

Analyzing Factors that Impact on Performance of Pickers in Third-Party Logistics Warehouses in Sri Lanka

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Abstract - Order picking is the most crucial and expensive operation in a warehouse which affects customer satisfaction and the profitability of the warehouse. Picker is the employee who is responsible for the order picking process. So, picker performance is very important in improving the overall performance of the warehouse. Therefore, identifying the factors that have an impact on the performance of the pickers is advantageous. The main objective of this research is to identify the relationship between factors that has an impact on picker and picker performance through the Partial Linear Square – Structural Equation Modelling (PLS-SEM) technique using SmartPLS software. Initially, the most important twelve factors were identified by reviewing the past literature and industry experts' opinions. They were divided into three main categories based on the characteristics and to reduce the complexity of the model which are picker-related factors, management-related factors, and warehouse-related factors. The data analysis was done in two steps to discover direct and moderator relationships, separately. The product type that the pickers handle is the moderator used in this study. The results of the PLS-SEM analysis show that picker-related factors and warehouse-related factors have a significant impact on picker performance at the significance level of 0.05, while management-related factors have a significant effect on picker performance at the significance level of 0.10. Further, the product type moderates all three relationships. The outcomes of the study help the managers of the warehouses to improve the performance of the pickers so that the overall performance of the warehouse can be improved.

Keywords - 3PL warehouses, order picking, picker performance, PLS-SEM