

Dynamic modeling of business process performance

ABSTRACT

Net profit business process is an accounting process as a function of revenue and cost. Profit is an appropriate performance measure and accounting profit is the institutional formula that constitutes the selection criteria for being in business. However, profit is a complex business process, not regular and its behavior may range from simple to very complicated. Generally, it is necessary to provide management with important financial data useful for decision making. The objective of this paper is to introduce a dynamic model to understand and analysis the net profit of accounting business process and to measure changes in relative and absolute operational performance by including time. In order to understand and examine the model, a net profit index is developed to measure the net profit changes. The dynamic mathematical model is verified and tested on the revenue and costs of five firms in bursa Malaysia over the period of 2008 to 2017. The result indicates that net profit index equals zero when revenue is greater than costs or revenue is less than costs, and index is one when revenue equals costs over the periods of time. Consistent with these arguments, the success of such model depends mostly on the expression modality of objective function and constraints in mathematical equations. Mathematical models do not have to be precise; they just have to be approximate to give better results of the real problem.

