



UvA-DARE (Digital Academic Repository)

Service business model framework and the service innovation scope

van der Aa, W.

Published in:

Advances in service quality, innovation, and excellence: proceedings of QUIS 12, the 12th International Research Symposium on Service Excellence in Management: June 2-5, 2011, Ithaca, NY

[Link to publication](#)

Citation for published version (APA):

van der Aa, W. (2011). Service business model framework and the service innovation scope. In B. van der Rhee, & L. Victorino (Eds.), *Advances in service quality, innovation, and excellence: proceedings of QUIS 12, the 12th International Research Symposium on Service Excellence in Management: June 2-5, 2011, Ithaca, NY* (pp. 256-265). Ithaca, NY: Cornell University, Center for Hospitality Research.

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <http://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

**SERVICE BUSINESS MODEL FRAMEWORK
AND THE SERVICE INNOVATION SCOPE**

Paper for the

12th International Research Symposium on Service Excellence in Management

Ithaca, New York, USA: Cornell University

June 2011

Wietze van der Aa

Amsterdam Centre for Service Innovation,

University of Amsterdam, Netherlands

w.vanderaa@uva.nl

ABSTRACT

In this paper we present a framework for service business models. We build on three streams of research. The first stream is the service management and marketing literature that focuses on the specific challenges of managing a service business. The second stream consists of research on e-business models. The third and most recent stream of research includes frameworks and business models from strategic management and innovation management. The next step in our research is the development of a service business model framework and describing a set of core dimensions of innovation in a service business. The framework will be illustrated with recent case studies of service firms.

THREE PERSPECTIVES ON BUSINESS MODELS

In discussions on innovation in services the focus is very often on the classical distinction between service (or product) and process innovations (Nijssen, Hillebrand, Vermeulen and Kemp, 2006). Although several authors also use different classifications of innovations there seems to be room for a broadening the scope for innovation in services and updating the frameworks that describe those innovations (Den Hertog et al, 2010; Menor et al. , 2002). One of the reasons for such an update is the rise of many new and different type of service businesses. This development is reflected in the discussion on business model innovation (Hamel, 2000; Teece, 2010).

In this paper we take a holistic approach in which we acknowledge also the system level in a service business. Innovation does not only take place in one part of a service business such as a new service concept or a delivery system, but it happens also through the interrelatedness between the parts and at a system level. This perspective can help us to understand the phenomenon of business model innovation in service firms.

A business model is defined as “a conceptual tool that contains a set of elements and their relationships and allows expressing a company’s logic of earning money” (Osterwalder et al, 2005). In this paper we focus primarily on the combination of elements of a (service) business model as a tool for describing innovations.

Service business model frameworks

The first stream of research comes from the field of service management and service marketing. In a number of key publications from those fields generic models of a service business or service firm are introduced. We selected four of these core publications. Two of them build on work in the seventies and eighties of the 20th century, but were updated more recently (Heskett et al, 1997; Normann, 2000). Two other key publications represent different research streams (service marketing and service management / operations) are of more recent date (Zeithaml et al, 2006; Frei, 2008). Those four represent a large body of knowledge in the service management and marketing fields.

They also mirror the breadth and multidisciplinary character of the science of service management: general management, marketing management and operations management. The key elements of the models that are presented in the four publications are summarized in table 1.

The comparison of these four models leads to a number of observations:

- All four models share a focus on three core elements: service customer, service concept and service delivery. The Servqual model uses a somewhat different terminology (Zeithaml et al.). But we argue that the same logic (customers – concept – delivery system) is behind the first three gaps in the ‘gaps-model’.
- The service delivery system can be considered as a sub system in itself consisting of different components. Two authors underline the specific role and qualities of service personnel or service employees in the delivery (Heskett et al; Frei). In the service profit chain the interaction between customers and employees is one of the core processes leading to results in terms of turnover and loyalty of customers and employees. The employees can also be considered as the carriers of the service culture in an organization (in Normann’s model culture is a separate dimension).
- In the four models technology and processes (information, logistics, etc) form another part of the delivery system. Compared to the key role of technology in the mainstream innovation literature the role here seems to be more limited as one of the factors. Frei does not even consider technology as one of the core elements in her model.
- Only one model (Frei) pays particular attention to the element of the revenue model. One explanation is that her publication is rather recent and that discussions on revenue models really came up in the literature after the rise of internet (see for example Amit & Zott, 2001; Chesbrough, 2006). The internet created a large number of new ways to generate a revenue with a service offering.
- The interrelatedness of the various core elements in a service business model is a key issue in all four models. The interconnections in a service model can be considered as a distinctive characteristic of service firms. According to Frei (2008) effective overall integration of the elements is crucial to a successful service model: “the whole business depends more on the interconnection of the four than on any one element”.

Table 1 Business Model Frameworks for service firms – Key dimensions

	Service–profit chain (Heskett et al)	Service Management system (Normann)	Servqual model (Zeithaml et al)	Service model (Frei)
Customers	Target market	Customers as market and as co-producers	Customers and expectations	Customer management system
Service concept	Service concept	Service concept	Service standards & design	Service offering
Service delivery system People & culture	Service delivery system	Service delivery system: Personnel, Culture	Service delivery People	Employee management system
Service delivery System Technology & Processes		Service delivery system: Technology & Physical support	Service delivery Technology & Systems	
Revenue model				Funding Mechanism
Business model	Interaction and dynamics of service-profit chain	System of Components, Business philosophy	Gaps model of service quality	Integrated service model

Sources: Heskett, J.L., W.E. Sasser Jr & L.A. Schlesinger (1997); Normann, R. (2000); Zeithaml, V.A., M.J. Bitner and D.D. Gremler (2006); Frei (2008)

E-business model frameworks

The second stream of research reflects the rise of the internet and the new opportunities for innovation and value creation it creates. Starting at the end of the nineties of the 20th century many authors tried to capture the implications and opportunities for e-businesses. Madevan (2000) presents a framework for e-business models with four 'value streams', six revenue streams and three logistical streams. Another publication, by Amit and Zott (2001) pays attention to four sources of value creation in e-businesses. These two stand for a much broader set of publications on e-business and e-business models. This attention to business models, value creation and revenue streams is a reflection of the search for answers to new technological and business opportunities. As Amit and Zott (2001) state "the business model construct is useful because it explains and predicts the empirical phenomenon of value creation". In this stream of publications it is hard to find any connections or references to the first stream of research introduced in this paper. It seems that the authors on e-business models, often coming from other disciplines (information management), were not aware of these models from service management and service marketing or did not use them for specific reasons. The research on e-business models has contributed to our understanding of business models by paying attention to the essential questions how companies create value and how they exploit new business opportunities, for example by developing new revenue models. Furthermore we have learned about new forms of innovation by creating new distribution channels and on-line businesses with new roles for customers in self service formats. But these publications show some limitations as well. They tend to focus on a narrow set of businesses and the empirical elaboration is limited.

Generic business model frameworks

Partly building on the research on e-business models several authors have developed more generic type of business model frameworks. Osterwalder & Pigneur (2005; 2010) developed a business model framework based on the previous stream of research, mainly from the e-business literature. They included also more generic models in their evaluation such as published by Hamel (2000). Osterwalder, Pigneur and Tucci (2005) deduced from about fourteen models their own business model framework with nine core building blocks. These building blocks are represented in the first column of table 2. Other generic business models were developed by Chesbrough (2006) and Johnson, Christensen and Kagermann (2009). Those two are represented in columns two and three of Table 2. This table shows the various key elements or building blocks of these three generic models.

Table 2 Generic Business Model Frameworks – Key dimensions

<i>Osterwalder, Pigneur (2005)</i>	<i>Chesbrough (2006)</i>	<i>Johnson, Christensen, Kagermann (2009)</i>
Customers	Market segment	
Offering	Value proposition	Customer Value Proposition (target customer, job to be done, offering)
Delivery channel	Value chain structure	
Relationships		
Revenue model	Profit potential & cost structure	Revenue model & cost structure (+ margins model, resource velocity)
Key resources		Key resources (people, technology, equipment, information, channels, partnerships, brand)
Activities		Key processes (new product development, sourcing, manufacturing, hiring, marketing, information management + metrics and norms)
Partners	Value network & eco-system	
Cost structure		
	Competitive strategy	

The three generic business model frameworks seem to be more elaborated than some of the e-business models by paying attention to a broader set of business dimensions. The three frameworks share a considerable number of elements, but differ in the level of specification and the level of analysis.

SERVICE BUSINESS MODEL FRAMEWORK: SEVEN DIMENSIONS FOR INNOVATION

From our analysis of the three streams of research on (service) business models we deduced a new service business model framework (table 3). In the first column seven core dimensions are listed. The first three – customers (as market as well as co-producer), service offering and service delivery system – can be traced back to the main components in the service business models presented in table 1. These three seem to be the hard core of every service business system. The latter four dimensions are drawn from the other two streams of research on e-business models and the generic business models.

In the second column of table 3 we listed a number of specifications of the seven dimensions. These specifications show the variety of elements that were introduced in the literature. In the third column of table 3 we refer to some key publications where those core dimensions and the elaborations are discussed as being important aspects of a business model.

The first dimension is ‘the customer’ in two connected ways. First of all the customer has needs and expectations about the service functions to be delivered. Secondly, the customer is not only the market but shows also up as a co-producer in a service business (Normann, 2000). Customers are often part and parcel of the development or production of the (new) service. The interaction process between the provider and the client is an important source of innovation – the more so when the business service itself is offering support for innovation (which, for example, is the case in R&D or design services).

The second dimension - the service offering - is the value that is created for the customer. New concepts offer value in a new way. Service innovations may be embedded in a tangible product but the innovation itself is often a new idea or concept of how to organise a solution to a problem. Many new service concepts are combinatory i.e. they do combine elements of services that do exist individually or as part of other services into a new combination or configuration (van der Aa and Elfring, 2002).

The third dimension concerns the service delivery system and organisation. Here we make the distinction between the human part of the delivery system (personnel, organization, culture) and the technological and process aspects involved in delivering the service. New services, for example, may require new organisational structures, (inter)personal capabilities or team skills. To some extent also the customer can be considered as a part time human resource being a productive factor in the service delivery (Normann, 2000). The customer as co-producer and the design of the customer interface are important issues in this innovation dimension. The technological aspects of the service delivery system have caused much debate in the service innovation literature. Service innovations are of course possible without technological innovations but they often go hand in hand. Predominantly, but not exclusively information technologies can facilitate service innovations.

Table 3 Service Business Model Framework

<i>Core dimensions</i>	<i>Elaboration of dimensions</i>	<i>Key literature</i>
Customers	Markets, market segments	Zeithaml et al. 2006
	Expectations & needs, loyalty	
Service offering	Customer interface, customer as co-producer, Service delivery mode	Normann, 2000 Osterwalder et al 2006
	<i>Service concept</i> , value proposition, Combination of services elements Combination of services and goods	Zeithaml et al. 2006 Johnson et al. 2009 Amit & Zott, 2001
Service delivery system (key resources)	People, HRM, capabilities	Frei, 2008
	Culture (Information) technology, capacity, Front & back office, processes	Normann, 2000 Heskett et al, 1997 Mahedevan, 2000
Partnerships	Business partners, Eco-system	Chesbrough, 2006
	Suppliers, customers	Teece, 2010
Revenue model	Pricing	Frei, 2008
	Cost management	Osterwalder et al. 2005
Business model	Structure & dynamics	Frei, 2008
	Balance & coherence	Teece, 2010
	Business philosophy & values	Normann, 2000
Strategy & Management (key processes)	Management (innovation)	Birkinshaw, Hamel & Mol, 2008
	Leadership, Entrepreneurship	Teece, 2007, 2010
	Growth strategy	Chesbrough, 2006
	Multi business model	Frei, 2008

The fourth dimension is related to new revenue models. To develop the right revenue and pricing model fitting a new service concept and service delivery system may require considerable ingenuity. Many service innovations in for

example healthcare fail as the appropriate revenue model is missing. Numerous new service offerings in web-enabled new services require new revenue models.

The sixth dimension is the integrated business model. This dimension links the five separate ones and shows the newness at a system level. Several authors have underlined the importance of this dimension (Frei, 2008; Osterwalder et al 2005). A service firm can innovate on every single dimension in the framework, or on a combination of several dimensions. Business model innovation is typically related to a system level.

The seventh dimension in our framework is the strategic and management dimension. Service firms develop and implement strategies at the firm level and make decisions on distinctive positioning of the company in the business context (competition, stakeholders), on renewal and innovation, on growth strategies. The strategy of the firms can include various service business models. Then the innovation refers to the strategy level of the company (for example multi-businesses strategy, Frei, 2008)

In most of the publications on business models no explicit attention is paid to the management or the execution of the models. For analyzing the success or failure of service innovation and business models it is crucial to include the way a model is executed and the (service) business is managed. For that reason one of the dimensions is management innovation: novel approaches to management – new ways to organize, lead, coordinate and motivate (Birkinshaw, Hamel & Mol, 2008).

When we want to describe and analyze service innovations this model offers us a framework to structure the variety of innovations we can encounter in service firms. We can easily see that service innovation can mean more than simply product or process innovation. The scope for innovation is much broader and we can select some elaborations of dimensions such as the customer as co-producer that are specific for service firms.

CASES

In a number of recent projects on service innovation we tested the relevance of the our service business model framework. We conducted case research on the type of innovations in 12 cases of seven service firms. This set of firms included an airline, a hotel chain, a wholesale distribution company, an on-line retailer, a social network site, a temporary staff agency and an on-line information broker. In table 4 we show the result of the mapping of the main innovations in the cases in the framework we developed. Not all of the seven dimensions seem to have relevance for each and every case. This is a very explorative way of testing the relevance of the framework. On average about five dimensions per case were considered as relevant. These seven dimensions are instrumental in mapping the separate service innovations, in pointing at the multi-dimensionality of service innovation and the linkages between the dimensions. However, the weight of the dimensions, as well as the interactions between them, will vary across individual service innovations and firms. This is a first illustration of usefulness of such a framework for describing

the variety of service innovations. Further specification and operationalization of the framework will have to prepare it for more severe testing.

Table 4 Dimensions of service innovation – illustrations from 12 cases in service firms

<i>Dimensions</i>	<i>Cases</i>
Customers	On line retailer 1 Social network site On line information broker Hotel chain Wholesale distribution
Service offering	Airline 1 On line retailer 1 Social network site On line information broker Hotel chain Temporary staff agency Wholesale distribution
Service delivery	Airline 1
System	On line retailer 1 Social network site Hotel chain Wholesale distribution
Partnerships	Airline 1 + 2 On line retailer 2+3 On line information broker Temporary staff agency
Revenue model	On line retailer 2 + 3 Social network site On line information broker
Business model	On line retailer 1 +2 + 3 On line information broker Hotel chain Temporary staff agency Wholesale distribution
Strategy & Management	Airline 2 On line retailer 1 + 3 Social network site Hotel chain Temporary staff agency

CONCLUSIONS

In this paper we have presented a service business model framework. The objective of the paper was to develop a framework that can describe the richness and variety of innovation in services and to overcome the limitations of more classical approaches in innovation theories. We have build the framework on three bodies of knowledge of models from service management & marketing, e-business models and generic business models. The combination of seven core elements and dimensions of those three streams of research resulted in a new service business model framework. This framework and its dimensions are related to leading publications on the topic of services and business models. Finally some illustrations indicated the relevance of the model.

This explorative work is a first step on the way to a deeper and broader understanding of service innovation. More work has to be done on the specification and testing of such a framework

REFERENCES

- Aa, W.van der and Elfring, T., (2002), Realizing innovation in services, *Scandinavian Journal of Management*, 18, p.155-171
- Amit, R. and Zott, C., (2001) – Value creation in e-business, *Strategic Management Journal*, 22, p.493-520.
- Aung, M.,(2000),The Accor Multinational Hotel Chain in an Emerging Market: Through the Lens of the Core Competency Concept, *The Service Industries Journal*, 20 (3), p.43-60
- Birkinshaw, J., Hamel, G. and Mol, M.M., (2008) Management innovation, *Academy of Management Review*, 33 (4) p.825-845
- Chesbrough, H.W. (2006), *Open business models – how to thrive in a new competitive landscape*, Harvard Business School Press
- Frei, F.X., (2008), The four things a service business must get right, *Harvard Business Review*, April, p.70-80
- Johnson, M.W., Christensen, C.M. and Kagermann, H., (2008), Reinventing your business model, *Harvard Business Review*, December, p. 50-59
- Hamel, G., (2000), *Leading the revolution*, Harvard Business School Press.
- Heskett, J.L., Sasser, W.E. Jr . and Schlesinger, L.A., (1997), *The service profit chain: How leading companies link profit and growth to loyalty, satisfaction and value*, Free Press, New York
- Hertog, P. den, Aa, W.van der and Jong, M.W.de, (2010), Capabilities for managing service innovation: towards a conceptual framework, *Journal of Service Management*, 21 (4), p. 490-514.

- Hertog, P. den and Jong, G. de., (2007), Randstad's business model of innovation: Results from an exploratory study in the temporary staffing industry, *Innovation: management, policy & practice*, 9, 351–364
- Magretta, Mahadevan, B, (2000), Business models for internet-based e-commerce: an anatomy, *California Management Review*, 42 (4), p.55-69.
- Menor, L.J., Tatikonda, M.V. and Sampson, S.E., (2002), New service development: areas for exploitation and exploration, *Journal of Operations Management*, 20, p.135-157
- Michel, S., S.W. Brown and A.S. Gallan (2008), Service Logic Innovations: How to innovate customers, Not Products, *California Management Review*, 50 (3), 49-65
- Nijssen, E.J., B. Hillebrand, P.A.M. Vermeulen and R.G.M. Kemp, (2006), Exploring product and service innovation similarities and differences, *International Journal of Research in Marketing*, 23, p.241-251.
- Normann, R. (2000), *Service Management; Strategy and Leadership in Service Business*, Wiley
- Osterwalder, A., Pigneur, A.Y. and C.L. Tucci, C.L., (2005), Clarifying business models: origins, present, and future of the concept, *Communications of the Association for Information Systems*, Vol.15
- Osterwalder, A, Pigneur, A.Y, (2010), *Business model generation* (self publication)
- Teece, D.J., (2007), Explicating dynamic capabilities: the nature and micro-foundations of (sustainable) enterprise performance, *Strategic Management Journal*, 28, 1319-1350
- Teece, D.J., (2010), Business models, business strategy and innovation, *Long Range Planning*, 43, p.172-194
- Winter, S.G. and Szulanski, G.,(2001), Replication as strategy, *Organization Science*, 12 (6), p. 730–743
- Zeithaml, V.A., M.J. Bitner and D.D. Gremler (2006), *Services Marketing*, McGraw-Hill.