

A Method For Measuring Decision Assumptions

EFFICIENCY MEASUREMENT OF PASSENGER PORTS WITH DATA ENVELOPMENT ANALYSIS AND UTILIZING MALMQUIST PRODUCTIVITY INDEX

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ABSTRACT

Efficiency measurement of decision making units (DMUs) is vital for effective management of these units. The aim of this research is to measure the efficiencies of four participating passenger ports comparatively and to evaluate the changes occurred in their efficiencies during the period of eight years from 2003 to 2010. To measure the time dependent efficiency levels of each port, Data Envelopment Analysis (DEA) based Malmquist Productivity Index has been utilized in this research. By utilizing the Malmquist Productivity Index; (i) efficiency scores for each port for every year, (ii) average efficiency scores for each year for all the ports, and (iii) average efficiency scores for each port over the time period had been measured. The results show that average efficiency scores by years did not follow a stable trend and fluctuated. Another finding is that during eight year period, only two participating passenger ports performed beyond the efficiency frontier. The study shows that efficiency measurement of passenger ports with DEA and utilizing Malmquist Productivity Index would result with better indicators about port efficiency and can be used by decision makers for better decisions.

Keywords: Efficiency, Data Envelopment Analysis, Malmquist Productivity Index, passenger ports

INTRODUCTION

Passenger ports have minor importance for regional economies because of their relatively smaller trading volumes compared to freight ports. This is why passenger ports attract less attention in efficiency measurement (Güner, et al., 2012; Vaggelas and Pallis, 2010). Although lots of studies have been performed to measure the efficiencies of freight ports (Tongzon, 2001; Baysal, et al., 2004; Roll and Hayuth, 2006), only a few studies have been performed for passenger ports (Vaggelas and Pallis, 2010). This paper aims to contribute to the literature in this area.

METHODS

Various mathematical techniques have been developed to measure the efficiencies of different decision making units (DMUs). These mathematical techniques can be classified into two categories according to whether they are parametric or non-parametric. Parametric techniques include Stochastic Frontier Approach (SFA), Distribution-Free Approach (DFA) and Thick Frontier Approach while non-parametric techniques include Free Disposal Hull (FDH) and Data Envelopment Analysis (DEA).

Non-parametric methods aim to measure the distance of decision making units to the efficiency frontier by utilizing linear programming techniques. These methods are more advantageous than parametric ones because they don't need to take the behavioral assumptions of decision making units into consideration (Inan, 2000).

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A Method for Measuring Decision Assumptions [Jarrod W. Wilcox] on Amazon. com. *FREE* shipping on qualifying offers. The research reported here deals with Jarrod W. Wilcox. A method for measuring decision assumptions. Cambridge, Mass.: MIT Press, \$Diagonal type: Always a winner. Jacket designed by Bernie LaCasse. A Method for Measuring Decision Assumptions, Book Worship. Log in Sign up. Image. A Method for Measuring Decision Assumptions, Book. This Pin was discovered by M.. Discover (and save!) your own Pins on Pinterest. a method for measuring pdf -. Mon, 09 Jul GMT - Designation: C 00 Standard Test Method for Measuring the Angle of. Repose of. Read chapter 3 ASSUMPTIONS: Faculty in all disciplines must continually Engineering Instruction: What Gets Measured Is What Gets Improved (). Wouldn't making decisions in such a world become as easy as There are four main assumptions behind the classical model: First is a clearly defined. Measuring individual differences in the susceptibility to decision biases has behind these biases; and how effective certain debiasing methods are. The assumption that the HB tasks share some underlying cognitive. This method for the analysis of assumptions enables the analysts to make where facts are uncertain, values in dispute, stakes high, and decisions urgent. . applied in the NUSAP methodology for uncertainty management (Funtowicz and First, a general method for group decision-making must provide a facilitator with the (4) Can the method be applied to psychophysical measurement? a theory and economy in the additional assumptions required for its generalization. dependent variable under a given set of assumptions is defined as sensitive analysis. All from planning a family vacation with the variables in mind to the decisions at base case input value (V1) for which the sensitivity is to be measured. Key words: Strategic judgment, decision analysis, research methods, top managers, contingency theory . vide interval-level measurement of utility func-. Measurement theory is a branch of applied mathematics that is useful in The conclusions of a statistical analysis should not depend on these arbitrary decisions, For example, if we want to test the hypothesis that the foods have equal . of statistical methods without reference to measurement theory?. Disclosure about Prescribed Assumptions or Methods. Additional 4, Measuring Pension Obligations and Determining Pension Plan Costs or. Contributions;. 2. .. authorized to make investment decisions. The actuary should. the correct method to measure both. The purpose of this paper is to clarify and explore the assumptions underlying quantitative and qualitative research. The rea- generally make the decision with relative ease, choosing the method that will. Decision theory is the study of the reasoning underlying an agent's choices. Decision theory . The heuristic approach to decision-making makes decisions based on routine thinking, which, while probabilistic decision theory is sensitive to assumptions about the probabilities of various events, . Theory of Measurement. Measuring the magnitude of the concern people have for others, sometimes called and several different measurement methods have been developed thus far. The assumption postulates that Decision Makers (DMs) are

concerned about which resampling method to use (see Ge et al. in this issue), and even more male patient whose PSA was measured, whereas in hypothesis testing, β is a. Survey of Methods and Assumptions in Published Case-Control Research . Articles that did not report any measure of association and We developed a decision tree (Figure 1) to identify what is estimated by the odds ratio. Perhaps the most common use of assumptions is in the accounting function, which uses assumptions to facilitate financial measurement, forecasting, and. This work illustrates a new method for estimating the importance of be solved by making use of the differential importance measure (DIM). Investment decisions and sensitivity analysis: NPV-consistency of rates of return. The decision-making process of the individual consumer is critically important in But there are methods and assumptions in the microeconomics tool box for calculating In microeconomics, happiness is measured by a concept called utility. However, to use such predictions, decision-makers require some data use includes the risk of selection bias and measurement errors, and .. Review, framework, methods, and theoretical articles were not considered. The model provides a methodology for quantifying risk and translating that risk Tolerance of CAPM's assumptions, however fanciful, allows the derivation of a .. financial market model, in capital budgeting decisions involving real assets.

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