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<b>Title</b>	Professional Service Operations Management : sustaining the discipline?
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<b>Type</b>	Conference or Workshop Item
<b>URL</b>	This version is available at: <a href="http://usir.salford.ac.uk/id/eprint/57187/">http://usir.salford.ac.uk/id/eprint/57187/</a>
<b>Published Date</b>	2016

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# Professional Service Operations Management: sustaining the discipline?

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## Abstract

Operations management (OM) theory suggests that professional services have some distinct operational challenges. There is an emerging consensus that professional services are changing, due to the socio-economic and political climates in which they operate. In order to investigate these issues a systematic literature review was undertaken. This paper makes a contribution by exploring the OM literature encompassing two decades of publications in terms of value, in relation to operational effectiveness within the ‘professions’. The analysis of the sample suggests a potential methodological mismatch between the core theoretical frameworks, exploring features of effectiveness and efficiency across the professions. This paper makes a contribution through a reflection on theories in the area of Professional Services Operations Management.

**Keywords:** Professional Service Operations Management, Literature Review, Knowledge Intensity, Operational Processes

## Introduction

Professional Services Operations Management (PSOM) is perceived as labour intensive, differentiating between the levels of customization and the degree of service variation within the service offerings and actual process design (Schmenner, 2004). There has been a growth in service operations management research (Bamford et al, 2015), and professional services are increasingly appearing at the forefront of research agendas. For example, Radnor et al (2014) argue that services have moved away from product-dominant logic and can embrace

the experience, inter-organizational, and systemic nature of public services delivery along with the role of the service user as a co-producer. For example, the healthcare sector has exploited OM from a professional campus perspective (van Rooij & Merkebu, 2015). In addition, the more traditional PSFs have realised the potential benefits and adoption of OM theory and practice, as evidenced by papers found during the literature review from education, engineering, health, legal maritime, military, and the public sector. Professional Service Firms (PSF) are defined by Von Nordenflycht (2010) as: i) Classic PSFs (e.g. law and accounting firms) - characterised by a high knowledge intensity, a professionalised workforce, and low capital intensity; ii) Professional campuses (e.g. hospitals) - characterised by a high knowledge intensity, a professionalised workforce, and high capital intensity; iii) Neo-PSFs (e.g. management consultants) - characterised by a high knowledge intensity and a low capital intensity; iv) Technology developers (e.g. R&D firms, biotechs) - characterised by a high knowledge intensity and a high capital intensity. Lewis and Brown (2012) highlighted that PSFs have less variable and faster throughput processes – creating a significant opportunity for commoditization when seeking greater efficiency and effectiveness.

Despite the discovery of these factors, most of the published research in service operations management appears to have neglected the needs of PSOM and there is no major systematic literature review supporting these observations. Our aim of this paper is to presents a comprehensive literature review of published material relating to the impact and value PSOM thinking, focused around the two following research questions: RQ1: To what extent is PSOM thinking expected to enhance PSFs through efficient process, capacity planning, process design resourcing and value? RQ2: How can the PSFs be efficient with the rapid adoption of new service models from new market entrants? The paper contributes to varying perspectives of the knowing-doing gap within the Von Nordenflycht (2010) taxonomy of professional services. The intention of this research is to advance understanding into PSOM, and examine how OM theory is underpinning the discipline. The paper is structured as follows: first, a brief description of the context of the study and consideration of the features of PSF organisations that make it an interesting area of study is provided by Von Nordenflycht (2010). Second, the systematic literature review methodology is described in detail. Third, the main findings from the review are presented by synthesising the literature on PSOM. Fourth, a research agenda is developed and finally the paper concludes by considering the opportunities for OM theory development through experimental research in PSOM settings.

## **Methodology**

In order to address the research questions, a systematic literature review was undertaken. Two decades of OM publications were reviewed in terms of value, in relation to operational effectiveness within numerous professions. To start identifying relevant publications a key words search gravitating around the terms of service operations, professional services, sector/discipline, service design, service modularity, and service network within the PSOM context were performed. In total 586 articles were identified has potentially relevant. The abstracts of these 586 articles identified from a database search were examined and, of these, 191 papers were put forward for full paper review. 395 papers were excluded based on their title and / or abstract (Kauppi et al., 2013). Finally, another 137 articles were excluded based on the full text assessment. Hence, in totally, 54 papers were included for the literature synthesis. These 54 papers have been categorized via the Von Nordenflycht (2010) taxonomy are presented in figure 1, under classified headings: Classic professional service firms, Professional campuses, Neo-Professional and Technology developers as per the literature definitions. To develop the findings each category was analysed separately in term of authors,

year of publication, journal, country of research and methodology. Each article was reviewed through content analysis by scanning the entire document for discussions of the PSOM concepts, frameworks and specific cases supporting technologies that underpin PSOM thinking. Data was then recorded in an Excel spreadsheet. The panel coded the papers independently. The following section, will present the findings of the systematic literature review, with only the key papers identified under the via the Von Nordenflycht (2010) taxonomy.

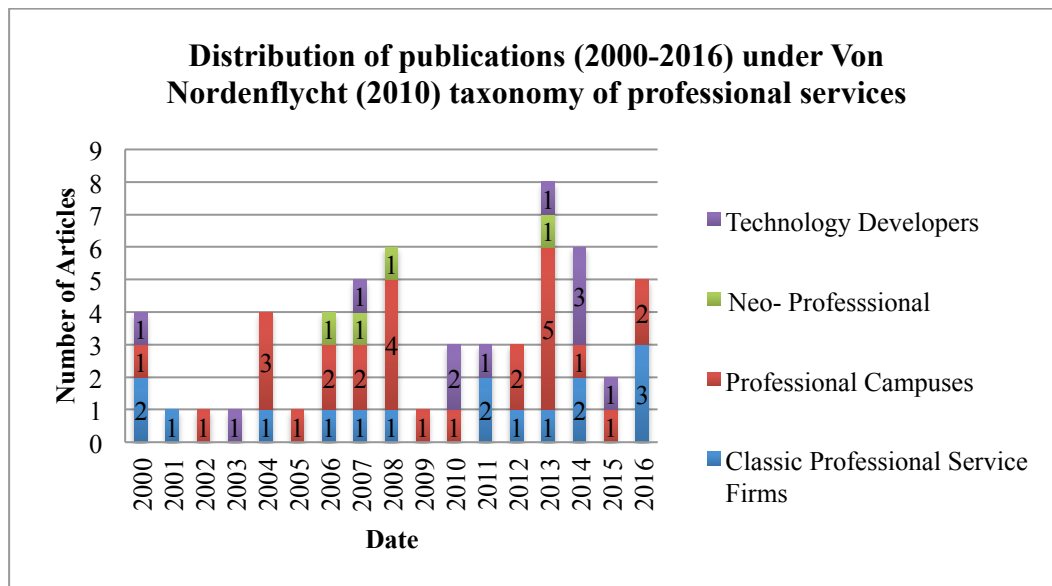


Figure 1 – The distribution of publications under Von Nordenflycht (2010) taxonomy of professional services

### Literature Review /Findings

Operations Management (OM) is primarily dominated by the following themes: processes, performance, products, capacity capability, service quality, supply chain, lean and continuous improvement. Professional service operation (PSO) is defined as “a generic service type with high levels of customer contact/service customization and fluid/flexible processes with low capital/high labour intensity” (Lewis & Brown, 2012, p.1). Given that OM is primarily concerned with the operation/organization as a unit of analysis, what about the questions that preoccupy OM: processes, performance, economies of scale, capacity planning, technology, quality, continuous improvement, and supply chains etc. Several authors have reflected on the state of theory in PSOM stating there is a lack of theory driven research (Harvey et al 2016; Brandon-Jones et 2016). Here, we trace the literature by discussing the findings of PSOM research articles from the bridging the gap within the Von Nordenflycht (2010) taxonomy in order to identifying the big ideas that have proved to be influential in setting the research agenda in this field.

#### *Classic Professional Service Firms*

According to Maister (1993), service operations management can have different forms, such as: measurement, coaching, employee training, reward systems and so on. In PSFs the main problem is that managers need to deal with is how to judge the performance of professional service providers (Patterson, 2000). Since the mid-1990s, evidence revealed that a great pressure on PSFs to become more managerial and bureaucratic in order to survive in the high competitive environment (Cooper et al., 1996). Extensive emphasis has been given to the

service quality, firms' performance and customer needs. Research also indicates the existence of high level of variation in the way different professional firms are organised (Malhotra & Morris, 2009); the multidisciplinary partnership form observed in accounting firms (Suddaby & Greenwood, 2005) and the differences in structural responses to various environmental pressures in law firms (Malhotra et al., 2006) were discussed. The literature indicated that the more classical PSFs face diverse operational challenges, on the one hand due the type of services that they offer and on the other hand due to the nature of the employees involved in those services' production (Goodale et al., 2008). For example, Law and Kim, (2005) highlighted that knowledge systems provide valuable expertise and its abstraction enables professionals to offer higher quality services. However, the success of any service operation involves managing both tangible and intangible resources in a way that they act in the best interest of a firm (Goodale et al., 2008). In order to manage and improve the service operations, scholars have suggested the adoption of management tools including: self-supervision (Mills et al., 1983), agency theory (Melnyk et al., 2004), and quality management (Nagendra & Osborne, 2000). In addition to this, the use of information related to professional service in order to shape norms of professional behaviour could have a positive impact upon management and control of services; for example based on the expectations and requirements, the production process can be standardised influencing the service quality and customers experience (Goodale et al., 2008). Customers' perspective and opinion regarding the service quality are considered as the most important elements that affect operations management strategies and decisions (Sampson and Froehle, 2006).

It is widely accepted that service operations involves high level of customer interaction and customisation (Schmenner, 2004). Furthermore, numerous reported articles have focused on PSFs effectiveness, improving the service quality hence satisfying the customers' needs (Hong & Goo, 2004; Santoso & Erdaka, 2015). Hong & Goo (2004) suggested the use of five-dimension framework to measure the service quality in the context of professional accounting business. The five dimensions include: service quality, customer satisfaction, price, firm image and customer loyalty. The authors concluded that one such model could be used by firms to target the specific dimensions seeking for improvements and provide the appropriate directions for any initiatives to be successful (Hong & Goo, 2004). Likewise, Lewis & Brown (2012) explored the operations strategy of a law firm and pointed out that the nature of client interaction was varied and confirmed that within this particular context a "distinct environment for managing operations" (Goodale et al., 2008, p. 670) could exist. Lai et al. (2007) suggested the implementation of a linearisation technique to overcome problems of uncertainty in demand in PSFs. For example, Giannakis et al (2015) proclaimed that the lack of research into service operations and service modularity maybe due to the heterogeneous nature of services, the role that people play in such services and the often personalised nature of service episodes and encounters. Therefore, Giannakis et al (2015), proposed that service modularity as an approach that is supporting law firms in their operations and service delivery through the adoption of modular principles and practices. In addition to this (Harvey et al, 2016) explained that 'professionals' making judgments about both ends (what constitutes an adequate/appropriate outcome) and means (the content and sequence of process steps) are essentially fluid/flexible in character.

### *Professional Campuses*

Von Nordenflycht (2010) differentiated Professional Campuses from Classic PSFs as they are more capital intensive having a specialised physical infrastructure, citing hospitals as a prime example in where Healthcare appears to be the dominate case examples. One an interesting article by Flagle (2002) presented a very personal account of his experience of the history of Operations Research in the Health Sector, describing its developments over time. Which is

complimented by the systematic literature review carried out by Mahdavi et al (2013) in their attempt to identify a generic model for health services operations management.

### *Humanitarian Logistics*

An interesting article by Heaslip (2012) conducted a systematic, quantitative review of Literature on Humanitarian Logistics and whilst acknowledging the lack of research into this area he proposed the following opportunities to apply service management in this area:

1. Servitisation in humanitarian logistics
2. Service development in humanitarian logistics
3. Humanitarian aid organisations as logistics service providers
4. Service standardisation

In the non-management journals there were a number descriptive articles which while they may not mention services operations theory explicitly, certainly discuss service PSOM issues: the redesign of Occupational Health Services (Tobias, 2008); the integration and centralisation of pathology services in the US (Groppi et al, 2013); the Operations Manual for HIV prevention (Spira et al, 2009); setting up abortion services in Nepal (Puri et al, 2014); the management of Mental Health services in Schools (Massey et al, 2005).

### *Hospitality Sector*

In terms of hospitality sector several studies and explored the uptake of OM thinking. For example, Kwortnik & Thompson (2009) adapted an earlier model by Evaradsson (1997) based on their research in the Leisure Cruise Industry to develop a model of Service Operations Systems. Additionally, Goss-Turner & Jones (2000) investigating Area Management in the UK identified four key dimensions of the role: job scope; organisational congruence; geographic density and unit conformity. From this research they identified four approaches to area management: the archetype, the entrepreneur, the multi-brand manager, and the business manager. Chathoth (2007) Investigated the use of IT within full service hotels, and identified a potential impact not just on transaction costs, but also on productivity, guest satisfaction, employee morale, and profitability from the effective use of IT systems. Zang, Joglekar & Verma (2012) investigated environmental sustainability across a 6 year period developing a dataset of 984 US hotels, and developed an environmental performance management system. A minority of other studies that fall within professional campuses include an investigation into: performance management of waste services (Walker, 2007) which identified a lack of research relating to management theory and Local Government service delivery, but recognised the link between operations management and the delivery of waste services; and the use of the Servqual instrument to analyse service gaps in undergraduate and executive level education finding it a useful tool to assess service quality (Foropon, Seiple & Kerbache, 2013).

The majority of the literature focused on a generic models and management strategy, with a consequently a lack of core themes being identified. One interesting finding, there were only two additional cross industry studies identified in the literature surrounding professional campuses, the first identified the needs for a model of service management to aid the understanding of facilities management by both practitioners and academics (McLennan, 2004), the second study focused on the development of Information Technology management processes over a three year period to evaluate the effect of IT service management tools and proposed a service impact analysis framework within a at a Hong Kong Science Park (Wan & Chan, 2008). These characteristics create complexity for professional campuses that try to control the operations through the implementation of different tools and techniques.

### *Neo- Professional Service Firms*

Neo PSF which is the third theme of Von Nordenflycht's (2010) taxonomy that represents a move from the traditional former taxonomy of organisations (professional organisations) which included classic PSF and Professional Campuses to more knowledge centric organisations with less capital intensity. Early research on knowledge intensive organisations suggested that the nature of knowledge and strategy of its management mediated organisational structure and performance (Morris and Empson, 1998), so this was an important shift from the former notions of knowledge and its importance in competitiveness (See for example: Barney, 1991) to a notion centred around its structure and ownership. This accords with a recent research where Zardkoohi et al. (2011) proposed to redefine what a PSF is. However, Zardkoohi et al. (2011) seem to call to refrain from defining PSF for a group of firms because this might create too many definition that excludes some firms due to small variations. They, instead, called for examining how groups of firms responds to context changes and how they optimally organise themselves accordingly (Zardkoohi et al., 2011).

With more knowledge intensity and less capital intensity Neo-PSFs are more likely to adopt high performance work systems (HPWS). In accordance with this, Fu et al. (2013) surveyed 93 accounting firms to better understand how HPWS is likely to influence professional supply chain PSFs. Despite being centred around accounting firms, which has been labelled as classic PSFs by Von Nordenflycht (2010), the findings positively link HPWS with better PSF supply chains. The study suggested those HPWS practices such as human resources that is based on enabling and motivating employees enhance organisational performance and yield high profit levels for the firm (Fu et al., 2013). Previously, Laing and Lian (2005) critically examined the nature and format of interorganisational service relationships which led them to reject traditional practices of adhering to monolithic format of relationships and call for a multi-dimensional, diverse and complex set of relationships. Eventually, this needs more investigation in the case of Neo-PSFs, for which Von Nordenflycht (2010) sought to distinguish from other forms of PSFs. In today's business environment, professional supply chains have become more complicated due to the varying natures of organisational and contractual relationships.

### *Technology developers*

Technology Developers such as Biotech and R&D labs are share with Neo-PSFs the knowledge intensity but diverge in capital intensity where Technology Developers may have high capital intensity (Von Nordenflycht, 2010). This can be seen in that those developers are usually publicly funded organisations for example; smart phone technology and chemical plants. Such Technology Developers recently witnessed a paradigm shift where servitisation marked this shift when several product-oriented industries adopted strategies that leant on service provision (Robinson et al., 2016). An example of this is the study carried out by Zhang and Zhang (2014) who sought to identify organisational issues that surrounded the management of complex engineering service operations. They have noted the shift of those organisations from design, build, and manufacture focus towards providing support and end-of-cycle services (Zhang and Zhang, 2014, Robinson et al., 2016).

Since Technology Developers are now considered high-intensive capital, investment on improving the service and innovating R&D is remarkable. When IT firms face skill shortages, they tended either to recruit experienced talents or largely invest on the tailored training of fresh graduates (Kipping and Varum, 2003). In a study of 250 Spanish engineering consulting firms, del Carmen Haro-Domínguez et al. (2007) summarised that the degree of absorptive capacity moderates positively internal and external acquisitions of technology. That said, Murovec and Prodan (2009) dichotomised absorptive capacity as either demand-pull or science-push, where their determinants include internal R&D, training, and attitude

towards change. The analysis of such Technology developers suggests a potential methodological mismatch between knowledge intensity adopted strategies that lean on service provision (Robinson et al., 2016). The analysis suggests departing away from trying to distinguish both IT consulting and management consulting, there seems to be more research on how both can be considered as complementary practices. Chathoth, (2007) studied the impact of information technology on hotel operations, service management and transaction costs. The research argued that despite the many benefits IT brings to service operations, certain operations such as the customer-producer exchange mechanism in hotel industry evolved at a slower pace than expected.

## **Discussion**

The analysis of the sample literature suggests a potential methodological mismatch between the core theoretical frameworks to address the OM thinking within PSOM practice, exploring the effectiveness and efficiency within the profession. With the socio-economic and political climates in which service professionals operate (Harvey 1990, 2010, 2016) Furthermore, PSOMs have distinct operational challenges in order to respond to today's turbulences (Lewis and Brown 2012), and service demands (Radnor et al 2016). Most examinations on PSOM practice has been conducted in isolation and not linked to the wider footprint of operations management theory. For instance, the Journal of Operations Management published a special issue into the current themes within PSOM thinking. The articles identified the less obviously, knowledge-intensive services such as management consulting, investment banking, advertising, engineering, education, hospitality architecture, supporting' role, professional services remain largely under-researched in the Operations Management field (Harvey et al 2016; Brandon-Jones, et 2016, Lawrence, et al, 201, and Dobrzykowski, et al, 2016). Harvey (2016) explained that the value of PSOM stems from two principal propositions:

- Levels of customer contact (i.e., lots of face to face interactions, meetings, consultations, etc.) and consequent delivery specifications (i.e., every condition, case, problem is different) are understood to be high, and;
- Operational processes that emerge as a consequence of 'professionals' making judgments about both ends (what constitutes an adequate/appropriate outcome) and means (the content and sequence of process steps) are essentially fluid/flexible in character.

In support of these propositions, Reid and Bamford (2016) highlighted the specific knowledge gaps and then developing bespoke learning solutions for practicing lawyers, such as the adopted term of 'lean thinking and operational agility'. The 'leaner' thinking requires a more agile approach in terms of the PSOM in the legal sector. For example, when margins are being squeezed as a result of the UK's recent deregulation in 2007 and emergence of new entrants into the market with core specialisms such as; personal injury and payment protection insurance (PPI). In order to structure the discussion, this section has been positioned around the two research questions RQ1. To what extent is PSOM thinking expected to enhance PSFs through efficient process, capacity planning, process design resourcing and value? The drivers for PSF operations thinking being critical due to the nature complexity of PSFs – The lean thinking ideology can be an aide in navigating and managing the journey to meet these challenges Bamford and Forrester (2010, 2015). It is not a panacea, but part of the strategy to support the development of a solid, business like, responsive, performing and continually improving PSFs it would however have the potential to make a positive impact on the PSOM sector; through better understanding of operations management practice. The authors therefore believe that the research opportunity is related to a more



'robust' PSOM operation. In terms of the publications reviewed most research that had been published was not highly theoretical or mathematical models, and that much of the research was 'one off in nature', therefore making the topic somewhat incoherent. Such as 'classical PSFs' face diverse operational challenges, whilst improving the service quality whilst 'professional campuses' highlighted the issue of assigning resource and models for decision making, but also on productivity, customer satisfaction, employee morale, and profitability from the effective use of IT systems. In terms of RQ2: How can the PSFs be efficient with the rapid adoption of new service models from new market entrants? There is an emerging consensus that professional services is changing in the socio-economic and political climates in which service professionals operate (Harvey 1990, 2010) and that professional services have distinct operational challenges in order to respond to today's turbulences (Lewis and Brown 2012), and service demands (Radnor et al 2016). Although the adoption of OM thinking is widespread in service operations, the legal profession is traditionally conceived of as a slow moving, incremental, and conservative profession (Sieh, 2010) and therefore the opportunities to develop PSOM practices through OM theories have evolved. For example, Radnor and Bucci (2011) carried out a comprehensive review into lean thinking within the UK's justice system, but with the subsequent impact of deregulation in the legal profession in 2011, the legal market has become more turbulent through the introduction of new entrants. For example, Tsolakis, (2014) stated that: "Over the next few years, to remain competitive, law firms will need to better understand their business. They will develop better skills and techniques in cost accounting, project management and workflow analysis". In terms of the adoption of new service models from new market entrants, professional supply chain has become more complicated due to the varying natures of organisational and contractual relationships. For example Neo-PSFs are adopting high performance work systems (HPWS) resulting in a more positive impact on the existing management and control of services. This would raise the opportunities for the industrialising the operational practices within such PSFs.

## **Conclusion**

There is an emerging consensus that there is a lack of theory driven PSOM research (Harvey et al 2016; Brandon-Jones, et 2016). The analysis of the sample literature suggests a potential methodological mismatch between the core theoretical framework to address the OM thinking within PSOM practice, exploring the effectiveness and efficiency within the profession. The findings also examine the important questions of value (defined as: economic, ergonomic, aesthetic, technical design (Bamford and Forrester, 2010) and the lean thinking tools and techniques being considered in PSOM practice. For example, according to research by Legal Week, for the 2012-2013 financial year, the top 50 law firms in the UK have seen their average profits shrink by 0.5% while average turnover has risen by 6.9%, indicating that law firms are feeling margin pressure and are perhaps finding it difficult to manage their operations within the fee structures currently demanded by this market. There has also seen a significant growth in demand and raised service quality where clients are requesting more and 'better' service provision, whilst demanding to pay less. Furthermore, with the deregulation and demise of legal aid and rise of "litigations in person" may force legal PSFs to significantly change their legal service offerings.

In conclusion, if PSFs firms are considering their PSOM practice and service offerings a redesign of operations at both a strategic level and operationally. Whilst classic PSFs have focused on their strategic thinking there opportunities to investigate operational processes (Harvey, 2016), such as the concept of service modularity appears to be an approach that is supporting law firms to on an operational level (Giannakis et al 2015). Furthermore, the uptake of information technology across all PSFs needs investigating in order to develop the

organisational issues that surrounded the management of more complex PSOM practices. The objective of this study is explore current heterogeneous nature PSFs and associated literature of current PSOM thinking. Future work will focus on the behavioral OM side of PSOM in order to generate some potential avenues on service value and operational effectiveness.

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