

Advanced Manufacturing Technology (AMT): A cross-sectional study in Electrical and Electronic Firms in northern region of Malaysia

ABSTRACT

The purpose of this study are to determine: (1) the frequency of use of advanced manufacturing technology (AMT) in electrical and electronic firms across northern region of Malaysia, (2) which AMTs have the greatest perceived impact on producer's value, and (3) which has been most successfully employed? The study population is consisting of senior manufacturing executive's in electrical and electronic firms located in northern region of Malaysia. The study addresses the senior manufacturing executives' perceptions how well specific AMTs have achieved the expectation of the firms implementing them. They are selected as respondents because of their understanding of the technology and their effects, and because as top manufacturing decision makers, their opinions are likely to shape the technology future of the organization. This study found that (1) the most frequently used AMT is computer-aided design (CAD), used by 81% of the respondents followed by Just-in-Time (JIT) and Automated Process Inspection (API) with 75% used by the respondents, the other AMTs are used at least fifty percent or less by the respondents and ROBOT is found to be the least used AMT. (2) AMT that perceived greatest impact on producer's value is Flexible Manufacturing System (FMS), due to it's high effects on two dimensions of producer's value: quality and cost. (3) Just-in-Time (JIT) is found to be the most successfully employed AMT among respondents. The findings of this study are significant as they contribute to the AMT literature especially in the context of Electrical and Electronic firms.