The Role and Substance of Public Service Operations Management

Professor Zoe Radnor, Dr Nicola Bateman
School of Business and Economics, Loughborough University

This introductory chapter establishes the need for a book on Public Service Operations Management and then through unpacking the structure and content of the book explore what is meant by Public Service Operations Management. To begin let us reflect briefly on some of the concepts as a baseline for the focus of the book.

This book focused on Operations Management and Public Service. A public service can be considered to be a service or set of services provided to citizens directly through a public sector body or through financing of provision by private sector, third sector or voluntary organisations. Public Sector is the Economic body in which many public service organisations reside. At the most simplistic level operations management (OM) is concerned with managing inputs of processes, people and resources through a transformation process model to provide the required output of goods and services (Slack *et al*., 2012). Service operations management is concerned with both the output or outcome of 'the service' in the sense of 'customer service' and also the service organisation itself - in the way it configures, manages and integrates its (hopefully value-adding) activities (Johnston and Clark, 2008). Operations tasks fall into three main areas; developing an operations strategy, improving the operation and, managing the day-to-day operations (Slack *et al*., 2012). Within service operations two main components are evident; the front office and back office (Johnston and Clark, 2008). The front office being the interface between the organisation and user and the back office being the activities, tasks and processes being carried out remotely from the user (Johnston and Clark, 2001). All these elements; transformation process, tasks and components are shown to be pertinent in the chapters within this book and support the development of operations management within the public sector and public service organisations.

So, why the need for presenting a body of knowledge focused on public service operations management? We argue that general operations management concepts, tasks and components are relevant to this sector but also, that public sector organisations should recognise that they are a service organisation so should engage with service operations management theory and frameworks. Authors, including the leading editor of this book (Radnor *et al*., 2012), have noted that operations management methodologies are 'context specific' and this means that the discipline needs to adapt,

rather than dismiss, the context (Radnor and Osborne, 2013). The chapters within this book aim to develop that adaption process through illustration and presentation of propositions culminating with a final chapter which gives some reflections on the implications and draws together future research agendas.

Operations Management recognising Public Services

Periodically authors and editors of Operations Management journals state the need for more Operations Management research in not-for-profit and Public Sector organisations (Taylor and Taylor, 2009; Karwan and Markland, 2006; Verma *et al.*, 2005). In 2014 the Office of National Statistics quoted that 5.7 million people in the UK worked in the public sector which equates to 19.1% of the workforce[i]. In the US and UK in 2005 the total outlay on public services as a percentage of National Gross Domestic Product (GDP) was 35.9% and 44.5% respectively (Pettigrew, 2005) rising from 12.7% and 24.0% in 2001 (Karwan and Markland, 2006). In 2011 the Index of Economic Freedom reported that Government spending as a percentage of National GDP was 38.9% for the USA and 47.3% for the UK (Index of Economic Freedom, 2011). During this same period (2005 – 2011) both the UK and US, as well as other countries such as Greece and Portugal, have experienced financial crisis with debts in the billions and trillions leading to severe budget and spending cuts across the public sector. In the UK, the Operational Efficiency Report (H M Treasury, 2009) in April 2009 stipulated that potential savings of around £10 billion a year should be sought over three years across public services.

This growing pressure on public services across the western world has led to a focus on increased efficiency which, according to Berman (1998), traditionally receives less focus as an outcome measure than effectiveness and equity. However, although the focus on efficiency and productivity initially led many public organisations to consider information technology as a possible solution (Karwan and Markland, 2006) the pressure to reduce the cost base and reduction of budgets has meant many organisations have had to adopt private management concepts in order to improve their internal operations and processes. In particular, public services including Health (Fillingham, 2008; Guthrie, 2006), Central and Federal Government (Radnor and Bucci, 2010; Radnor and Bucci, 2007; Richard, 2008) and, Local Government (Seddon and Brand, 2008; Krings *et al.*, 2006; Office of the Deputy Prime Minister, 2005) have responded by implementing business process improvement methodologies. Business process improvement methodologies (BPIMs) include Lean Thinking, Six Sigma, Business Process Reengineering (BPR), Kaizen and Total Quality Management as well as blended approaches such as Lean Six Sigma. In a recent literature review focusing on the use of

business process improvement methodologies in the public sector 51% of publications sourced focused on Lean, 35% of these were on health services (Radnor, 2010).

An analysis of the key operations management journals; International Journal of Operations and Production Management (IJOPM), Journal of Operations Management (JOM) and Production and Operations Management (POM) from 1980 to 2014 shows how operations management thinking has evolved over the last thirty years and the role that public service operations has taken within this body of work. Of 3,607 papers published 114 were explicitly focused on the public sector with a further 140 as mixed public and private. The peak of publication for public sector (including mixed) was 2011, whilst during 1980-1991 only a handful of papers were published and in some years none at all. In the past decade there has been consistent publication focusing on public service and mixed public and private, however it may be that the 41% of papers (1980-12014) where no sector is stated did have a public sector element that the authors chose not to explicitly state. The predominant types of papers published were surveys and case studies representing 30% and 31% of the 254 papers. Revealing that most research published is trying to establish the current state of public service OM. Whereas papers that set the agenda, i.e. positional and conceptual, only represent 1.2% and 3.9% of the public service OM papers. This may be a lack of research in this area, difficulty publishing this type of papers or, a reflection of the need for greater levels of field data and in-depth analysis to develop new concepts and theory in the area.

Of the 254 papers in public and mixed categorising by sector, healthcare was revealed as the biggest with 30% of papers. The next largest single sector was education with 8%, but papers that examined multiple sectors represented 24% of the papers. In compiling this book the editors particularly sought to bring sectors other than healthcare to the fore and so we have drawn from a wider range of sectors than have been extensively documented in the past. Including; uniformed services in Walley and Richie (ch. 7), Bateman, Maher and Randall (ch. 8), Barton and Matthews (ch.15) and Aitken, Esain and Williams (ch. 21) focusing on the fire and police and ambulance services and, social housing – Meehan, Drake and Vogel (ch. 9), local government Ramesh and Sheikh (ch.12) , higher education Adderley and Kirkbright (ch. 10) and Radnor and Osborne (ch. 16) and finally third sector and voluntary organisations chapters Bamford, Moxham, Kauppi and Dehe (ch. 2), Taylor and Taylor (ch. 11) and Moxham (ch. 13).

The countries represented across the 254 papers in the journal analysis were dominated by the USA (37%) and UK (17%), China and India are surprisingly low, both with only 2% of papers. Of the other BRICS countries only Brazil is represented with a single paper, Russia and South Africa are

not specially mentioned at all. How public service is to be shaped for these large and growing countries has not been addressed in the literature.

Due to the GDP percentage spent on public services, the financial situation and, the response by public organisations in using operations management concepts and methodologies (particularly managing process improvement) there never has been a more important time for Operations Management (OM) scholars to both research and publish on OM in the public sector. This has to go beyond merely reporting case study examples, giving survey results or focusing on healthcare and developed countries, but to use the opportunity to develop new OM thinking and theory which can be applied to public sector organisations and public services in general which we are defining as 'Public Service Operations Management'. This new discipline needs to adapt the traditional frameworks and concepts, developed through manufacturing and private service organisations, and develop on new frontiers taking into account the digital and information age.

However, the challenge is not just how the OM discipline should adapt to the context/sector but also how the context/sector adapts to the discipline. As the next section will explore and argue, public sector organisations have struggled to recognise that they are a service based organisation but instead considered themselves in terms of policy and product orientation.

Public Sector Organisations recognising Public Service Operations
It has been argued that the increasingly fragmented and inter-organizational context of public services delivery (Haveri, 2006) necessitates asking new questions about public services delivery. It is now no longer possible to continue with a focus solely either upon administrative processes or upon intra-organizational management – the central pre-occupations of public administration and (new) public management, respectively. Rather these foci must be integrated with a broader paradigm that emphasises both the governance of inter-organizational (and cross-sectorial) relationships and the efficacy of public service delivery systems rather than discrete public service organizations. This broader framework has subsequently been termed The New Public Governance (Osborne, 2010). This framework does not replace the previous foci of course, but rather embeds them in a new context, an argument similarly made by Thomas (2012).

A second argument that has been presented is that much contemporary public management theory has been derived conceptually from prior 'generic' management research conducted in the manufacturing rather than the services sector. This has generated a 'fatal flaw' (Osborne and Brown, 2013) in public management theory that has viewed public services as manufacturing rather

than as service processes – and that are created by professional design and input and then delivered to the user even though the business of government is, by and large, not about delivering pre-manufactured products but to deliver services. Nor are most relationships between public service users and public service organisations characterised by a transactional or discrete nature, as they are for such products (McLaughlin *et al*., 2009). On the contrary, the majority of 'public goods' (whether provided by government, the non-profit and third sector or the private sector) are in fact not 'public products' but rather 'public services' that are integrated into people's lives. Social work, health care, education, economic and business support services, community development and regeneration, for example, are all services provided but service organisations rather than concrete products, in that they are intangible, process-driven and based upon a promise of what is to be delivered. Public services can of course include concrete elements (health care or communications technology, for example). But these are not 'public goods' in their own right – rather they are required to support and enable the delivery of intangible and process-driven public services.

We would suggest that the attitude of uncritically applying manufacturing ideas to public service is flawed although, many of the approaches and ways of thinking that helped evolve these original manufacturing ideas are useful. This approach of adapting operations management to the public service environment whilst learning from existing thinking is exemplified in a study of the UK's Royal Air Force by Bateman (2014) and further developed in Matthias (ch. 4), Pettit and Beresford (ch. 5) , Meehan Drake and Vogel (ch.9), Radnor and Osborne (ch. 16) and de Blok (ch. 23). We argue that public services should recognise themselves as services, with the distinctive service operations management logic and managerial challenges that this implies, and hence reject the potential flaw contained within current, product-dominant public management theory.

This product-dominant flaw, we argue, has persisted despite the growth of a substantive body of services management and service operations management theory that challenges many of its fundamental tenets for the management of services (Johnston and Clark, 2008; Gronroos, 2007; Normann, 1991). It is this latter body of service management theory, it is argued here and within the book, that should inform our theoretical and conceptual understanding and analysis of the management and delivery of public services.

Tasks of Public Service Operations Managers

Public service organisations are not homogeneous – they have different structures, governance, incentives, drivers and delivery modes. Even within a sector such as healthcare, policing, fire, social care or local government there can be high levels of variation between the local delivery of services. This challenge is acknowledged across the chapters within this book. It does then pose

the problem of the degree to which 'best practice'. i.e. standardisation, should be imposed, implemented or utilised. The argument here would be to recognise the difference between standardising of the process with its benefits to quality and efficiency and standardising of the outcome, which can have a detrimental impersonalised outcome. Developing an operations strategy that allows for customisation through a standard offering of processes (such as in sandwich shops which only offer a limited choice of breads and fillings but the customer leaving with what they feel as their customisation sandwich) could be a means of developing both efficiency and effectiveness. Understanding how to develop appropriate operations strategy is considered in the first section of this book in chapters 2-6. Chapter 2 (Bamford, Moxham, Kauppi and Dehe) is focused on Sports OM and highlights issues of scope from international to local groups; chapter 3 (Al-Tabbaa, Leach and March) considers strategy in non-profit organisations; chapters 4 (Matthias) and 6 (Sinha and Pastellas) consider strategy in public health organisations; and chapter 5 (Pettit and Beresford) considers humanitarian supply chains and the associated responsiveness and flexibility required across organisations and countries.

Developing an operations strategy was the first task identified for an operations manager. The second, improving the operation has been identified as a key area of focus for public services. This has been due to the focus on efficiency, reduction in budgets and recognition of the importance of citizen or user involvement. Where process improvement methodologies have been implemented it has suggested they can offer significant impact related to quality, cost and time and even to the satisfaction of both staff and service users. The UK Ministry of Defence, for example, reported a fall in the cost of maintaining one aircraft from £711 to £328 together with a reduction in manpower required for this activity by 21%; the Connecticut Department of Labour eliminated 33.5 staff hours in its work by the redesign of its processes, saving $500,000 in staff time over a year; and Solihull Borough Council produced £135,000 saving in the postal costs for its fostering service, through a Lean review (Radnor, 2010). Other reported benefits have included the reduction of waiting time for public services and a reduction in service costs through a reduction in resource utilisation (Silvester *et al.*, 2004) as well as intangibles such as increased employee motivation and satisfaction and increased customer satisfaction (Radnor and Boaden, 2008). A number of chapters in this book reflect on the use of improvement methodologies. Moxham (ch. 13) looks at how performance measurement and continuous improvement interact in public service and Moullin (ch. 14) examines how the adaptation of the balanced score card can be used in two public sector cases. Burgess Radnor and Furnival (ch. 17), Kumar and Lindsay (ch. 18) and Hudson Smith (ch. 19) explore improvement in different healthcare settings and Barton and Matthews (ch. 15) examines improvement application and issues with professional norms in the police service.

In a recent article the lead author for this book noted that lean implementation in public services has led to a number of challenges (Radnor and Osborne, 2013). An over-reliance on workshops (rapid improvement events) with staff coming together to make quick changes; public service organisations although claiming to be carrying out integrated lean reforms, are in fact taking a toolkit-based approach leading to pockets of short-term impact rather than a systemic embedding of Lean principles. So, although these tools can lead to short-term success in improving internal efficiency they rarely engage with core lean principles - the centrality of the service-user and external orientation to organisational effectiveness. Consequently these lean initiatives became inward facing (policy or finance) rather than outward facing to the benefit of service-users. This then led to the conclusion that the success of lean may be due to the fact that, as a process improvement methodology, it has been able to address the prior poor design of the public service (Radnor and Osborne, 2013). So once achieved the larger issue remains of designing public services to meet the needs of end-users and adding value to their lives. This then raises the important point that the engagement of process improvement methodologies by operation managers in public services should not be ends in themselves but consideration of the design of the processes in Sinha and Pastellas (ch. 6) and Radnor and Osborne (ch. 16), the final task, of managing day-to-day operations in Bateman, Maher and Randall (ch. 8), Aitken, Esain and Williams (ch.21) and de Blok (ch. 22).

The key challenge of managing the day-to-day operations of public services is that as a number of the chapters in this book illustrate in Bamford, Moxham, Kauppi and Dehe (ch. 2) and Meehan, Drake and Vogel (ch.9) there is a lack of understanding of operations management concepts (even the notion of processes) and even the language used in the public and voluntary sector by organisations and individuals. This is particularly true for planning and control or capacity and demand management as shown in chapters Walley and Ritchie (ch.7) and Meehan, Drake and Vogel (ch.9).

The lack of understanding of service management is highlighted through how the citizen is cast as the co-producer of public services (Alford, 2009), which should be as a co-producer rather than as solely the client of public service agencies. Users should be able to manage their own journey (where possible) with providers, commissioners and regulators. There needs to be challenge of the line of interaction between the user and provider, between what is part of the front office and the back office. In re-designing the processes, increasing the user involvement and, recognising how to manage the 'touchpoints' the chapters by Radnor and Osborne (Ch. 16), Meehan (Ch. 9) and,

Matthias (Ch. 4) illustrate how user experience is increased, variety/variation (as from the provider) is reduced and, transparency (of the regulator) is apparent.

Another key aspect of the day-to-day management has been the use of performance measurement and management systems. At its peak most public sector organisations in the UK were reporting significant amounts of measures for audit, scrutiny, assessment and monitoring as a means to create 'market forces' (Radnor, 2008). The use of performance measures has spread around the globe along with debates and discussion on how measures can be used to manage more effectively the process and service delivery. More recently, the use of data gathered has changed with a reduction of top-down regulatory frameworks. This has an effect for us as researchers as sets of data which could be collected and analysed over a period are no longer available. but it also has an effect on the autonomy of public service management. Without the pressure of the reporting the challenge becomes how managers and organisations utilise their data to support effective public service delivery. Performance measurement and management is considered within chapters 11-14 in the specific section but also Bateman, Maher and Randall (ch. 8) concerning the Fire and Rescue service

Structure of the Book

The book is divided into five major sections reflecting the components of service operations management and the tasks of operations managers: Strategy and Service Design; Responsiveness and Resourcing; Performance Management and Measurement; Improvement; and Supply Chain Management. In selecting these sections the editors reflect current active research and also address the agenda for new areas for research. The strategy and service design section looks beyond straight-forward public sector and engages with other designs for public service delivery including third sector, such as charities and non- profitmaking organisations. Chapter 2 (Bamford, Moxham, Lauppi and Dehe) studies OM in sport and illustrates the diversity of the OM challenge in a sector that has an international profile but also engages with local grass sports clubs. Chapter 3 (Al-Tabbaa, Leach and March) considers the non-profit sector and its implications for strategy including consideration of stakeholders. Chapter 4 (Matthias) contrasts the impact of piecemeal improvement in an NHS hospital and considers the impact strategy could make on this approach. Chapter 5 (Pettit and Beresford) reflects on the extreme end of public service by looking at humanitarian supply chains examining cross-sectorial flexible response. Chapter 6 (Sinha and Pastellas) uses a rich picture approach to examine system design in a healthcare setting.

The responsiveness and resourcing section deals with the challenging environment in which public services must be delivered particularly balancing issues between demand, resources and capacity. Walley and Ritchie (ch. 7) examine demand and capacity in the police service and Bateman, Maher and Randall (ch. 8) explore a similar theme in the fire service and its effect on wellbeing and working conditions for firefighters. Chapter 9 (Meehan, Drake and Vogel) explores issues of demand management within a social housing environment and also considers the idea of social surplus. Chapter 10 (Adderley and Kirkbright) looks at the operational impact of encouraging entrepreneurial activities in a university setting.

Performance management and measurement is a widely researched area in the public sector and is perceived as a highly publishable and researchable subject. Although many papers from other sections could have been included here the editors chose to select papers that directly addressed issues in this area namely stakeholder theory in the context of UK Advocacy services - Taylor and Taylor (ch. 11) and developing the idea of a public sector scorecard Moulin (ch.14). Moxham (ch. 13) explores what actually happens in voluntary organisations and the gap between the aspiration for performance measurement to support continuous improvement. Ramesh and Sheikh (ch.12) explore the use of performance measures placed on the public grievance redressal system in local government in India.

The improvement section is an active area as, previously outlined, much research and wider activity within public services is focused around this topic. The papers selected for this section had a very "lean" focus as this is the dominant paradigm for improvement in public service. Despite lean's predominance this section addresses health, policing, and education all taking different approaches. The wealth of research and relative maturity of healthcare in applying lean in public service is reflected in the three papers concerned with the health sector. The first of these is Burgess, Radnor and Furnival (ch.17) which looked at whole organisation transformation in an English healthcare setting whilst, Kumar and Lindsay (ch.18) reflect on a Scottish experience particularly focusing on softer aspects of implementation. The final healthcare chapter in this section is Hudson-Smith (ch.19) which particularly focuses on service quality using pre-existing patient survey data. Barton and Matthews (ch. 15) explore policing concentrating on how knowledge creation ties into improvement and professional standards and, finally, Radnor and Osborne (ch.16) revisit the idea of service blueprinting and although their application of this is to university services their principle focus is on the need for maturity of operations management approaches in public service.

The final section is Supply Chain Management (SCM); this reflects a growing area for public service research and has only been addressed in three of the 254 papers in previous public service papers from JOM, POM and IJOPM in the last thirty years. It has been included because there is a growing need to join up different elements of supply to the end customer and this section begins to address this under-researched area. Bhakoo and Sohal (ch.20) explore e-SCM in the health sector and explore the institutional drivers for adoption of such an approach. Aitken, Esain and Williams (ch. 21) consider the drivers of demand in the emergency services and its consequent chain of response. De Blok (ch. 22) applies well established supply chain logic to the area of criminal law enforcement.

The book ends with a reflective summary addressing the future research agenda. It also summarises the difference between sectors of private, public and third sector (for profit and not for profit). The implications for managers in the public sector are identified, highlighting tactical and operational effectiveness and integrated services and network capability.

The editors hope this book consolidates existing research in the area of public sector operations management, introduces some new areas of discovery and, most importantly, lays the foundation for future contributions, research agendas and allows the development of a discipline that can support and improve our public services.

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