. Updated DeLone & McLean mode (IS)

DeLone & McLean (1992) explored the various IS achievement processes by suggesting the 6-variables IS achievement model. This model comprises the taxonomy and an evaluation method to determine the difficult dependent factors in IS. In some other studies, Kim et al. (2015) outlined the advantages of the services process, while Erlirianto et al., (2015) explored the information quality in other perspectives. According to DeLone & McLean (1992), there is a correlation of individual engagement and efficiency with performance measurements that use ISs. The revised IS success model included service performance in addition to the original theory and

highlighted the crucial role that the quality of the service plays in the achievement of IS. While the quality of services is the most significant determinant of the overall effectiveness of an IS, user satisfaction and Service Quality (SQ) can be used to evaluate the effectiveness of the system as a whole. Figure 2 depicts the overall relationships in IS theory.

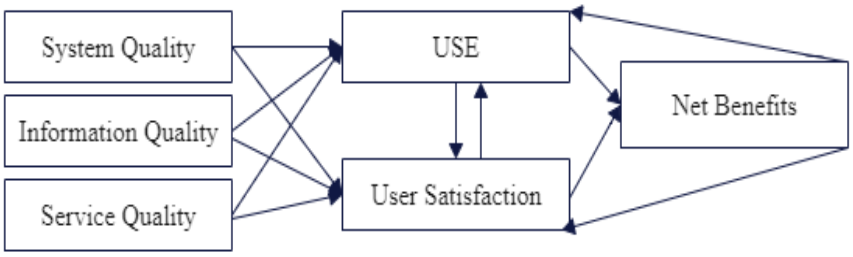

Fig. 2: IS theory.

The user satisfaction of TAM and the complexities of IDT are comparable in terms of performance expectancy. It illustrates how challenging it is for users to use a system. According to UTAUT, effort expectancy influences behavioral intentions significantly. When consumers believe that is simple to use and does not take a lot of time, they are more likely to achieve the desired results. The technological qualities will have an impact on effort expectation. The benefits of a system, including accessibility and timeliness, will authorize an individual to make financial intermediaries while saving time and effort. Moreover, the system offers fewer functionality and cleaner platforms as compared to the complicated platforms of E-CRM, which offer several features. This may make user actions easier. is simple to use for the average user. Several benefits will influence the subscriber's performance expectation. Furthermore, the task's technologies' fit influences an individual's behavioral intentions. Whenever a subscriber's responsibilities need quick, efficient, and ubiquitous payments will he or she consider them useful and increase his or her effectiveness?

2.3. Integrate updated DeLone & McLean mode (IS) and task technology fit (TTF-IS)

The D&M information Systems Achievement framework (DeLone & McLean, 1992) and the task technology fit model (Goodhue & Thompson, 1995) focuses on distinct perspectives and has various viewpoints on the impact of usage and presentation outcomes. Every framework focused on a particular approach, that can still be covered in its totality as well as a complexity of sorts of scenarios by a single model. Every framework has advantages and disadvantages, which are balanced & supplemented by integrating them. The D&M and TTF frameworks are complementary, which means that their integration is valuable for analyzing the impact of use contribution &

IS correction. Furthermore, by combining the two theories, flaws in each can be corrected effectively. for instance, lacks a lot of attention to how well technological attributes fit the job characteristics in the D&M model. TTF theories, on the other hand, need to consider system quality, information quality, or service quality in terms of E-CRM and individual satisfaction. Both theories' combinatorial variables contribute to our consideration of E-CRM utilization and performance outcomes. Figure 3 illustrates the typical IS-TTF framework.

3. Research Method

The current study methodology includes eight components, each of which was assessed using a selection of items. To maintain the content's authenticity, we assimilated the majority of our questions from available literature We proceeded in establishing novel items including both categories because there were no current questions for situational factors and relevant attributes. Firstly, we conducted a literature review to produce the basic questions for both categories. Secondly, we enlisted the help of three professionals to evaluate these things. We reviewed and updated several pieces of information based on their comments. Thirdly, we gathered information and performed an exploratory factor analysis to filter the elements. We also examined the dependability of both notions. Researchers acquired three objects for each concept after completing these three procedures. Three critical success factors describe three user success criteria: omnipresent email address administration, payment system and immigration, and real-time username and password inquiry. Several technological features describe qualities, which include accessibility, quickness, and security. (Al Amin et al., 2018) revised the items assessing task technology fit to represent the fit between digital payment performance objectives and services. provided the questions used to assess the four components of UTAUT and application performance. Achievement goal datasets contain enhanced payment ease and reliability while utilizing a system. Factors of perceived usefulness and perceived ease reflect the ease with which E-CRM can be learned or used skills. Records of impact on society identify the impact of significant persons.

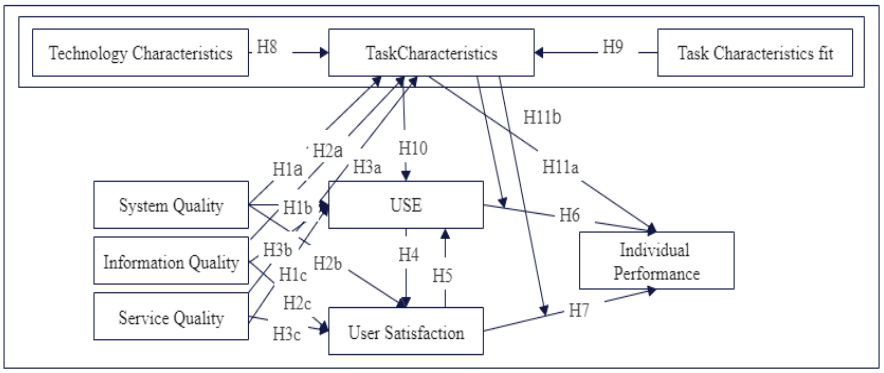

Fig. 3: IS-TTF framework.

4. Results

4.1. Pilot study

A pilot study has been conducted on the target population. The size of the pilot study range from 25 to 100. In this study, we have distributed 30 questionnaires to the employees working in the telecommunication company among its three branches. The questionnaire was designed based on 5 Likert scales, with the scale 1 indicated strongly disagree, while 5 indicated strongly agree. The respondent indicated their rating based on scale 1 to 5 for each question. This pilot study took around 15-30 minutes. Subsequently, the collected form is then analyzed by using SPSS software. The main aim of conducting a pilot study is to ensure that the structure is suitable for the examination before proceeding for a formal review (Hristov *et al.*, 2021). We distributed the form to 35 potential respondents; however, only managed to collect it back from 30 people. The demographic background of the participants is in Figure 4.

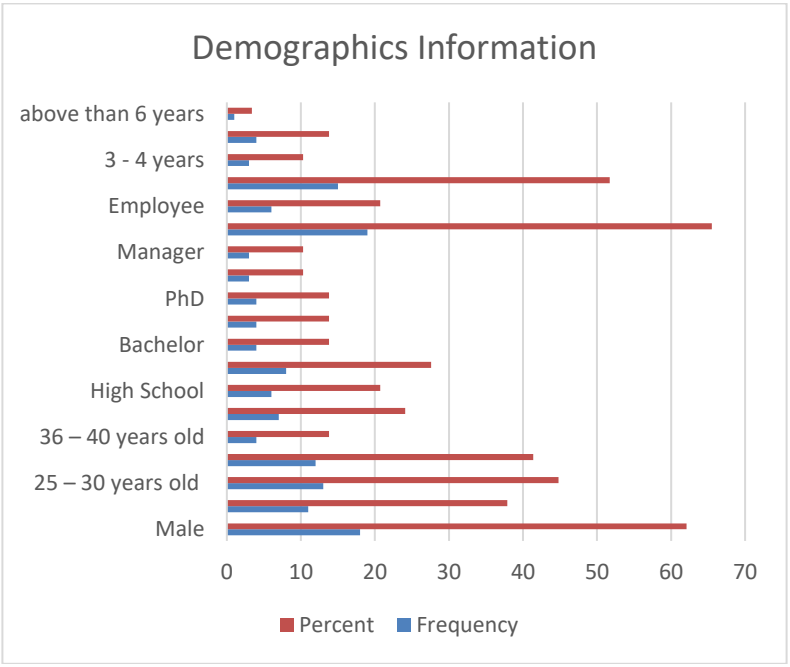

Fig. 4: Demographics information of respondents.

4.2. Common method bias (CMB)

Collected data through a self-recorded method often face the issue of mutual technique bias. In the current research, a self-record method (survey) was conducted to gather data. Consequently, Table 1 illustrated the common method bias was an issue. If a very variable explanation for more than 50% variance, then the data is said to have the issue of mutual technique bias. In this research, the total difference illustrated by

each variable was 23.234, which is lower than 50%. Thus, based on the results, the present data is free from the issue of common method bias.

Table 1: Analysis of common method bias (CMB).

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	23.234	36.879	36.879	23.234	36.879	36.879
2	4.226	6.708	43.587			
3	3.247	5.155	48.741			
4	2.645	4.199	52.940			
5	2.390	3.794	56.734			
6	2.255	3.579	60.313			
7	2.108	3.346	63.658			
8	1.679	2.664	66.323			
9	1.659	2.633	68.956			
10	1.509	2.395	71.351			
11	1.353	2.148	73.499			
12	1.309	2.078	75.576			
13	1.172	1.860	77.437			
Extraction Method: Principal Component Analysis.						

4.3. Coefficient of determination / R square (R2)

After assessing the path coefficients, both direct and indirect, the next step in the essential framework was assessing the Coefficient of Determination / R square (R2). R2 is the maximum universally utilized to estimate the fundamental framework explanatory power and epitomizes the exogenous suppressed construct's integrated effect on the endogenous latent constructs/factors. The coefficient is thus computed as the squared correlation between a specific endogenous variable's actual and predicted values. Table 2 shows human and social sciences research, the amount of R2 is evaluated as <0.09, ≥ 0.09-≤ 0.24, and >0.24 as weak, moderate, and substantial, simultaneously. In marketing and customer behavior research, R2 values of 0.24, 0.40, and 0.60 for endogenous latent factors, as the second rule of thumb, are defined as significant, reasonable, and weak.

Table 2: Coefficient of determination results.

No	R^2	Cohen (1988)	Chin (1998)	Hair et al. (2013)
1	0.639	Substantial	Substantial	Slightly substantial
2	0.719	Substantial	Substantial	Slightly substantial
3	0.616	Substantial	Substantial	Slightly substantial

4.4. Measuring the predictive importance Q square (q2)

In specific, the impact of the amplitudes of the exogenous variables (technology, organization, & User variables) on the endogenous variables (observe quality (PU), staffs contentment, and performance management process (IP)) was examined using Stone-Q2 Geisser's assessment's to evaluate the statistical significance or representativeness of the designed study framework. According to Hair et al. (2017), the blindfolding process must be one utilized by reflecting correlation coefficients and exogenous construct factors, with a focus on constructing cross-validated redundancies. The path-generated validity of the finding's power/relevance over a certain coefficient of determination is revealed by Q2 attributes greater than 0 for a specific reflective estimated parameter. Values of 0.35, 0.15, and 0.02, correspondingly, are considered to indicate substantial, moderate, and modest impacts when evaluating Q2. (Hair et al., 2016), relating to the relative measurement of the postulated model's predictive capability. Figure 5's findings demonstrate that all independent variables (technology, organization, and individual characteristics) have a significant forecasting accuracy and significance in the proposed methodology on the endogenous components.

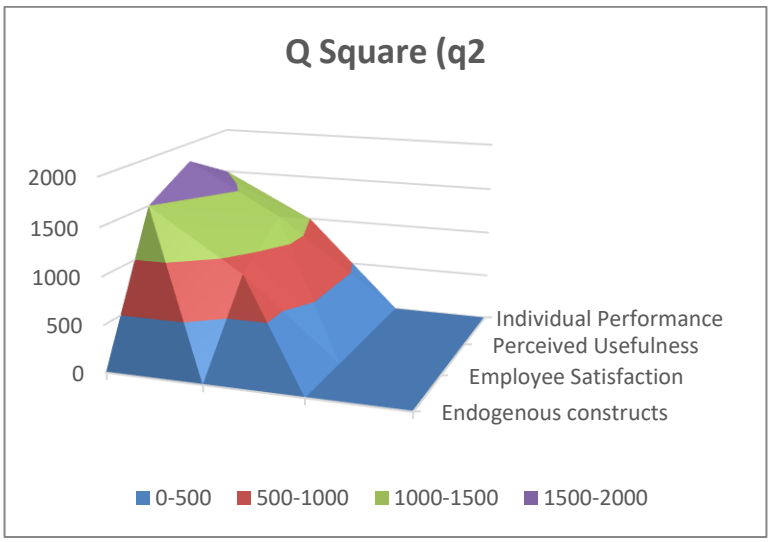

Fig. 5: Square (q2) experiment.

4.5. Importance-performance map (constructs, unstandardized effects)

Figure 6 shows the priority map. With regards to the unstandardized total effects of the proposed model, it can range the significant predictors as, (system quality, service quality, and information), and Individual variables (IF). To interpret unstandardized results in the map, it can be observed that there is one-unit improvement in employee satisfaction. In addition, it can be seen that in terms of the ease of use, the performance of employee satisfaction increased by 66.837 %, controlling the other constructs. In

terms of the Technology Factors (TF), there is an increase of 65.149 % of task technology, controlling the other constructs. In terms of Individual Factors, there is a performance increase of 64.910%, controlling the other constructs.

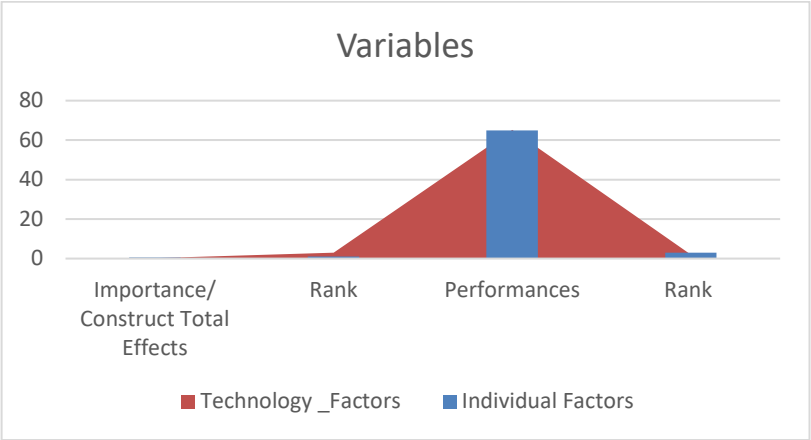

Fig. 6: Importance-performance map.

4.6. Level of significance of the reflective measurement model (second order constructs)

Second-Order Constructs refer to a model or G. Factor or strong theory that contains the theory and its sub-factors. In this research, the first G Factor is Technology Factors (TF) with System Quality (SQ), Information Quality (IQ), and Service Quality (SERQ). The second G Factor is Individual Factors (IF) with four subfactors: Easy to Use (EOU), Skills (SK), Computer Experience (CE), and Computer Self-Efficacy (CSE). As mentioned earlier, all loadings or relationships between all latently exogenous constructs or G Factor and their specific sub-factors are statistically significant as P-Value =0.000, critical value ($P \leq 0.05$), and T-Statistics is more than (critical value ≥ 1.964), that conclude that all sub-factors significantly contribute in shaping and modeling its latently G Factor (Figures 7).

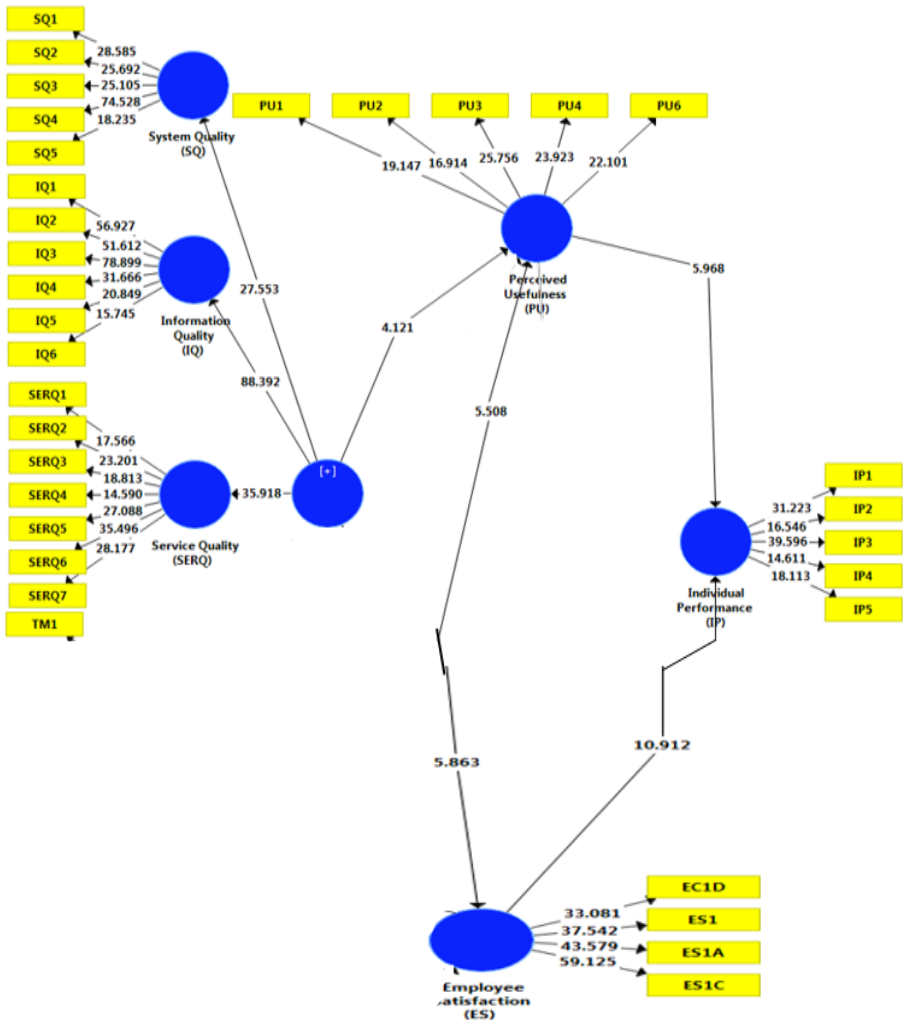

Fig. 7: Second-order constructs framework.

4.7. Employee satisfaction and perceived usefulness on individual performance

As illustrated in Tables 3, 4, and 5, Coefficients and Multi-Collinearity Statistics suggest that there is no evidence of significant multi-collinearity among the research predictor variables (Employee Satisfaction and Perceived Usefulness) as all tolerance values are greater than 0.20, and all VIF values are below 5. It is suggested that the variance of our predictor variables (Employee Satisfaction and Perceived Usefulness) explain in our dependent variable (Individual Performance) are not overlapping with each other. Likewise, the coefficients results provide usefulness results exactly there is a statistically significant relationship between a set of the independent variables (Employee Satisfaction and Perceived Usefulness) and (Individual Performance) as

T-Values are greater than 1.964 and P-Value =0.000 (less than 0.05). There is more confidence to say that the results of the next analyses will be robust and worthwhile. Additionally, the results in Table 4 denote to Model Summary, suggesting that the impact of Employee Satisfaction and Perceived Usefulness on Individual Performance is .613 (61%) a considerable effect size as it is larger than 0.60 (Chin, 1998). Lastly, the outcomes in Table 5 ANOVA suggest that there is a strong and statistically important relationship (F= 235.401, Critical Value = 1.964 and P=0.000) between a set of independent variables (Employee Satisfaction and Perceived Usefulness) and an independent variable (Individual Performance). Briefly, the multiple regression results reveal the second model is highly acceptable, emphasizing the validity of the main model of the current research

Table 3: Coefficients and collinearity statistics.

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	6.038	.689		8.761	.000		
	Perceived Usefulness	.088	.041	.125	2.163	.031	.390	2.563
	Employee Satisfaction	.487	.041	.682	11.797	.000	.390	2.563

a. Dependent Variable: Individual Performance

Table 4: Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783[a]	.613	.611	2.04987

a. Predictors: (Constant), Employee Satisfaction, Perceived Usefulness

b. Dependent Variable: Individual Performance

Table 5: ANOVA.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1978.295	2	989.148	235.401	.000[b]
	Residual	1247.985	297	4.202		
	Total	3226.280	299			

a. Dependent Variable: Individual Performance

b. Predictors: (Constant), Employee Satisfaction, Perceived Usefulness

5. Discussion

To the aimed to contribute, this is the first experimental study examining the relationship between the TTF and D&M modeling techniques, as well as the significant influence of Task technology fit on the use to individual effectiveness and employee contentment to user ability in E-CRM. Excluding H3a, H3b, and H11, our data suggest that our hypotheses are fully or partially validated. In our theory, the

utilization of E-CRM is reasonable to the quality of a system, quality of information, quality of service, and Task technology fit. The framework illustrates 56.9 percent of the variation in E-CRM use in linear regression (usage describes users' contentment) and 71.2 percent in equation 2 (employer satisfaction predicts utilization). Our theories about use obtained from system quality, information quality, and Task technology fit are usually confirmed. Only linear regression is evidenced, and service quality is not validated. When only the overall quality of E-CRM is considered to describe utilization, the findings are comparable to those published in related research. Our conceptual framework verifies the association between total E-CRM quality and users' happiness. The framework shows an 83.3 percent variance in users' satisfaction in model 1 and 71.8 percent in framework 2. There are various factors on the general advantage of the E-CRM system that improve employee satisfaction and, as a result, have a significantly positive influence on usage, which is equivalent to further research (Reinartz *et al.*, 2012). The conclusions, in particular, show how critical it is to improve system quality, information quality, and service quality, as well as the impact of these on user experience. TTF variance is explained by the conceptual framework 72.9 percent of the time. When compared to prior studies on E-CRM acceptance with task technology fit applications. our study had a higher predictive potential. These findings show that system quality, information quality, technological features, and task requirements all have a favorable impact on TTF. The empirical framework illustrates 77.9% of diversity in individual performance, indicating a higher statistical significance. Based on the findings, we contend that individual performance is affected by the need for user satisfaction. Furthermore, it indicates that TTF significantly predicts the association between E-CRM use and user experience in describing user tasks. The findings indicate that getting a great Task technology fit score suggests that the influence of usage on user performance will be higher, while the reasonable benefits of users' contentment on user performances' will indeed be narrower. If E-CRM individuals believe that they allow communication of their information to achieve, the user gains power but user satisfaction loses strength in evaluating performance outcomes. The article's theoretical and practical consequences are described in detail following.

From a methodological viewpoint, this research combines D&M with task technology fit to illuminate individual E-CRM effectiveness. We discovered that Task Technology Fit seems to have no significant impact on individual performance; nevertheless, when we compared the mediating impact of Task Technology Fit on utilized to user performances and human satisfaction with individual skills, our findings showed that task technology fit plays a critical role. The experiment's offerings are two-fold based on these findings: firstly, the finding contributes to the small domain of research on E-CRM individual performance. Most E-CRM research, to aim to contribute, focuses on the identification of users. This is a previously unknown domain of the E-CRM study. Secondly, while some structures have little or

no significant effect on one another, examination in conjunction with other hypotheses as a moderating effect can. This would increase the rationality of examining multiple consequences to reveal additional understandings. Concerning the influence of system quality, information quality, and service quality on need and employer contentment, the findings show that E-CRM users seem to be more inclined to utilize it if they are satisfied with it. Considering user satisfaction justifies utilization, the findings showed that the total quality of the E-CRM system has no important impact on usage. While previous research has emphasized the importance of E-CRM adoption, we develop the knowledge and understanding by recommending that contribution influences employer contentment and its correlation with E-CRM use in post-adoption behavior and attitude. We recommend that future scholars studying technology individual performance will be finding this experiment valuable. The integrated model introduced in this study should have been an adequate approach to assessing the determinants of technology effectiveness and could be used as a foundation for future research.

6. Conclusions

Because the E-CRM individual performance domain is indeed the primary main focus of this research, a previous research analysis was undertaken to identify issues and the best route ahead. Whereas most E-CRM research focuses on acceptance and perceived behavioral control, this study is focused on the adoption period. Addressing E-CRM customers would be as important as understanding the potential adopters. Our academic research tries to explain the determinants of utilized, individual satisfaction, TTF, and user performance by merging the D&M and task technology fit models, which integrate each other. In framework 1, the outcomes indicate that system quality, info quality, and TTF all have a substantial influence on E-CRM use (in that utilization illustration of individual satisfaction). The accuracy of the system, the quality of the info, and the quality of the service all have an impact on employer contentment. System quality, information quality, technological features, and task requirements all have a favorable impact on E-CRM TTF. The findings show utilization and employer contentment are key predictors of User performance, as well as the significance of TTF's moderating variable on need and users' satisfaction with user enactment. Furthermore, the utilization, user satisfaction, and mediating variable impacts of task technology fit gave higher accuracy to E-CRM user effectiveness, which is a significant factor in retaining E-CRM customers. As a result, we may understand more about how to assist E-CRM management teams in implementing tactics to continue to maintain users and indeed recruit future consumers. Researchers feel that scholars doing additional research on technology individual performance will benefit from this research, which could provide a further understanding of user development and behavior.

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