Service Science, Quo Vadis?

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ABSTRACT

The world is dominated by service-based economies. The service sector in developed economies accounts for over 75% of economic activities. The industrial and agrarian economic activities amount to around 20% and 5%, respectively. Despite their dominant position, services are the least studied part of the economy. This is partly attributed to the complexity and diversity of services, and inherent difficulties in providing a comprehensive theoretical foundation with well-defined concepts, tools, methods, and practical implications. Service science is an emerging discipline that fills in the gap. It is an interdisciplinary endeavor bringing together economics, management, engineering, and information and system sciences. The authors present a concise historical account of the development of economic activities leading to the present body of services. Aspects of service diversity and evolution are addressed. Scientific approaches to elucidation of services are overviewed. They are organized into four logical categories and examined from both macro and micro-level viewpoints. The emerging service science requires effort in synthesizing partial knowledge from individual disciplines and encompassing both micro and macro characteristics of services. A future perspective on service science is also offered.

Keywords: Multidisciplinary Science, Service Classification, Service Science, Service Sector, Services, Three-sector Hypothesis

1. THE DEMAND FOR SERVICE SCIENCE

Service-based economic activities dominate the world economies. It is a *de facto* signature characteristic of developed economies. Their service-related economic activities account for over 75% of gross domestic product. Service orientation is becoming increasingly evident in developing economies as well. Significant number of developing economies has service-related economic activities in excess of 50%. Similar statistics are observable also in employment data. Service sector employs the majority of productive work force (Figure 1).

Despite the overwhelming statistical evidence, the services have been the least studied part of the economy. The study of services has been systematically underrepresented in research and academia—in both private and public establishments. More attention has been paid to industries and agriculture, while services have been generally sidelined as the 'other economic activities'. This momentum has

Figure 1. Employment growth in service sector (1965-2005) [Source: US Bureau of Labor Statistics]
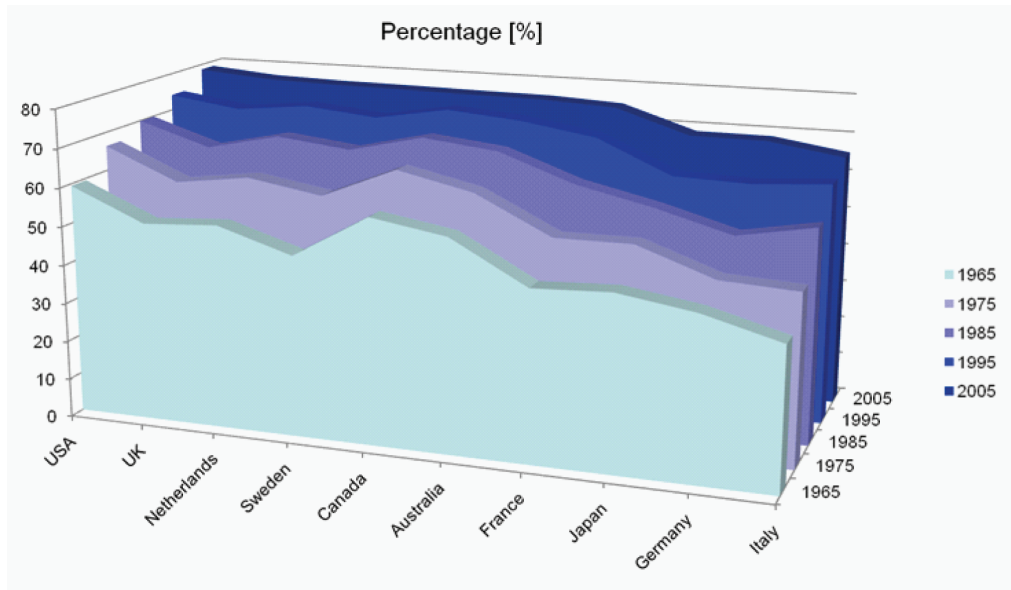
been maintained practically since the industrial revolution. It is principally inappropriate given the present state of the issues.

Dominant service sector and its increasing economic significance necessitate focused inquiry. Concentrated elucidation of services should provide novel understanding, methods, and tools indispensable for further progress. The need for scientific inquiry into services is eminent in several domains spanning from academia to policy-making:

- **Research:** Conventional research approaches extended from 'manufacturing angle' are insufficient in comprehending the wide-ranging spectrum of services and service related activities (Vargo & Lusch, 2004). Novel scientific frameworks and methods need to be developed. The research into services requires interdisciplinary approaches, both synthetic and analytic.
- **Education:** Educational institutions need to produce professionals that are ready to meet and adapt to the real world challenges (Witner & Kellogg, 1999). They should offer programs that educate new professionals with service-oriented mindsets. To do so, they need to draw extensively from advances in service research.
- **Business:** Success in an increasingly competitive environment of service dominant economies requires new thinking, skills, and strategies. Businesses cannot afford to downplay or ignore services (Karmarkar, 2004). Winning in business will require effective symbiosis with services and closer collaboration with academia.
- **Government:** Maintaining social progress, economic growth, and rising living standards entails pursuing effective policies. Beneficial policies must account for outcomes in the dominant service sector. This demands active knowledge of services and constructive involvement with academia and businesses.

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