SERVICE INNOVATION IN GERMAN MANUFACTURING INDUSTRIES:
INFORMATION SOURCES, ORGANIZATIONAL RESPONSIBILITIES AND THEIR EFFECTS ON THE SUCCESS WITH SERVICES

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Introduction

- Internal R&D is the driver of product innovations
- The responsibility for service innovations is not clearly defined
- Previous studies focused only on product innovations for a long time

State of research I

- What are the differences between product innovation processes and service innovation processes?

  - "assimilation approach" => service innovations hardly differ from product innovations

  - "demarcation approach" => service innovations are basically new and require new theories and instruments

  - "synthesis approach" => service innovation aspects are also relevant for product innovations

  Coombs and Miles 2000; Dreher 2004

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State of research II

- German manufacturing industries: 55% of all companies focus on R&D internally, but only 30 % of the innovative service companies do

- Formal R&D is not as important in the service sector as in the product innovation sector

- Close connections to universities seem to be less important in the service sector

- Information channel "cooperation with customers and suppliers" is more important for innovations in the service sector than in the manufacturing sector => demand pull is more relevant

Analysis leading to the mentioned results investigated differences between service and product innovations

=> Approach ignores the necessity to develop innovative services even in industrial enterprises

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State of research II

- Developing service innovations in manufacturing industry is very complex.

  - Tradition as manufacturers of technologically sophisticated products

  - Focus on product developing and manufacturing

  - Services and service innovations are gaining importance

  - Organizational anchoring of development and the delivery of services in manufacturing companies => ??
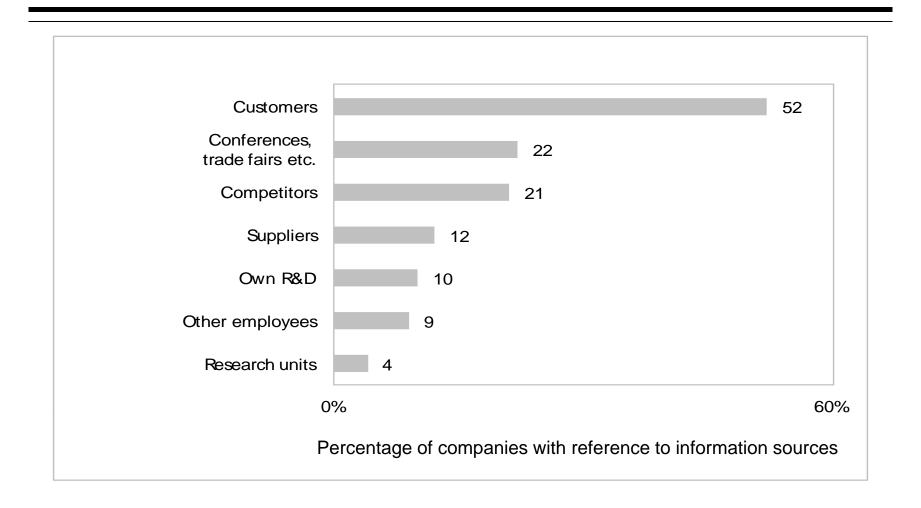
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Research questions

- *What information sources are important for companies to obtain impulses for service innovations?*

- *Are there any differences between important information sources for service innovations and product innovations?*

- *Who is responsible for developing service innovations in manufacturing companies?*

- *Are there any links between the organizational responsibilities for service innovations and the success with service innovations?*

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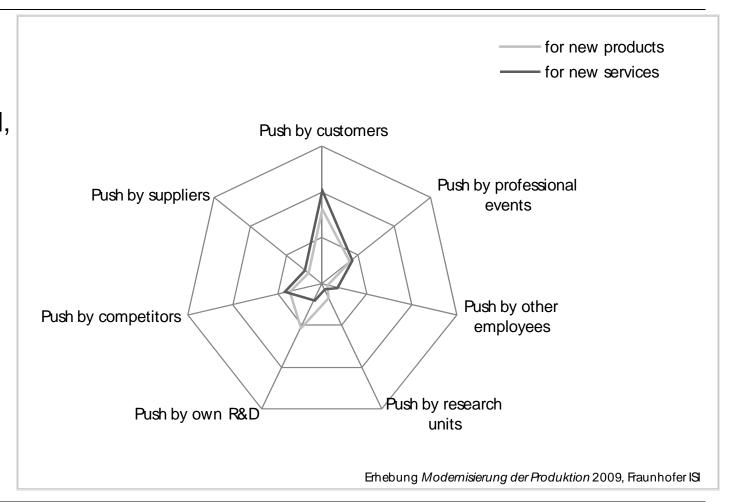
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Database:
German Manufacturing Survey

- Survey covers all branches of manufacturing industries in Germany

- This survey analyzes production strategies, the application of technological and organizational innovations and the resulting improvements in performance of the manufacturing sector, human resources, and questions concerning the selection of production locations

- In 1993, the German Manufacturing Survey was conducted for the first time (since then every 3 years)

- In 2009:

  - Of 15 576 manufacturing companies in Germany, the survey covers a representative sample of 1 484 companies from the manufacturing sector that returned completed questionnaires, yielding a utilizable return rate of ≈ 10 %.

  - The sample is representative for all industrial sectors

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Information sources for service innovations

Customers — 52
Conferences, trade fairs etc. — 22
Competitors — 21
Suppliers — 12
Own R&D — 10
Other employees — 9
Research units — 4

0% — 60%

Percentage of companies with reference to information sources

Importance of different information sources for product and service innovations

Product innovations with push/pull,

no push component with service innovations

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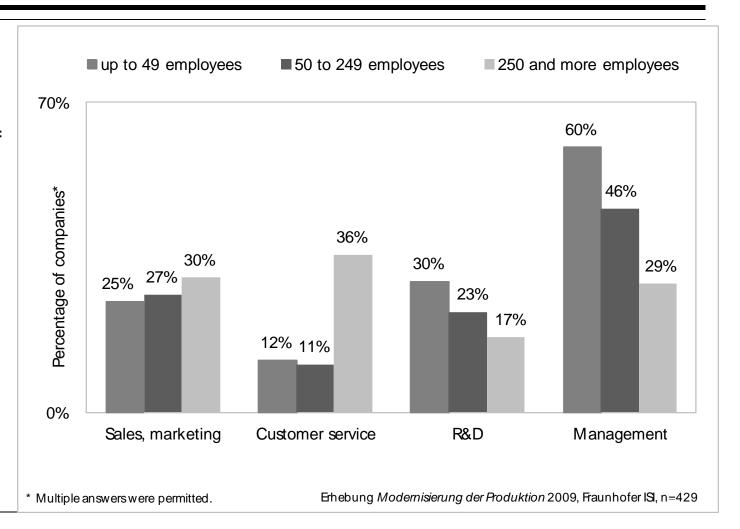# Organizational anchoring of development capacities for service innovations

- In which organizational unit are service innovations developed for the industry?

- Only less than one quarter (24%) indicated that their research and development department is responsible for service innovations => significantly less than for product innovations

- The customer service unit is responsible only in 15% of the companies => thus service departments have mainly executive tasks

- Sales and marketing departments are responsible in 27% of the companies

- Most important for service innovations is general management (49%)

  - Development of service innovations has high priority

  - No competent organizational unit responsible for service innovations!

    => rather a stop-gap solution

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Prime responsibility for developing service innovations depending on company size

Stop-gap solution:

Management = service innovator?

up to 49 employees ■ 50 to 249 employees ■ 250 and more employees

Percentage of companies*

	Sales, marketing	Customer service	R&D	Management
up to 49 employees	25%	12%	30%	60%
50 to 249 employees	27%	11%	23%	46%
250 and more employees	30%	36%	17%	29%

* Multiple answers were permitted.

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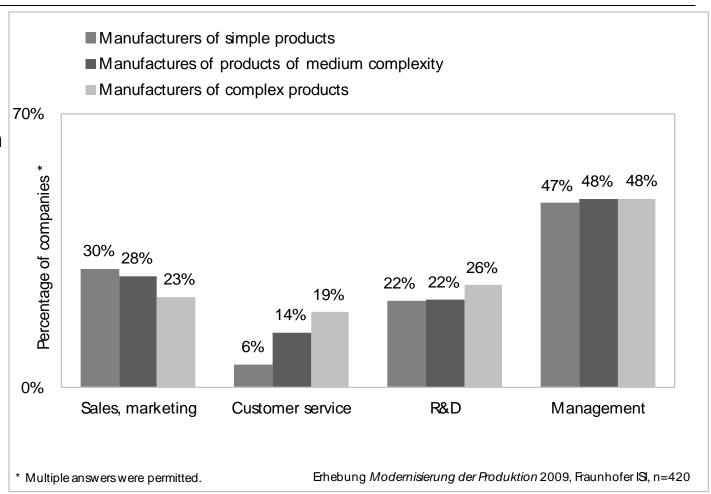ISI

Responsibility for developing service innovations depending on product complexity

The product complexity has an impact on the organization of service innovations

Legend:
- ■ Manufacturers of simple products
- ■ Manufactures of products of medium complexity
- ■ Manufacturers of complex products

Percentage of companies *

70%

Sales, marketing: 30%, 28%, 23%
Customer service: 6%, 14%, 19%
R&D: 22%, 22%, 26%
Management: 47%, 48%, 48%

0%

* Multiple answers were permitted.

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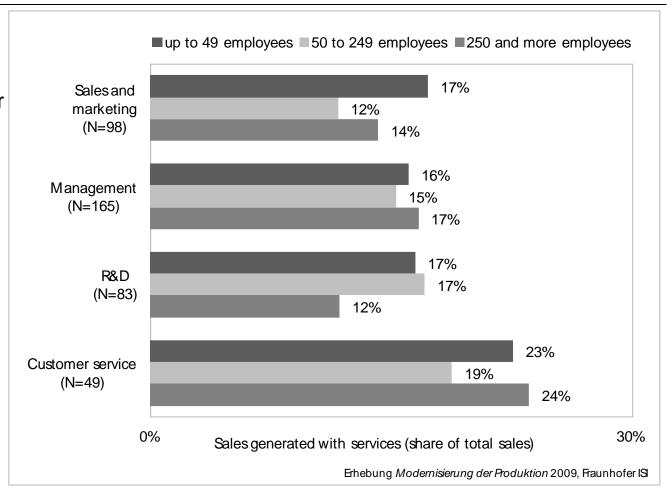
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Effects of the organizational anchoring of development capacities for service innovations

- Are different organizational forms relevant for the success of industrial services (different shares of sales) ?

  - companies in which the sales or marketing department is responsible for service innovations
    industrial services => about 14% share of sales

  - companies in which the general management is responsible for service innovations
    industrial services => 15.7% share of sales

  - companies in which the R&D department is responsible for service innovations =>
    industrial services 16.2% share of sales

  - companies in which the customer service unit is responsible for service innovations
    industrial services => 21.7% share of sales

$\Rightarrow$ the organizational alternative "customer service is responsible for developing new services " outclasses - also in a statistically significant way - other alternatives

$\Rightarrow$ independant of the company's framework conditions like company size, product complexity, batch size and the company's position in the value-added chain

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Sales volume with services depending on company size and responsibility for service innovations

Companies in which the customer service unit is responsible for service innovations achieve a higher share of sales with services

Legend: ■ up to 49 employees ■ 50 to 249 employees ■ 250 and more employees

Sales and marketing (N=98)
- up to 49 employees: 17%
- 50 to 249 employees: 12%
- 250 and more employees: 14%

Management (N=165)
- up to 49 employees: 16%
- 50 to 249 employees: 15%
- 250 and more employees: 17%

R&D (N=83)
- up to 49 employees: 17%
- 50 to 249 employees: 17%
- 250 and more employees: 12%

Customer service (N=49)
- up to 49 employees: 23%
- 50 to 249 employees: 19%
- 250 and more employees: 24%

0% — Sales generated with services (share of total sales) — 30%

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Organization of developing service innovations in manufacturing industries

Conclusions:

- **New services are mainly designed to meet customer demand (demand pull).**

- **The general management is frequently responsible for service innovations.**

- **Companies with own service department for designing new services generate a significantly higher service revenue.**

- **More effective interaction between product-developing and service-developing departments seems appropriate.**

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