

“Sales of B2B-Services: Isoquant Scheme Segmentation”

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The Co-Production of Services among a minimum of two parties, the Service-Provider and the Service-Customer partners. The Authors use and transfer of microeconomic isoquant schemes to services called “Iso-Services-Line” (German: Iso-Leistungslinie) as graphic scheme to provide helpful indications, how the distribution of input activities between both partners, the service-provider and service-customer, could be realized and preplanned. This concept is shown as starting point and also opening- up chance for more specified and detailed aspects of segmentation of the service customers, service blue-printing and other service concepts. Opportunities and limits of the Isoquant Scheme are discussed. The case-study of telecommunication-enabled remote services allow new forms of cooperation as transaction costs are continuously sinking. Taking international telecommunication infrastructures into account this concept enables clear segmentations and service engineering i.e. specific development of customized services.

Key Words:

Isoquant service co-production scheme, isoquant graphs, service development, service innovation, service engineering, service marketing, customer segments, market segmentation, opportunities, threats, case study, telecommunication, remote services.

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In Service Science the core definitions and attributes of service are often described as

Immaterial, co-production of service-providing and service-using party integrating external factor inputs.¹

The following German Meta study backs-up this fact:

Eigenschaften von Dienstleistungen in der wissenschaftlichen Diskussion

Autoren	Nichtlagerbarkeit	externer Faktor	Immaterialität	Heterogenität
Bateson	•	•	•	
Bell	•		•	•
Berry	•	•	•	•
Bessom, Jackson		•	•	•
Booms, Bittner		•	•	
Carmen, Langeard		•	•	•
Davidson		•	•	•
Davis, Gultinan, Jones		•	•	
Donelly	•	•	•	
Eiglies, Langeard		•	•	•
Fisk			•	
George, Barksdale		•	•	
Grönroos		•	•	
Johnson		•	•	•
Judd		•	•	
Knisely	•	•	•	•
Langeard		•	•	•
Lovelock		•	•	
Rathmell	•	•	•	•
Regan	•	•	•	•
Sasser	•	•	•	•
Schlissel		•	•	•
Shostack		•	•	•
Thomas	•		•	•
Uhl, Upah	•	•	•	•
Zeithaml		•	•	•
Häufigkeit der Nennungen	10	23	26	17

Quelle:
Jaschinski, 1998

Table 1: Meta-Study of service attributes in the scientific discussion
by Jaschinski²

Summing up the three views of service as input-oriented (resource-based), service-process-oriented and output-oriented (service result-oriented) are well spread in service science.³

So definitions that take up at least one of the three possible standpoints can be differentiated:

¹ Maleri, Rudolf; Fietzsche, Ursula 2008: *Grundlagen der Dienstleistungsproduktion*, 5. Auflage, Berlin,, pp. 17-20;

Berekhoven, Ludwig 1966: *Der Begriff „Dienstleistung“ und seine Bedeutung für eine Analyse der Dienstleistungsbetriebe*, in: Jahrbuch der Absatz und Verbrauchsforschung, 12. Jg,1966, pp.. 314-326.

² Jaschinski, Christoph 1998: *Qualitätsorientiertes Redesgn von Dienstleistungen*, Aachen.

³ Vgl.Maleri, Rudolf; Fietzsche, Ursula 2008: *Grundlagen der Dienstleistungsproduktion*, 5. Auflage, Berlin,, pp. 17-20.

1. Service as products which bases on a capability/ readiness to provide factor inputs especially by the service providing party: A colloquial example might be the statement: "I go to the hairdresser's."
2. Service as the process integrating internal and external factors from the service provider in a common process of co-operative service creation: This might be simplified in the statement: "I let my hair cut."
3. Service as the result of a factor combination and service process aimed at benefits at the service consumer site. The spropositon: " I will get a nice hair-cut." Indicates this implication.

The example of a hair cut service (Hairdresser) underlines these valuable perspectives.

The following model provides further insights to the service generation process:

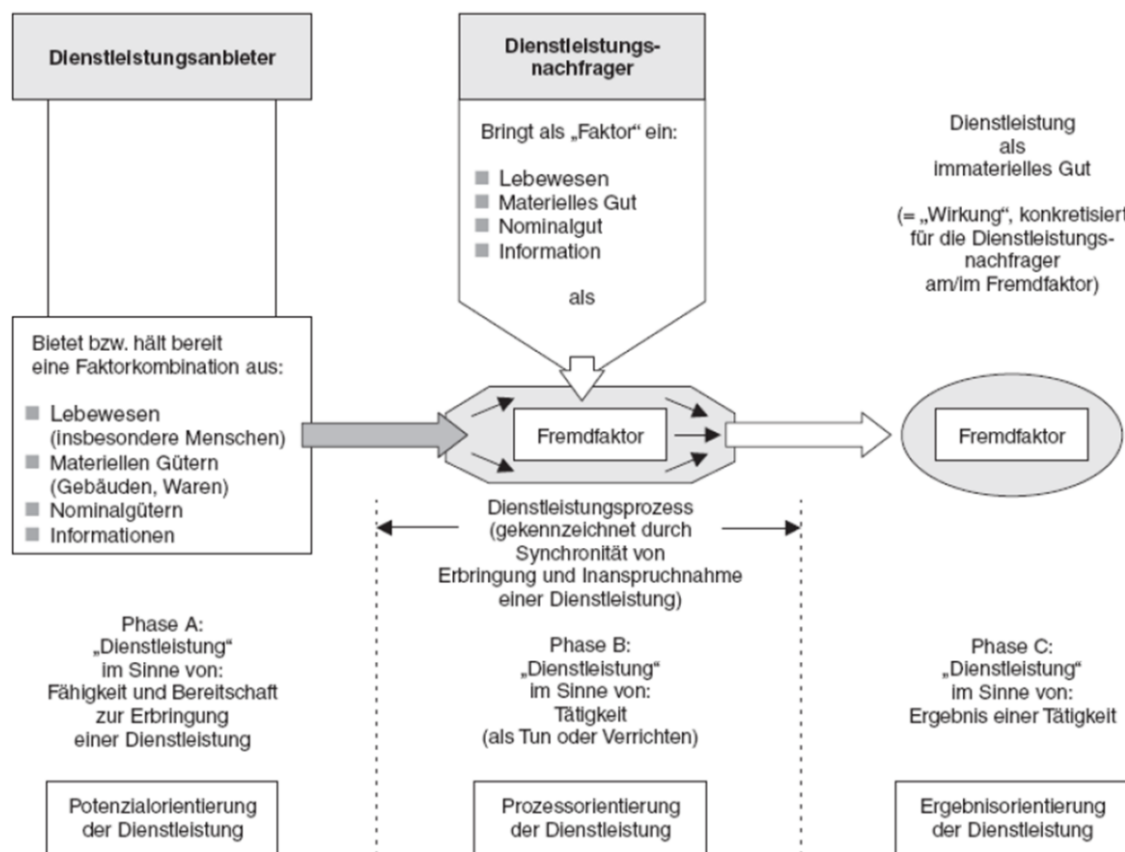


Exhibit 1: Service Generation Process based on the three Perspectives⁴

The co-production of service involves crucial distinguishing aspects of services from tangible, physical goods like a wide variation in quality of person related services, which can be traced back to the volatility of human factor inputs of both sides.⁵

⁴ Meffert, Heribert; Bruhn, Manfred 1995: *Dienstleistungsmarketing*, 1. Auflage, Wiesbaden, p. 26.

⁵ Borgmeier, Arndt 2002: *Teleservice im Maschinen- und Anlagenbau: Anwendung und Gestaltungshinweise*, pp. 33-34.

A special in German literature cited concept stems from production theory of services is the isoquant factor combination scheme, which mainly shows factor combinations between service providing and service consuming parties from a service production aspects.⁶

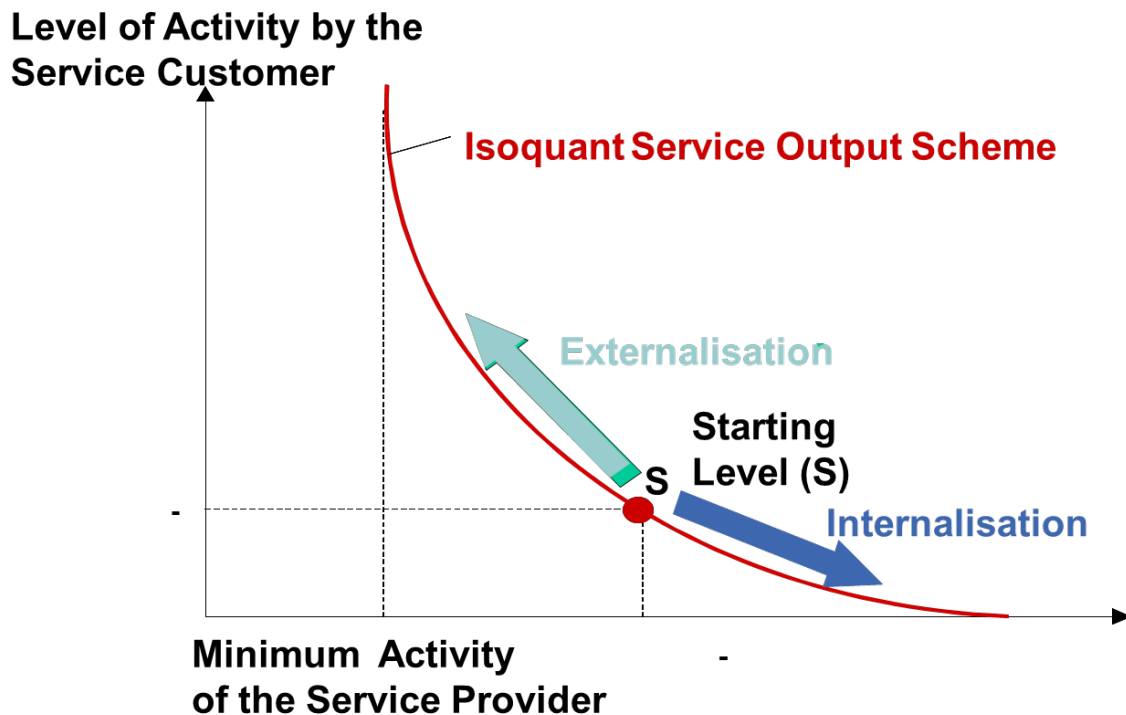


Exhibit 2: Isoquant-Service-Output- Scheme (Indifference Curve Concept)

These lines are comparable to isoquants in production theory and show the factor combinations in dyadic service co-production leading to a comparable service result assuming input factor substitution from both service partners. The service Provider has to provide at least a minimum activity in the partnership whereas the service customer could nearly (asymptotically) do nothing for instance if the whole process is very much automated and self-controlled.

This concept might work as a core switch for the other service-related methods. It reveals powerful qualitative information and interfaces with concepts like vignette technique, service controlling, customer segmentation etc.

Discussing the model in depth assuming the following prerequisites this scheme especially applies for services, ...

- Which integrate human factor input on service customer site
- Demand a minimum of an active customer role (no full-automation)
- Are based on a certain co-production of the researched service
- Thus allowing the customer substitutional factor input to a large extent
- Allow different factor combination with equivalent results for the service customer

⁶ Corsten Hans 198: Die Produktion von Dienstleistungen – Grundzüge einer Produktionswirtschaftslehre des tertiären Sektors, Berlin.

Maleri, Rudolf, Fietzsche, Ursula 2008: *Grundlagen der Dienstleistungsproduktion*, 5. Auflage, Berlin, pp. 17-20.

- Have little experience based “value” or event characteristics in the service process and factor input by the service provider

The following case study illustrates possible allocations:

Remote diagnostics of a machine abroad from a German OEM machine producer might work as a typical example of an after service diagnostic service on a technical system (machine). We are looking at two scenarios:

The A-Scenario might reflect the cost and availability demands of a production unit working at a highly productive plant with many shift working.

The B-Scenario responds to a very cost sensitive and less operational availability oriented extensive production unit may be in use in an emerging country.

a) Service provider realized Remote Diagnostics of the machine:

High service provider (OEM Machine produces after sales) involvement, realized by a widely automated remote diagnostic with a comparable low service customer involvement: The machine automatically demands from the service provider’s servers a remote diagnostics, which is executed by checking parameters and historic data from the machine memory (Guided by the idea of an internalization strategy, which means the service provider does a lot of activities for the service customer).

b) Service provider supported Customer Self Diagnostics of the machine:

High service customer involvement by customer self-services. The Service providing party shows in comparison to scenario a) less input by coaching and guiding to spontaneously demand oriented analytics and consulting the service customer. (Following the idea of an externalization strategy).

So it appears wise to keep in mind or even simulate the service process integrating the customers service necessities and demands to benefit from useful criteria and aspects for segmentation. Here like in typical B2B segmentation the usage and non-socio-demographic attributes of the customers play an important role.

So attributes derived from the qualitative and quantitative intensity of the (ex ante: expected and ex-post: visible) service production provide a helpful bridge to customer segmentation.

So in this example segmentation could be improved by price, production details at the customer’s site, diagnostic know-how or expertise, the organization of the co-production of the service, the enabling communication al infrastructure, etc. As conclusion a wide variety of techno-organizational, often interdisciplinary, criteria from service production theory might “incubate” service customer segmentation.

Although this concept provides quite an impressive background for service “production” and service customer segmentation via the individual (also expected) activities in the service process, it is allows criticism and also shows demand for further research:

Aspects to be considered for further research cover e.g.:

- The useful definition and border lining of the researched service in the service mix
- some service creation might be path-dependent and might allow factor substitution only in a limited way
- the production and transactions in the generation of services are difficult to differentiate
- The probability and stability a service production develop during the double-individual process like expected.
i.e. the hypothesis that the concept will provide better results regarding highly internalised (automated) processes of the service provider when the factor

input of the service customer is considerably low (i.e. rather indifferent levels of experience based value of the service might be predicted).

- In fact the indifference curve for services is not necessarily indifferent. The process of common service creation itself creates benefits from a special service generation transactions like sales or learning experience. Concepts to integrate the “transactional value” out of the process and resource based input for the service customer. The “idealistic neglect” of the added value due to the transaction or experience during the service generation through the service customer’s eyes, which makes the whole outcome hard to compare.
- Some service creation might be path-dependent and might allow factor substitution only in a limited way
- The possibility of using it as a quantitative concept, measuring activities.
- The fact that customer self-services often bear a bias in the perception of their costs (e.g. bank statement form an automatic teller machine (atm)), which might lead to unexpected factor allocation.

Further aspects refer to the integrated use of “strong” concepts, e.g. like:

In relation to sales interdependencies between resource investment (e.g. hardware, software). Role models like the buying center applied to a kind of “service center” also based on role interests in the service.

The customers’ perception of visible/ noticeable/ available input/ resources into the service generation process might be another interesting aspect for future research.

Assuming furthermore that the service is an after sales machine-related industrial service, like a remote diagnostics, this scheme appears to be a valuable bridge not only for service engineering but also for customer segmentation, which often is based on behavior- or usage-based in B2B-marketing.

As result seen from a very universal perspective service production and transaction aspects and theories appear to be worthwhile analytics and useful “hub” or “bridge” to further service marketing research. This also suggests to follow a multidisciplinary and holistic approach and do a systematic “Service Engineering” which comprises production and transaction theory aspects of services as well as service marketing.

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