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## Understanding the Total Value of Information Technology Services from the Perspective of Students and Academic Staffs

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#### Abstract

Today service providers are more focused on the value produced by delivering information technology (IT) services, rather than focused on the procurement of IT services. The value from the two perspectives: service providers and service consumers, contribute to the total value of IT services namely Total Value Orientation (TVO). This study focuses on understanding the total value of a key operational service in educational sector, i.e. academic online (SIM Akademik), from the perspective of academic staffs as service provider, and students as service consumers. The goal of this study is to find factors that contribute to the delivery of value from each perspective. In order to find those factors, a conceptual model of TVO was adopted and implemented by collecting data using different questionnaire assessments for each perspective. Then the questionnaire results served as inputs for understanding the relationships between factors on the conceptual model by applying the partial least square (PLS) technique using SmartPLS software. This study results in factors that are perceived well by students and academic staffs. Students understands that service quality is the most important factor while academic staffs understands that technology transfer factor is important for the delivery of service value of academic online (SIM Akademik). Some recomendations are proposed, e.g. optimizing the capacity of server infrastructure and managing access schedule for users when performing course enrollments in order to minimize the impacts from server down due to many users accessing SIM Akademik.

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Keywords: Information Technology Services; Total Value Orientation; Service Provider; Service Consumer

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#### 1. Introduction

There has been a paradigm shift in managing information technology (IT). Nowadays, business demands IT services to support their business process, rather than managing their own infrastructures, software applications, and data/information [1]. In educational sector where its core business process is academic activities, IT services are important to support transactional activities, e.g. facilitating course enrollment, recording student achievements [2]. To improve the service quality, the value of delivering this academic online (SIM Akademik) service shall be understood from the perspective of service providers and service consumers [3].

When delivering the value of IT services, a service provider manages the operation of IT services. In the case of academic online service (SIM Akademik), academic staffs are responsible in managing these services. Meanwhile a service consumer demands a service to support their activities. The enduser of an academic online service (SIM Akademik) is students who perceive value of the IT service. The case study employed in this research is the academic online service (SIM Akademik) provided in Institut Teknologi Sepuluh Nopember (ITS). The service provider of SIM Akademik is the staff of BAKP (Biro Akademik Kemahasiswaan dan Perencanaan) which is a business unit handing of planning and academic services in ITS; while the service consumers is undergraduate students in ITS.

This research focuses on understanding the value from both perspectives of service providers and consumers, i.e. BAKP staffs and students respectively. The conceptual model of value is taken from Bhagat et al. [4] that introduced a total value orientation (TVO) framework. The idea was to understand the value of IT services by looking at both perspectives of service providers and service consumers, while former research only focuses on the usefulness of a service based on the user's perception of what he has received and which has been issued [5].

Prior the implementation of the conceptual models, two sets of questionnaires are designed – each of which represents the perspective of service provider and service consumer. The data collection from distributing the questionnaires serves inputs for understanding relationships between factors on the conceptual models for understanding TVO from the perspective of service provider, and from the perspective of service consumers. The result from this study may serve a preliminary understanding toward what factors can contribute to the delivery of value from IT services.

The rest of the paper will be organized as follows. Section 2 provides more information on the TVO framework employed in the study while Section 3 deals with a sequence of method conducted to understand the factors driving the TVO from the perspective of service provider and of sevice consumer. Section 4 describes the research results, while Section 5 underlines several findings from the research.

#### 2. Total value orientation framework

The Total Value Orientation (TVO) Framework lies on the concept of value from delivering information technology (IT) services. According to Zeithaml [5], the value is defined as the value of low price services; while Byramjee et al. [3] defines value as the profit that customers get from the expenses to get the goods or services. Rahayu [6] added that the value received by service consumers may lead directly to a feeling of overall user satisfaction. Herdiyanti [7] also underlined that the value can be understood from the two perspectives, i.e. service provider and service consumer.

Total Value Orientation (TVO) is a framework (as depicted in Fig. 1 that captures all values from the perspective of service consumers and service providers that can later be the ultimate judgment of a service for the end-user [4]. From the perspective of service consumers or users, there are several factors that drive the value of IT services, i.e. Service Quality, Profitability, Productivity, Reduced Communication, Reputation, Operational Know-how, Specialization and Core Competencies, Product Reengineering, New Personnel, New Infrastructure, Search, Information Acquisition, Negotiation, Monitoring/Control, Dependency on Provider, and Opportunism. The value of IT services from the perspective of service provider is driven by the following factors: Technology Transfer, Additional Revenues, Intellectual Capital, Responsiveness, Economies of Scale, Exposure to New Workflows, Access to New Markets, Optimal Workforce Utilization, Reduction of Competition, Transaction Cost, Dependency on Client, Reduced Flexibility, Adherence to Clients Requirements, and Loss of Operational Control.

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