

Meta-informações das revisões bibliográficas (2018)

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O artigo de revisão que você irá analisar nem sempre contém informações para todas as meta-informações, além das que você pode encontrar na web. Se ele não contiver, digite NADA no tópico correspondente.

As informações podem ser inseridas em inglês, como cópia do original (citar a página)

Salvar este artigo antes de inserir o conteúdo, com o título: SEP5843 2018 - análise revisão <nome do aluno> <ano, autor principal>

1. Referência completa do artigo

LIGHTFOOT, H.; BAINES, T.; SMART, P. The servitization of manufacturing: A systematic literature review of interdependent trends. **International Journal of Operations & Production Management**, v. 33, n. 11/12, p. 1408–1434, 2013.

2. Autores (um registro por autor)

Howard Lightfoot

2.1. Tipo: Research Fellow

2.2. Idade: ?

2.3. Anos pesquisando no assunto: 11 anos (1º artigo sobre PSS em 2007)

2.4. Instituição: Aston University

2.5. Índice-h: 16 (segundo google scholar)

2.6. Colegas da mesma instituição: Não é membro efetivo da instituição, mas tem muitas contribuições com o Tim Baines.

2.7. Quantidade de artigos já publicados: 45

2.8. Outros artigos significativos (mais citados) sobre outros temas:

- 159 citações - Baines, T., Lightfoot, H., Williams, G. M., & Greenough, R. (2006). State-of-the-art in lean design engineering: a literature review on white collar lean. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 220(9), 1539-1547.
- 85 citações - Benedettini, O., Baines, T. S., Lightfoot, H. W., & Greenough, R. M. (2009). State-of-the-art in integrated vehicle health management. *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering*, 223(2), 157-170.
- 34 citações - Ayeni, P., Baines, T., Lightfoot, H., & Ball, P. (2011). State-of-the-art of 'Lean' in the aviation maintenance, repair, and overhaul industry. *Proceedings of the Institution of Mechanical Engineers, Part B: journal of engineering manufacture*, 225(11), 2108-2123.
- 11 citações - Baines, T. S., Williams, G. M., Lightfoot, H., & Evans, S. (2007). Beyond theory: an examination of lean new product introduction practices in the UK. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 221(11), 1593-1600.

2.9. Outros artigos significativos (mais citados) neste tema

- 1636 citações - Baines, T. S., Lightfoot, H. W., Evans, S., Neely, A., Greenough, R., Peppard, J., ... & Alcock, J. R. (2007). State-of-the-art in product-service systems. Proceedings of the Institution of Mechanical Engineers, Part B: journal of engineering manufacture, 221(10), 1543-1552.
- 1068 citações - Baines, T. S., Lightfoot, H. W., Benedettini, O., & Kay, J. M. (2009). The servitization of manufacturing: A review of literature and reflection on future challenges. Journal of manufacturing technology management, 20(5), 547-567.
- 355 citações - Baines, T., Lightfoot, H., Peppard, J., Johnson, M., Tiwari, A., Shehab, E., & Swink, M. (2009). Towards an operations strategy for product-centric servitization. International Journal of Operations & Production Management, 29(5), 494-519.
- 150 citações - Baines, T., & W. Lightfoot, H. (2013). Servitization of the manufacturing firm: Exploring the operations practices and technologies that deliver advanced services. International Journal of Operations & Production Management, 34(1), 2-35.
- 140 citações - Baines, T., & Lightfoot, H. (2013). Made to Serve: How manufacturers can compete through servitization and product service systems. John Wiley & Sons.

2.10.Co-autores recorrentes

- Tim Baines; Palie Smart; Essam Shebab; Tonci Grubic; Richard Greenough (de acordo com o ResearchGate)

Tim Baines

2.11.Tipo: Professor

2.12.Idade: ~57 anos (estimado a partir do ano de formação)

2.13.Anos pesquisando no assunto: 14 (primeiro artigo em 2004)

2.14.Instituição: Aston University

2.15.Índice-h: 33 (segundo google scholar)

2.16.Colegas da mesma instituição

Os colegas do mesmo grupo de pesquisa são: Ali Ziaee Bigdeli, Andreas Schroeder, Daniel Andrews, Eleanor Musson, Ian Machan, John Morley, Angela Marqui, Ian McKechnie, Gillian Holmes, Jill Forrest, Torsten Dehn, Panos Petridis, Chris Owen, Andrew Harrison, Des Evans, Jim Euchner, Patricia Garcia, Paul Jackson, Parikshit Naik, Katja Dmitrijeva

2.17.Quantidade de artigos já publicados: 259 (segundo google scholar)

2.18.Outros artigos significativos (mais citados) sobre outros temas

- 185 citações - Adesola, S., & Baines, T. (2005). Developing and evaluating a methodology for business process improvement. Business Process Management Journal, 11(1), 37-46.
- 159 citações - Baines, T., Lightfoot, H., Williams, G. M., & Greenough, R. (2006). State-of-the-art in lean design engineering: a literature review on white collar lean. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 220(9), 1539-1547.
- 134 citações - Minarro-Viseras, E., Baines, T., & Sweeney, M. (2005). Key success factors when implementing strategic manufacturing initiatives. International Journal of Operations & Production Management, 25(2), 151-179.
- 124 citações - Bartlett, P. A., Julien, D. M., & Baines, T. S. (2007). Improving supply chain performance through improved visibility. The International Journal of Logistics Management, 18(2), 294-313.

- 118 citações - Baines, T., Mason, S., Siebers, P. O., & Ladbrook, J. (2004). Humans: the missing link in manufacturing simulation?. *Simulation Modelling Practice and Theory*, 12(7-8), 515-526.

2.19.Outros artigos significativos (mais citados) neste tema

- 1636 citações - Baines, T. S., Lightfoot, H. W., Evans, S., Neely, A., Greenough, R., Peppard, J., ... & Alcock, J. R. (2007). State-of-the-art in product-service systems. *Proceedings of the Institution of Mechanical Engineers, Part B: journal of engineering manufacture*, 221(10), 1543-1552.
- 1068 citações - Baines, T. S., Lightfoot, H. W., Benedettini, O., & Kay, J. M. (2009). The servitization of manufacturing: A review of literature and reflection on future challenges. *Journal of manufacturing technology management*, 20(5), 547-567.
- 355 citações - Baines, T., Lightfoot, H., Peppard, J., Johnson, M., Tiwari, A., Shehab, E., & Swink, M. (2009). Towards an operations strategy for product-centric servitization. *International Journal of Operations & Production Management*, 29(5), 494-519.
- 150 citações - Baines, T., & W. Lightfoot, H. (2013). Servitization of the manufacturing firm: Exploring the operations practices and technologies that deliver advanced services. *International Journal of Operations & Production Management*, 34(1), 2-35.
- 140 citações - Baines, T., & Lightfoot, H. (2013). *Made to Serve: How manufacturers can compete through servitization and product service systems*. John Wiley & Sons.

2.20.Co-autores recorrentes

- Howard Lightfoot; Victor Guang Shi; John Ladbrook; Ali Ziaee Bigdeli; D. K. Harrison (de acordo com o ResearchGate)

Palie Smart

2.21.Tipo: professor

2.22.Idade: ?

2.23.Anos pesquisando no assunto: Não é seu tema de pesquisa. Tem apenas 3 artigos na área, sendo o mais antigo de 2009 (há 9 anos).

2.24.Instituição: University of Bristol

2.25.Índice-h: 15 (de acordo com o ResearchGate)

2.26.Colegas da mesma instituição: Wayne Holland; Rutvica Andrijasevic; Helen J Ballard; Jonathan V Beaverstock.

2.27.Quantidade de artigos já publicados: 31 artigos

2.28.Outros artigos significativos (mais citados) sobre outros temas

- 112 citações - Holmes, S., & Smart, P. (2009). Exploring open innovation practice in firm-nonprofit engagements: a corporate social responsibility perspective. *R&D Management*, 39(4), 394-409.
- 95 citações - McLaughlin, P., Bessant, J., & Smart, P. (2008). Developing an organisation culture to facilitate radical innovation. *International Journal of Technology Management*, 44(3-4), 298-323.

- 86 citações - Smart, P., Bessant, J., & Gupta, A. (2007). Towards technological rules for designing innovation networks: a dynamic capabilities view. *International Journal of Operations & Production Management*, 27(10), 1069-1092.
- 59 citações - Gupta, A., Pawar, K. S., & Smart, P. (2007). New product development in the pharmaceutical and telecommunication industries: a comparative study. *International Journal of Production Economics*, 106(1), 41-60.
- 33 citações - Adams, R. J., Smart, P., & Huff, A. S. (2017). Shades of grey: guidelines for working with the grey literature in systematic reviews for management and organizational studies. *International Journal of Management Reviews*, 19(4), 432-454.

2.29.Outros artigos significativos (mais citados) neste tema

- 98 citações - Holmes, S., & Smart, P. (2009). Exploring open innovation practice in firm-nonprofit engagements: a corporate social responsibility perspective. *R&D Management*, 39(4), 394-409.
- 51 citações - Baines, T., Lightfoot, H., Smart, P., & Fletcher, S. (2013). Servitization of manufacture: Exploring the deployment and skills of people critical to the delivery of advanced services. *Journal of Manufacturing Technology Management*, 24(4), 637-646.

2.30.Co-autores recorrentes

- Fiona Lettice; Howard Lightfoot; Richard Adams; Neil Burns; Tim Baines (de acordo com o ResearchGate)

3. Estrutura do abstract (**contextualização**, **gap/lacuna**, **objetivo**, **metodologia**, resultados e **conclusão**)

Purpose – **The servitization of manufacturing is a diverse and complex field of research interest. The purpose of this paper is to provide an integrative and organising lens for viewing the various contributions to knowledge production from those research communities addressing servitization. To achieve this, the paper aims to set out to address two principal questions, namely where are the knowledge stocks and flows amongst the research communities? And what are generic research concerns being addressed by these communities?**

Design/methodology/approach – **Using an evidenced-based approach, the authors have performed a systematic review of the research literature associated with the servitization of manufacturing. This investigation incorporates a descriptive and thematic analysis of 148 academic and scholarly papers from 103 different lead authors in 68 international peer-reviewed journals.**

Findings – **The work proposes support for the existence of distinct researcher communities, namely services marketing, service management, operations management, product-service systems and service science management and engineering, which are contributing to knowledge production in the servitization of manufacturing. Knowledge stocks within all communities associated with research in the servitization of manufacturing have dramatically increased since the mid-1990s. The trends clearly reveal that the operations community is in receipt of the majority of citations relating to the servitization of manufacturing. In terms of knowledge flows, it is apparent that the more mature communities are drawing on more locally produced knowledge stocks, whereas the emergent communities are drawing on a knowledge base more evenly distributed across all the communities. The results are indicative of varying degrees of**

interdependency amongst the communities. The generic research concerns being addressed within the communities are associated with the concepts of product-service differentiation, competitive strategy, customer value, customer relationships and product-service configuration.

Originality/value – This research has further developed and articulated the identities of distinct researcher communities actively contributing to knowledge production in the servitization of manufacturing, and to what extent they are pursuing common research agendas. This study provides an improved descriptive and thematic awareness of the resulting body of knowledge, allowing the field of servitization to progress in a more informed and multidisciplinary fashion.

4. Palavras-chaves e se foram citadas no abstract.

O paper traz as seguintes palavras-chave, sendo todas citadas no título ou no abstract.

- Services marketing, Manufacturing, Management, Service, Servitization, Product-service systems, Service science, Systematic literature review

5. Introdução e/ou revisão bibliográfica introdutória, afirmações / constatações (tipo) versus citações (essa lista pode ser longa, por isso coloquei em forma de tabela)

Afirmação / Constatação	Tipo (*1)	Referência (*2)
Competing strategically through service provision is becoming a distinctive feature of innovative manufacturing firms.	C	(Spring and Araujo, 2009)
Integrated product-service offerings can be a means of differentiation and provide a robust market defence to competition from lower cost economies, particularly in the manufacturing sectors where there is a high installed product base.	C	(Wise and Baumgartner, 1999)
Consequently, there is a growing amount of research interest in the role of services in sustaining the competitiveness of manufacturers.	C	-
The term “servitization” was coined by Vandermerwe and Rada (1988) to describe this phenomenon and subsequently become known as the “servitization of manufacturing”.		(Vandermerwe and Rada, 1988)
As a field of research the servitization of manufacturing is being studied from a broad range of academic traditions.	C	-
Researchers are working within their distinct research communities and providing unique and complementary perspectives on the rationale, design and delivery of servitization.	C	(Oliva and Kallenberg, 2003; Slack, 2005; Malleret, 2006)
Issues that have received particular attention include service business growth, solutions provision, after-sale marketing, service profitability and new business models.	C	(Martin and Horne, 1992; Wise and Baumgartner, 1999; Gebauer et al., 2008), (Galbraith, 2002; Miller and Hartwick, 2002;

		Windahl and Lakemond, 2006; Davies et al., 2006), (Cohen et al., 2006), (Samli et al., 1992; Anderson and Narus, 1995; Neely, 2009), (Edvardsson et al., 2008; Lindahl et al., 2009).
This proliferation is testimony to the increasing recognition of the importance of services to manufacturers, and given the multi-disciplinary and applied nature of the issues being addressed platforms for improving researcher engagement should be actively sought.	C	-
Servitization within manufacturing is evidently a diverse and complex field with contributions arising across a range of research communities that are interdependent.	L	-
Improved awareness and cohesion across these communities will help to improve the quality and rate of knowledge production, and establish important future research challenges.	J	-
This is the motivation underpinning the research reported in this paper.	G	-
Our aim is to provide an integrative and organising lens for viewing the various contributions to knowledge production from those research communities addressing concerns associated with the servitization of manufacturing.	Objetivo	-
We are particularly interested in better understanding what research has been published in academic and scholarly journals (i.e. the knowledge stocks) and which scientific fields of study are underpinning and influencing its evolution (i.e. the knowledge flows).	Objetivo	-
To achieve this we address the following research questions, namely:	G	-
RQ1. Where are the knowledge stocks and flows amongst the research communities?	Research question	-
RQ2. What generic research concerns are being addressed by the research communities?	Research question	-
In doing so, we aspire to move the body of knowledge on servitization forwards and progress both within-community and cross-community understanding.	Objetivo	-
We have addressed these questions through an evidenced based investigation.	Metodologia	-
This research has been guided by the process of systematic review (Tranfield et al., 2003) and studied its application in other scholarly	Metodologia	-

works (Lesure et al., 2004; Thorpe et al., 2005; Bakker, 2010; Meier, 2011), which has allowed us to appreciate the subtle variations in adoption practices by academics.		
This approach takes principles originating from the Servitization of manufacturing 1409 medical sciences and applies them to management and organisation theory.	Metodologia	-
Through this process we have performed a descriptive and thematic analysis of 148 academic and scholarly papers from 68 international peer-reviewed journals.	Metodologia	-
The outcomes of this review are an understanding of where knowledge resides across research communities, where interactions and communications are stronger and where the common areas of inquiry are located.	Resultados	-
In this way, this work both confirms and expands previous research (Baines et al., 2009b) that indicates that the principal research communities are services marketing, service management, operations management, product-service systems (PSS) and service science (Baines et al., 2009a).	Resultados	-
Our work indicates that each of the communities is actively contributing to knowledge production.	Resultados	-
There are, however, significant variations in engagement and interaction amongst the communities.	Resultados	-
Nevertheless, there is shared interest in the conceptualizing product-service differentiation, competitive strategy, customer value, customer relationships and product-service configuration.	Resultados	-
This paper describes our investigation of the various contributions to the production of knowledge in the field of servitization.	Estrutura	-
It is structured to first introduce the research communities that are actively engaged with researching the topic of servitization, their origins and generic interests.	Estrutura	-
An overview of our research methodology is then provided.	Estrutura	-
The subsequent sections present the knowledge stocks and flows, and then the shared research concerns across the communities.	Estrutura	-

Finally, we conclude by summarising the contributions of this study and the implications this poses for future work.	Estrutura	-
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(*1) Tipos de afirmação / constatação: G (geral), C (contexto), J (justifica o artigo / pesquisa), L (**explicita a lacuna**). A constatação da lacuna é muito importante. Mas é difícil diferenciar J de L.; (*2) Inserir somente autor(es) e ano. A referência completa encontra-se no próprio artigo

6. Casos citados e principais características dos casos

Apenas cita casos. Não entra em detalhes das suas características:

- “Examples of leading practice in the literature are focused on larger organisations supplying high-value capital equipment such as Alstom and ABB (Miller and Hartwick, 2002; Davies, 2004), Thales Training & Simulation (Mulholland, 2000; Davies, 2004) and Rolls-Royce Aerospace (Howells, 2000; Baines et al., 2009a).” (LIGHTFOOT; BAINES; SMART, 2013, p. 1412)
- “Of particular interest are product-centric services, where the manufactured product itself is central to the provision of an integrated set of services (e.g. through maintenance, repair, support, availability and capability contracts). Examples include Xerox’s move from selling printers and copiers to delivering a “Document Management Service” (www.consulting.xerox.com), Rolls-Royce Civil Aerospace’s “TotalCare” Service (www.rolls-royce.com/civilaerospace) and Alstom (Train Life Services) supporting the UK west coast mainline for VirginRail (Lightfoot et al., 2011).” (LIGHTFOOT; BAINES; SMART, 2013, p. 1412)

7. Questão da pesquisa, Foco (escopo) e Objetivos (geral primário e secundários)

- Questões de pesquisa:
 - “RQ1. Where are the knowledge stocks and flows amongst the research communities? RQ2. What generic research concerns are being addressed by the research communities?” (LIGHTFOOT; BAINES; SMART, 2013, p. 1409)
- Foco:
 - Contribuições das diversas comunidades de pesquisa para o tema “Servitização na manufatura”
- Objetivos
 - Geral: “we aspire to move the body of knowledge on servitization forwards and progress both within-community and cross-community understanding.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1409)
 - Primário: “Our aim is to provide an integrative and organising lens for viewing the various contributions to knowledge production from those research communities addressing concerns associated with the servitization of manufacturing.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1409)
 - Secundário: “We are particularly interested in better understanding what research has been published in academic and scholarly journals (i.e. the knowledge stocks) and which scientific fields of study are underpinning and influencing its evolution (i.e. the knowledge flows).” (LIGHTFOOT; BAINES; SMART, 2013, p. 1409)

8. Qual o diferencial deste artigo (análise da revisão) com relação a outras revisões e/ou surveys? (segundo o autor, caso ele tenha citado). Avaliar uma por uma, caso o autor tenha feito isso. Pode montar uma tabela se for o caso.

- Apenas reforça avanços em relação a uma pesquisa prévia dos próprios autores: “In this way, this work both confirms and expands previous research (Baines et al., 2009b) that indicates that the principal research communities are services marketing, service management, operations management, product-service systems (PSS) and service science (Baines et al., 2009a). Our work indicates that each of the communities is actively contributing to knowledge production.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1410)

9. Metodologia

9.1. Descrição Geral: Nome do(s) método(s); se é qualitativo, quantitativo ou combinação de ambos

- Primeira técnica: “Our study adopted the principles and generic framework of the orthodox systematic review process as articulated for the management science field (Tranfield et al., 2003)”. (LIGHTFOOT; BAINES; SMART, 2013, p. 1414)
- Após filtro de leitura: “Once these inclusion and exclusion choices had been made, the cross-checking of authors and references and where possible consultation with scientific communities producing interim/unpublished relevant work (grey literature) further informed and increased the pool to 148 published principal articles.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1415)

9.2. Período de análise das referências (publicações desde que ano)

- Não cita período de análise das referências.

9.3. Tamanho da amostra analisada

- A amostra analisada era composta por 300 artigos indexados, os quais foram filtrados para 110 artigos, mais 38 artigos de “gray literature”.

9.4. Quantidade de referências citadas

- O artigo cita 103 referências.
- A metodologia cita 5 referências.

9.5. Foram realizadas observações complementares?

- As observações complementares foram apenas em relação à “gray literature”.
- Realizou análises quantitativas em relação ao número e distribuição de autores e revistas.

9.6. Fontes da revisão (casos, periódicos específicos, e quais bases de dados). Quais as justificativas para escolher essas fontes.

- Base de dados: “These have included Compendex, Inspec, Web of Science, Proquest, ABI Inform and Emerald, consistent with other reviews in the management field (Rashman et al., 2009, Pittaway et al., 2004).” (LIGHTFOOT; BAINES; SMART, 2013, p. 1414)
- Justificativa para as bases de dados: São bases de dados que cobrem de forma completa todas as comunidades de pesquisa.
- Tipos de materiais utilizados: “The search activity provided access to a wide variety of journal, conference and other forms of written materials such as books and magazines. For completeness, a search of internet sources was conducted using Google Scholar. We did, however, constrain our search to articles written in English, or those articles where an English translation was available.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1415)

9.7. Estratégia para construção da string de busca

- Uso de termos associados à pesquisa em serviços e manufatura. (LIGHTFOOT; BAINES; SMART, 2013, p. 1414)

9.8. String de busca

- Palavras-chave: “These included, for example, service integration, servitization, sustainability, service economy, product substituting service, functional economy, integrated solutions, product-related services, service marketing, aftermarket, customer service, value, value in use, intangibility, service operations, tangibility, product marketing, service infusion, service science, classification and framework.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1414)

9.9. Filtros

- Leitura de abstract, Keywords e conteúdos para reduzir o número de artigos: “Initial reading of the article abstracts, keywords and content allowed this pool to be reduced to 110 academic and scholarly articles that were relevant, in a manufacturing industry and “B2B” context, and papers that contributed concepts which were essential to understanding the evidence base.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1415)

9.10. Técnica / método de análise utilizada

- “Our analysis followed two stages. RQ1 was addressed through a largely quantitative and descriptive analysis of publications produced by the research communities. The emphasis was on understanding the positioning and perspective of each paper, and then establishing the other publications being cited.

RQ2 was dealt with using a qualitative analysis to identify dominant themes. This thematic element involved a detailed review of the content of each research article. To do this we created a coding frame to catalogue the textual content and summaries of each paper. This coding frame emulated a tree structure with over 40 initial constructs allowing the branching of 17 sub-themes and the final consolidation of five generic themes. The coding framework evolved inductively as the analysis work progressed. Records were also kept of the frequency with which specific words and terms (e.g. language, synonyms, homonyms, phrases, arguments and assertions) were used, and

this was taken to reflect their relative importance.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1416)

9.11. Metodologia para definição de pesquisas futuras

- Nenhuma metodologia é indicada para definição de pesquisas futuras.

10. Resultados

10.1. Quantidades resultantes antes e após cada filtro

- Primeira busca: 300 artigos
- Primeiro filtro: 110 artigos
- Adição de “gray literature”: 148 artigos.

10.2. Definições (resultantes da análise ou mesmo adotadas como premissas no início da publicação)

- Produto: “a product is a tangible commodity manufactured to be sold and fulfil a customer’s need, and that a service is an essentially intangible activity with economic value done for others on a commercial basis (Goedkoop et al., 1999)”. (LIGHTFOOT; BAINES; SMART, 2013, p. 1422)

10.3. Evolução da pesquisa / das publicações no assunto

- Services marketing: “With a firm foot-hold in the marketing tradition, researchers in the field of services marketing have largely evolved from a perspective of the exchange and distribution of commodities, to a focus on a customer relationship management perspective of the provision of services.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1410)
- Service management: “This has largely evolved from mainstream operations and strategy domains and tends to focus on service organisations and organisational culture as opposed to the goods/service division.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1411)
- Operations management: “The broad field of operations has complemented its traditional focus on production and productivity-oriented analyses for efficiency improvements, with an emphasis on operations management and strategy in the delivery of product and service combinations”. (LIGHTFOOT; BAINES; SMART, 2013, p. 1412)
- Product-service systems: “Research in this area aims to develop a better understanding of PSS to facilitate the planning, development and effective delivery of industrial PSS (e.g. Proceedings of the 1st CIRP IPS2 Conference, 2009). Although developed in unconnected research streams and coming from different points of departure, there is a striking overlap in concepts relating to servitization within the operations management and PSS communities” (LIGHTFOOT; BAINES; SMART, 2013, p. 1413)
- Service science: “Service science has largely evolved from information systems (IS) applied domains and generally focuses on providing a better understanding of complex service systems. Originating in the IS sector and within IBM, this is a relatively new

interdisciplinary concept, articulated for the effective provision of services.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1413)

- Evolução geral das comunidades (ver Figura 2): “Figure 2 shows the extent of the research activity and relative maturity of each of the communities. A general increase in activity across all the communities is clearly apparent. In the first two decades, research dissemination activity was largely confined to the services marketing and service management communities. The operations community became more active in the late 1980s, followed by the PSS community in the mid-1990s. Finally, the service science community emerged around the turn of the twenty-first century. The operations community is presently the most prolific in the generation of research articles directly relevant to the servitization of manufacturing as indicated by the fastest rate of growth in knowledge production in the last decade.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1417)

10.4. Comunidades / “tribos” / “igrejas” / áreas de conhecimento / disciplinas identificadas

- Comunidades
 - Services marketing
 - Service management
 - Operations management
 - Product-service systems
 - Service science

10.5. Características de cada tribo (os atributos e/ou explicações são definidos pelo próprio artigo)

- As características de cada tribo estão descritas juntamente à evolução de cada tribo. Ver tópico 10.3.

10.6. Principais “achados” (*findings*)

- Comportamento de citações: “Overall therefore, it is apparent that the more mature communities are drawing on knowledge stocks from within these particular communities, whereas the emergent communities of PSS and service science are drawing on a knowledge base more evenly distributed across all the communities.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1419)
- Insights sobre a evolução: “although interest in servitization has burgeoned recently, its “evolution” has roots that can be traced back as far as the 1960s;” (LIGHTFOOT; BAINES; SMART, 2013, p. 1421)
- Interação entre as comunidades: “the extent of cross-citations varies significantly across communities, and suggests that opportunities exist for increasing “interactions” and leveraging knowledge production.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1421)
- Preocupações genéricas dos pesquisadores em servitização (LIGHTFOOT; BAINES; SMART, 2013, p. 1422):
 - “(1) product-service differentiation – research concerns that address the differentiation of product and services constructs;
 - (2) competitive strategy – research concerns that address the leverage of competitive advantage by developing services-led manufacturing strategies;

- (3) customer value – research concerns that address value-added, value-in-use and co-creation of value constructs;
- (4) customer relationships – research concerns that address the relational nature of customer interactions; and
- (5) product-service configuration – research concerns that address the design and implementation of complex service offerings and their associated delivery systems.”

10.7. Outros tópicos que não foram tratados aqui (sugestão para nova meta-informação ou resultados significativos)

Talvez a estrutura do tópico 5 pudesse ser um pouco diferente, pois sinto falta de outros itens além de “G (geral), C (contexto), J (justifica o artigo / pesquisa), L (**explicita a lacuna**)”, e sinto algumas dúvidas na diferenciação de lacuna e justificativa. A estrutura de introdução proposta na aula de escrita científica poderia ajudar, sendo dividida em C (contexto), R (revisão da literatura), L (lacuna), P (propósito), M (metodologia), R (resultado), J (justificativa/valor), E (estrutura).

Um aspecto que achei curioso é que ele considera os serviços associados a produtos como uma troca relacional, ou seja, deixa de ser transacional. Talvez essa seja uma diferença entre um PSS e um serviço puro. (LIGHTFOOT; BAINES; SMART, 2013, p. 1410)

Os autores propõem que os conceitos de produto e serviço se misturam e se sobrepõem, e que é importante abandonar essa diferenciação. Mas acho que é importante diferenciar o que chamamos de produto, serviço ou PSS. Ou então podemos simplesmente focar em chamar de servitização, que é algo mais genérico.

A princípio, discutindo sobre o assunto, pensei sobre alguns requisitos para podermos estabelecer o que é PSS ou não. Acho que é uma definição essencial para podermos estudar estudos de caso. Pois, caso contrário, tudo é PSS e tudo é um possível estudo de caso. Acho necessário estabelecer limites.

Pré-requisitos > a tecnologia principal é produzida pelo provedor (pode ser integrador, desde que gere um novo “produto” – part number) [diferencial se a net é serviço ou PSS], o cliente tem acesso e disponibilidade do produto [diferencial se a amazon é serviço ou PSS], a posse e manutenção do produto é mantida pelo provedor [diferencial se uma locadora de veículos ou uma concessionária é PSS].

De fato, o artigo reforça que a tipologia do Tukker é relativa à servitização da manufatura. Mas ele aponta que PSS melhora impacto econômico, social e ambiental. Isso eu não concordo.

Além disso, ele diz o seguinte:

“Araujo and Spring (2006, p. 797) suggest that: [. . .] what counts as a product or service depends on the nature of the producer-user interface and the institutional structure of production rather than any essentialist feature of product or service.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1422)

10.8. Proposições de pesquisas futuras (geral)

- “Having gained a better insight into the activities of the current researcher communities, a more sophisticated and deeper analysis of interactions would complement our findings.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1429)
- In a similar way, it would be immensely valuable to bring together researchers from the different communities to debate and so refine our understanding of the major research themes.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1429)
- “Other opportunities lie in the further exploration of conceptual links in the servitization field. For example, servitization can be seen to be closely coupled to vertical integration (in that it deals with a manufacturer moving forwards in its supply chain to manage customers’ operations). As a consequence, there is a wealth of literature on vertical integration, outsourcing, facility location, etc. that may also be relevant to enhancing our understanding of servitization practice.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1429)
- It would also be valuable to better understand and critique the research processes favoured by the different research communities. Invariably, researchers from a management science discipline approach research practice in a different manner to engineers, and describe their work using different styles of language and discourse and publish their findings in different journals.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1429)

10.9. Contribuições (para academia / prática / ambas?)

- Apenas apontam contribuições para a academia: “Servitization within manufacturing is evidently a diverse and complex field with contributions arising across a range of research communities that are interdependent. Improved awareness and cohesion across these communities will help to improve the quality and rate of knowledge production, and establish important future research challenges.” (LIGHTFOOT; BAINES; SMART, 2013, p. 1409)

11. Conclusões

11.1. Trabalhos futuros (que o autor se propõe, diferente das proposições futuras)

- Os autores não se propõem trabalhos futuros.

11.2. Limitações

- Os autores não apontam limitações do trabalho.

12. SUA ANÁLISE

12.1. Pontos fortes

Foi um dos artigos mais esclarecedores que já li sobre as várias tribos da pesquisa em serviços.

É muito interessante a divisão das comunidades de pesquisa. Explicita muito bem as tribos que lidamos nas nossas pesquisas.

O artigo realiza uma busca abrangente em muitas revistas e parece abordar a literatura de forma mais completa do que outros que já li.

Ele não explicita a sua diferença em relação a outras revisões da literatura, mas, na minha opinião, realmente não era necessário explicitar, dado que o artigo está muito bem escrito e suas contribuições são muito claras: mostrar como as comunidades de pesquisa em serviços interagem, seus níveis de maturidade e seus maiores focos de pesquisa. Realmente, não há contribuição para a indústria, mas há uma excelente estruturação e síntese desse conhecimento para a academia.

Também é muito interessante o agrupamento dos journals nos quais cada tribo publica. Essa lista de journals divididos por tribos pode nos ajudar a selecionar melhor as revistas em que publicamos, de forma a atingirmos nosso público alvo.

Outro ponto forte é o uso de um método de análise do material mais estruturado do que apenas uma interpretação pessoal das informações.

12.2. Pontos fracos

Embora muito interessante, discordo um pouco da nomenclatura PSS ser utilizada para a tribo focada em sustentabilidade e impacto social/econômico. Tukker, por exemplo, utiliza o nome “PSS” e foi alocado na tribo “operations management”. Talvez a nomenclatura tenha sido um pouco infeliz, pois concordo com a forma que as tribos foram divididas. Apenas discordo da nomenclatura.

Os autores também não se preocupam em prover definições, provendo apenas a definição de produto. No entanto, eles abordam muitos conceitos e há perigo de gerar mal-entendidos dependendo da forma como o leitor entende cada conceito.

12.3. Sugestões para melhoria do artigo

Além dos aspectos levantados nos pontos fracos (prover definições e modificar a nomenclatura de uma das tribos), há algumas sugestões que poderiam prover resultados interessantes.

Seria interessante se o artigo oferecesse uma análise de quais/quantos autores de comunidades diferentes já publicaram juntos. Isso poderia demonstrar como as comunidades tem interagido sob uma perspectiva diferente do que apenas quais autores citam quais.

Também seria interessante se o artigo provesse um método mais estruturado para gerar as propostas de pesquisas futuras, assim como o fez para a análise das informações.

13. Figuras ou tabelas importantes (caso você queira copiar e citar nos tópicos anteriores)

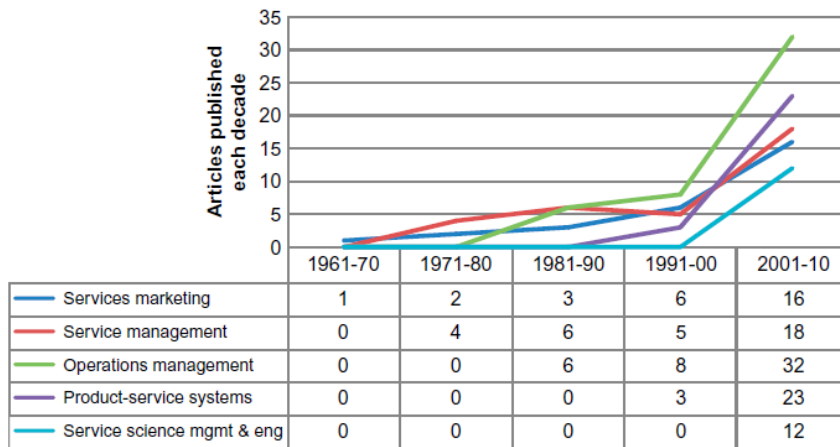


Figure 2.
Profile of 50 years of
servitization research
activity by researcher
community