Impact of ERP System Characteristics for the Business Performance of Manufacturing Companies in Sri Lanka

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Having an ERP system in a company has been identified as a mandatory requirement needed to enter the industry. Since it costs a larger amount of the budget, decision of selecting a suitable ERP system for a company was identified as a critical decision, because, it has been fact that, some companies have undergone failures in implementing ERP systems. The ambiguity of the results of previous studies conducted to identify impact of ERP systems for the performance has been demotivated most of the new ERP adopters.

Therefore, a study which identifies a method which can be used in ERP selecting process has identified as an important requirement in the industry. This study was conducted to identify the impact of the ERP system characteristics for the performance of manufacturing companies in Sri Lanka. The objective of the study was to identify the linkage between ERP characteristics and performance measures and come up with a framework to help in the ERP selecting process. The population was Manufacturing companies in Sri Lanka. Sample was manufacturing companies which have already adopted ERP systems. Eight ERP characteristics and five performance measures of companies were identified from a through literature review. A conceptual model was formed with that data. Based on that twoLikert scale questionnaires were developed for ERP management staff and ERP users. The survey was conducted, after making amendments to the questionnaire according to the feedbacks from the pilot survey. Data analysis was done using SPSS.

Using Spearman's correlation, it has been identified that there's a 65.4% of correlation of coefficient at 99% level confidence levelbetween ERP system characteristics and the company's performance, which implies that ERP characteristics have a significant impact for the performance of the company.After that correlations between each independent variable and the dependentvariables wastested to identify the correlation of each selected ERP characteristic with the selected performance measures.From a Pearson's correlation test conducted,it has been identified that correlation between independent variables itself is higher. To reduce the effect of these correlations, a factor analysis was conducted. Since the threshold value of cumulative percentage is 80% and by using three components 82.249% of total variables are retained. Those three principal componentsderived from eight ERP characteristics wererenamed as ERP vendor characteristics, ERP customizable characteristics, ERP flexibility. Multiple Regression test was done with each derived principal component with each dependentvariable. From that most correlated ERP characteristic for each performance measure was identified. Finally came up with a framework of set of factors which can be used to identify the ERP characteristics which impact the performance of the company.

Keywords: ERP Systems, Performancemeasures, Manufacturing Companies, ERP Characteristics; ERP Selection"

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