A Short Overview of Services Sciences

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Introduction

The services industry continues the fastest growing sector in most economies, including developed economies such as the U.S. economy and emerging economies such as China [1, 2]. Service activities are becoming more and more diversified. Services vary from individual (medical, legal, financial service) to firm (consulting, design and outsourcing) to national (military, health and strategy). Individual services are relatively simple. Firm services are complex, and are typically characterized with the unit purchase and management within a firm network. National services are much more complex. Rigorous analytical models offer opportunities to manage the process of productivity improvement more efficiently in services.

Over the past several decades mathematical models of traditional manufacturing and logistics systems have been developed and used for both strategic planning and operational decision-making. This has led to widespread use of various mathematical models and information technologies to improve service management and productivity.

This short overview describes some of the characteristics of services sciences and research issues for service process support that could be addressed through the use of management science methods.

What is Services Sciences?

The definition of services sciences is still under debate. According to the Service Management Interest Group at the Harvard Business School, the main differences between services and manufacturing lie in four perspectives: (1) services are often marketed and performed by the same people; (2) services rarely can be inventoried in conventional ways; (3) services present special problems of quality control in a real-time delivery environment; and (4) services benefit from creative human resource management [3]. The research division of IBM used the term “Services Sciences” to refer to “Service Science, Management, and Engineering (SSME)”[4]. This term includes both the service industry and service in the manufacturing industry. SSME has been defined as the application of science, management, and engineering disciplines to tasks that one organization beneficially performs for and with another. In a word, Services Sciences are about the adoption of scientific methods and tools in service sectors in order to serve the services. This has become the focus of a great deal of research as well as practice in recent years.

Research Topics in Services Sciences

Services sciences are about the adoption of scientific methods and tools in service sectors and thus involve a broad range of research topics. Some research issues are still under debate and remain undefined. These research issues range from traditional operations management research topics found in services to modern risk service management topics and to electronic services. Table 1 lists some traditional and unique topics in services sciences. These topics summarize those from [5, 6]. With the advent of the Internet and

emergence of data services, two areas (service data management and e-service) are critical. The former is often about data mining applications in services and the latter is about the adoption of information technology, especially Internet technology, in services.

Table 1: Research topics in services sciences

Traditional Topic	Project management	Location	Scheduling	Quality management	Service Forecasting	Service marketing	Service operations
Unique service topics	Yield Management	Customer Facing Information Technology	Managing the Service Encounter	Managing Customer Queues	Growth and Expansion	Service data management	E-service

Information on these issues can be found from the following new journal, *International Journal of Services Sciences (IJSSci)* http://www.inderscience.com/ijssci, which provides the primary forum for both academic and industry researchers and practitioners to propose and discuss state-of-the-art research and development in the areas of services. *IJSSci* is affiliated with RiskChina Research Center at University of Toronto. The RiskChina Research Center(RCRC, Chinese Domain: www.riskchina.org) at the University of Toronto is an institution affiliated with RiskLab Toronto (part of the international network of RiskLabs sponsored by Algorithmics) which was founded in 1996 to conduct activities in financial risk management, often times in collaboration with industrial partners. RCRC aims to promote collaboration moving toward greater understanding of China based on in-depth research and experience. The Center draws much if its expertise from the universities around the world, working collaboratively across institutions and jointly with the public and private sectors. The universities currently represented are the University of Toronto, University of Chicago, University of

Nebraska Lincoln (USA), Ryerson University (Toronto), Munich Institute of Technology (Germany), Universidad Autonoma de Madrid (Spain), the International Management Center in Nicosia (Cyprus), the Universidad del Pacifico in Lima (Peru) and many others in South America.

References

[1]. Bryson, John, Peter Daniels, and Barney Warf, 2005, "Service Worlds: People, Organisations and Technology," Routledge Publishers, Andover, U.K.

[2]. http://www.research.ibm.com/ssme.

[3]. www.hbs.edu/units/sm/Mission.html.

[4]. http://www.research.ibm.com/ssme/

[5]. J. A. Fitzsimmons. Curriculum and Research in Service Operations Management. Decision Line, December/January 1999

[6]. Aleda V. Roth, Larry J. Menor. 2003, Insights into Service Operations Management: A Research Agenda 12, 145-164.