# The Adoption of System Theory by Markus (1983) On User Resistance Determinants of ERP System in Malaysia

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## ABSTRACT

*In nowadays, the use of technology for managing the information becomes crucial for most of the businesses. The phenomenon is complemented with the urge by the government for all enterprises to go digital in their day-to-day business processes. This has resulted in the increasing demand for information technology (IT) adoption, specifically the Enterprise Resource Planning (ERP) System. Consequently, the adoption has also led the increasing debate in relation to the issue of the system usage among the end-users, which is user resistance. The purpose of this paper is to provide the idea for revalidation of the factors for Malaysia employees to avoid from active use of ERP System by applying the System Theory.*

**Keywords:** *ERP; adoption; System Theory; resistance; Malaysia*

## INTRODUCTION

Kumar and Hillegersberg (2000, pp. 22) have defined ERP system as *"A configurable information system packages that integrate information and information-based processes within an across functional areas in an organization".* The implementation and adoption of the ERP system is to allow the enterprises to secure their competitiveness. Although the use of ERP system can be said as mandatory since employees unable to perform their job without the use of the system (Li, Liu, & Liu, 2016), however there are still many difficulties to ensure employees utilize the ERP system effectively. The difficulties are rooted from the phenomenon of acceptance or resistance of usage by the employees. It is proven from the statement made by Kumar (2013) that the ERP system usage in Malaysia is in dismissal state. Moreover, Enterprise IT News (2014) reported that, 63% of companies globally, that include Malaysia, are facing failure with ERP system usage. In the view of Malaysia economic environment, companies with MSC status are the prominent industry, notable in the business of technology or digital (New Strait Times, 2018). Therefore, does resistance also exists in MSC companies? How many percentage of MSC companies resist to actively use ERP system? Does the factors of resistance in MSC companies is due to the system factor? Therefore, this paper aims at drawing a map for future research in revalidating the determinants for end-users to resist from

using the ERP system actively by applying the System Theory. This paper may help future research to identify the size of resistance towards ERP system in MSC companies.

## LITERATURE REVIEW

### Enterprise Resource Planning (ERP) System

Many studies have found higher rate of ERP system implementation failure due to many challenges face by the firms. Among the challenges include inefficient technology planning; insufficient user involvement and training; limited budgeting and scheduling; and absence of adequate skills (Beheshti, Blaylock, Henderson, & Lollar, 2014). However, according to the prediction of Sreedhar (2011), the ERP system implementation will grow at 21% until 2015 (Beheshti et al., 2014). In addition, the market eventually started to focus on adoption of ERP cloud solution (Tekshapers, 2018). Therefore, with the never-ending change in the landscape of ERP system, it is important for the enterprises to learn from mistakes by adapting and staying relevant with the condition in relation to operation and risk management (Morgan, 2019).

### Development of ERP System in Malaysia

The introduction of ERP system globally including Malaysia, starts from 1960s, that is called Inventory Control Packages (Supramaniam & Kuppusamy, 2010). The technology was later known as Manufacturing Resource Planning (MRP) system (Radley, 2018). The MRP developed into MRPII and continue to evolved into MRPIII (WorkWise, 2018) in 1970s. Throughout the years, many leading ERP system software were founded such as SAP software, Lawson software and Baan Software. In the 1980s, the IBM System/38 and PeopleSoft's Human Resource Management System (HRMS) were introduced (Grant, 2000). In 1990s to 2000, all core business enterprises that include government and non-profit organization started to buy and installed the ERP system (WorkWise, 2018). In the year 2005 until today, the ERP system has become a great reliance for many areas in small and large enterprises (Noudoostbeni et al., 2009).

### User Resistance

Klaus and Blanton (2010, pp. 627), have defined resistance due to a system as *"A behavioral expression of a user's opposition to a system implemented during the implementation"*. Klaus and Blanton (2010) also posit that the emergence and the development of resistance behavior may take place during and after the implementation of the system. Due to this, user resistance becomes a severe plague to widespread among the adopters. Salih, Hussin, and Dahlan (2013) have found the factors of user resistance to be due to resistance of users towards change, changes in job responsibility, expectations, needed efforts increased, lack of training, lack of education, issues in the usability of the system, and resistance towards the use of technology generally, lack of involvement and lack of communication between the management of adopters and the users. Other factors include age, culture and bad experience (Hani & Mahadi, 2014). Therefore, it is proven that resistance among users is a well-echoed phenomenon in the literature of IT implementation or adoption (Ngafeeson, 2015).

## System Theory

As supported by. Markus (1983), to comprehend the possible origins for the users of IT to develop resistive behavior, it is necessary to identify and discuss on the reasons for resistance at the first place (Indalecio & Joia, 2018). Hence, this paper suggested for the application of System Theory proposed by Markus (1983) because; 1) the theory focuses on the reasons of resistance in the view of the system, which could become a simple red flags to be removed; 2) the theory has theorizing resistance based on the perspectives of individual when the they are connected to the system personally; and 3) the theory would be able to be a roadmap for ERP system adopters to understand simple and reasonable ways to overcome resistance. However, with the absent of specific tested names for factors of resistance in the theory, it allows for free selection of appropriate dimensions.

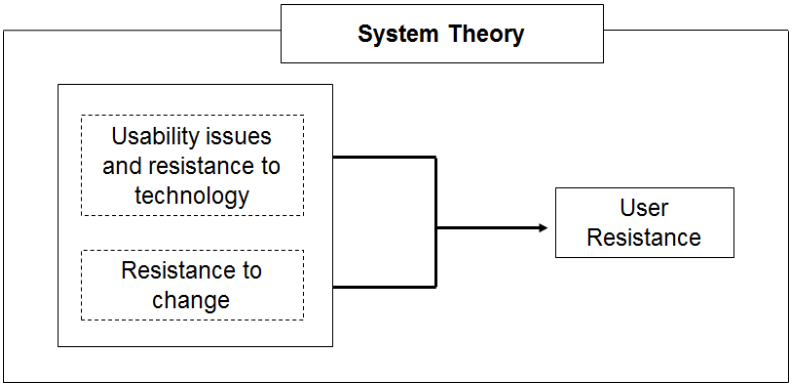


**Fig 1 Conceptual Framework. Source: Markus (1983).**

## SYSTEM FACTOR

Markus (1983)explained that resistance may emerge because of the technology-formed of factors. The factors include user interface available, performance from the usage, level of centralization, ease of use (Jiang, Muhanna, & Klein, 2000), usability issues and resistance to technology (Salih et al., 2013), quality of generated information (Bailey & Pearson, 1983) and system support (Ives, Olson, & Baroudi, 1983; Sanders & Courtney, 1985). In short, system factor illustrate the flaws of the system. The condition may have significant negative effect on the users. Therefore, it is suggested that the element of 'usability issues and resistance to technology' is tested. It is because the other elements (such as; user interface, usage performance, level of centralization, information quality and system support) can be collectively categorized as usability issues. Besides, an additional element of 'resistance for change' can also be tested as one of the system factor. Although Haddara and Moen (2017) denoted that system factor would be appropriately explain forces that available externally, according to Ainsworth (1977), the element may be also be classified under the factor of system. Therefore, the additional element, which was mostly tested under people factor, can be another element to fill the gap.

## RESEARCH METHODOLOGY

This conceptual paper is conducted through literature reviewing on the topic of resistance in relation to ERP system. For future research, this paper is suitable to apply a

sampling technique of simple random in selecting sample firms, which allow every sample to have equal chances of being selected. Since this paper is based on the perspective of the users, the unit of analysis should be the individual, where one employee in the MSC status companies will be the representative in providing responses in self-administered online questionnaires. One of the possible medium to obtain the listing is from the Malaysia Digital Economic Corporation (MDEC) Directory. It should also be noted that the employees should have the criteria of; 1) having authority to make management decision; 2) having ERP system literacy; and 3) frequent users of the system. The variables can be measured using 5-point Likert scale with 1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A) and 5=Strongly Agree (SA). The analysis of data may involve the use of SPSS as a statistical tool.

## CONCLUSION

This paper would be able to assist future research to identify the readiness of Malaysia companies, notable the companies with MSC status, in achieving government's aspiration towards digitizing enterprise business processes through the adoption of ERP system. Moreover, this paper may also become a roadmap to the future research in developing the framework of System Theory to be applied in analyzing the prominent issues of ERP system to arise nowadays. Therefore, the results obtained based on the System Theory can be used as a roadmap, specifically for MSC companies, to take productive corrections.

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