
The Servitization of Manufacturing: Innovation in Business Models

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Creating value through service

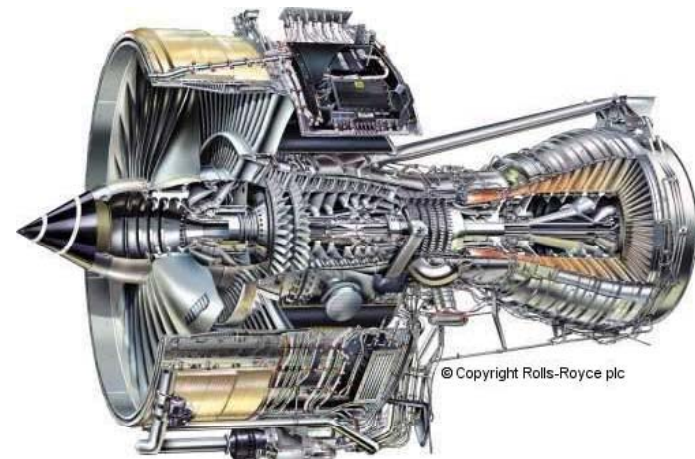
Interest in service-based competitive strategies is not new:

❑ Andersen and Narus – Capturing the Value of Supplementary Services, Harvard Business Review, 1995.

❑ Wise and Baumgartner – Go Downstream: The New Imperative in Manufacturing, Harvard Business Review, 1999.

But we may be at a technologically enabled tipping point...

- Servitization/Servicization...
- Product-Service Systems...
- Service Science...
- Remote Product Servicing...
- Intelligent Vehicle Health Management...



Service business model innovation



John Deere iGuide system

Uses GPS technology to automatically shift the steering pattern of the tractor to compensate for implement drift



Customers design and complete market research

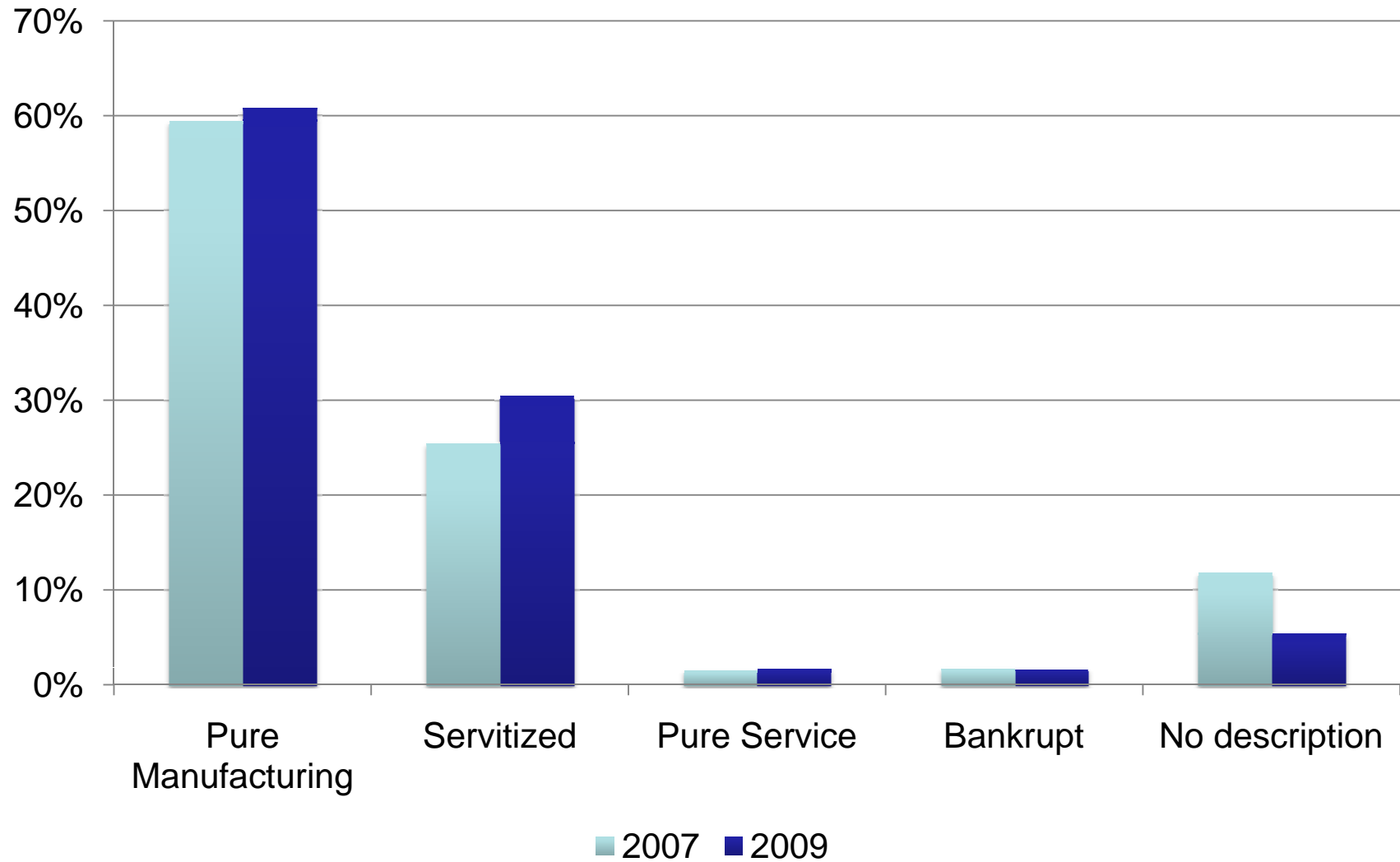
Exploiting the internet to enable crowd sourcing



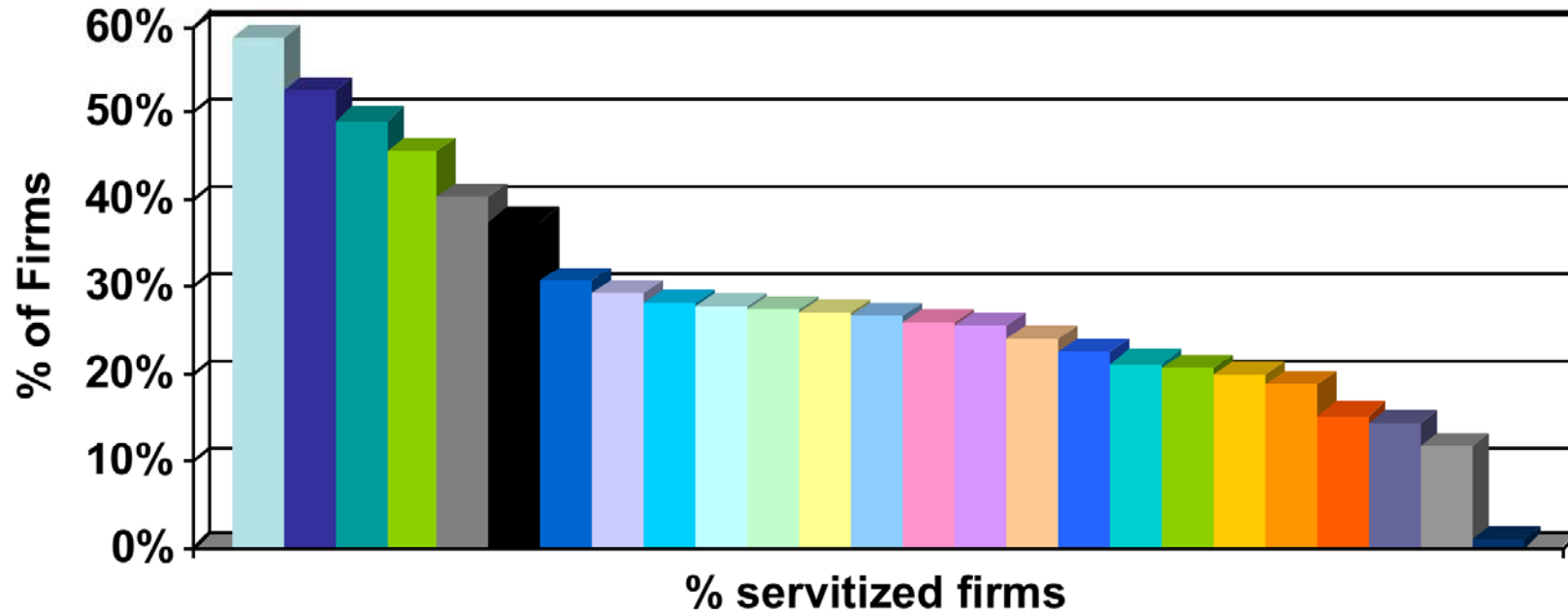
Who is servitizing?

	2007 dataset	2009 dataset
Source of data	OSIRIS database	OSIRIS database
Nos. companies	44,000 publicly listed firms	55,000 publicly listed firms
Nos. manufacturing firms (US SIC codes 10-39)	22,952 firms	27,670 firms
Nos. manufacturing firms with over 100 employees	12,521 firms	13,259 firms
Nos. firms with no business description	1,478 firms	706 firms
Nos. firms declaring bankruptcy	216 firms	222 firms
Useable sample	10,827 firms	12,331 firms

Despite having manufacturing SIC codes...

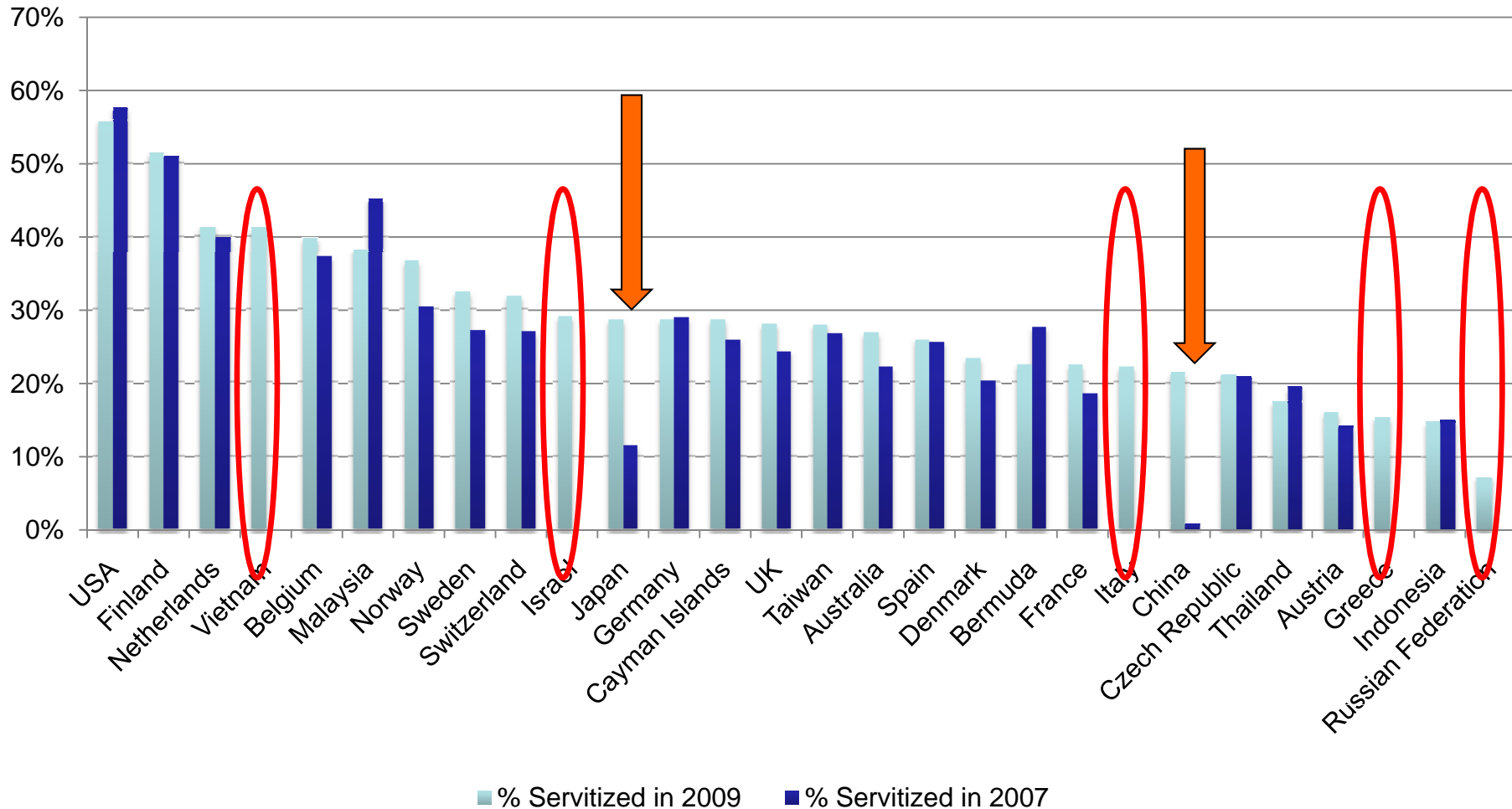


In which countries have firms servitized?



USA	Finland	Singapore	Malaysia	Netherlands
Belgium	Norway	Germany	Bermuda	Switzerland
Sweden	Taiwan	Cayman Islands	Spain	Great Britain
Greece	Australia	Czech Republic	Denmark	Thailand
France	Indonesia	Austria	Japan	China

Where has the growth in servitization come from?



Why are they servitizing?

Economic rationale	<ol style="list-style-type: none">1. Manufacturing firms in developed economies cannot compete on the basis of cost (technological developments are enabling them to add innovative services)...2. The installed base argument (e.g. for every new car sold there are already 13 in operation, 15 to 1 for civil aircraft and 22 to 1 for trains)...3. Stability of revenues – services vs. products...
Strategic rationale	<ol style="list-style-type: none">1. Lock in customers (sell the original equipment at cost, make money on spares & suppliers - razor, printers)...2. Lock out competitors...3. Increase the level of differentiation (e.g. equipment provider offers to take customer's risk and give predictable maintenance costs)...4. Customers demand it (e.g. contracting for capability)...
Environmental rationale	<ol style="list-style-type: none">1. Environmental rationale (change notions of ownership and resource use – e.g. Mobility cars)...

How are they servitizing?

1. Add services by going downstream (vertical integration)...
 - Could be termed **integration oriented PSS** – ownership of the tangible product is transferred to the customer, but the supplier seeks vertical integration, e.g. by moving into retail and distribution; financial services; consulting services; and transportation and trucking services
 - Effectively a product + a range of associated services
 - Relatively speaking: easy to implement and low risk



How are they servitizing?

2. Add services to the product...

- Known as **product oriented PSS** – ownership of the tangible product is transferred to the customer, but additional services directly related to the product are provided, e.g. design and development services; installation and implementation services; maintenance and support services; consulting services; outsourcing and operating services; procurement services
- Effectively a product + services integral to the product
- Relatively speaking: easy to implement and low risk



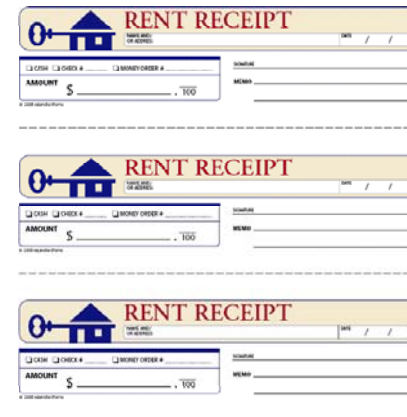
How are they servitizing?

3. Integrate services into the product...
 - Could be termed **service oriented PSS** – ownership of tangible product is transferred to the customer, but additional services are offered as an integral part of the value offering, e.g. Health Usage Monitoring Systems and Intelligence Vehicle Health Management
 - Effectively an integrated product-service system
 - Changes the nature of the business model, often shifts responsibility and risk
 - Reliant on technology so can require complex infrastructure



How are they servitizing?

4. Shift focus to service (delivered through product)...
 - Known as **use oriented PSS** – ownership of the tangible product is retained by the service provider, who sells the functions of the product, via modified distribution and payment systems, such as sharing, pooling, and leasing.
 - Borrow/lease and return (e.g. Mobility cars, Netflix)
 - Service-product systems
 - Major challenge – change conceptions of ownership



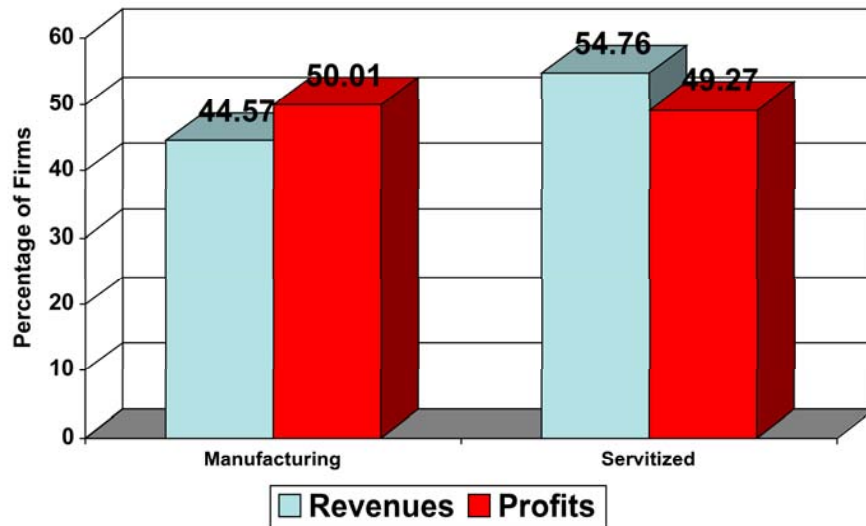
How are they servitizing?

5. Replace product with service...
 - Known as **result oriented PSS**
 - The PSS replaces services for products – e.g. voicemail service replacing answering machines

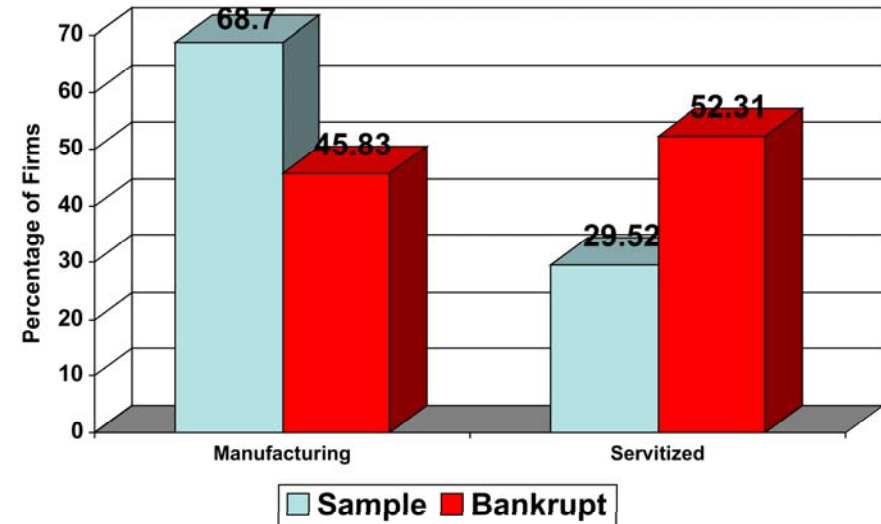


With what results?

Servitized firms account for a greater proportion of revenues, but a lower proportion of profit



A greater proportion of servitized firms went bankrupt than might be expected



While the shift to services is clear the transition to services is not straightforward – the latest research suggests that servitized manufacturers achieve lower profit margins and are more likely to go bankrupt than pure manufacturers (in the short-term).

The story so far... a services paradox

1. Widespread efforts to servitize...
58% of US firms with manufacturing SIC codes offer services.
2. Although the extent of servitization differs markedly by country...
Less than 2% of Chinese manufacturing firms had servitized by 2007
(Neely, 2009).
3. While services are thought to deliver higher margins, there is mixed evidence on the impact of servitization...
(Gebauer et al, 2005; Neely, 2009; Visnjic and Van Looy, 2009).
4. With increasing evidence that the relationship is non-linear...
(Fang et al, 2008; Suarez et al, 2008).
5. And that servitizing can be high risk...
Firms that servitize appear more likely to suffer bankruptcy (Neely, 2009).
And they are exposed to a greater range of risks (Benedittini and Neely, 2010).

The challenges of servitizing...

Shifting mindsets

- Of marketing – from transactional to relational
- Of sales – from selling multi-million dollar products to selling service contracts and capability
- Of customers – from wanting to own the product to being happy with the service

Timescale

- Managing and delivering multi-year partnerships
- Managing and controlling long term risk and exposure
- Modelling and understanding the cost and profitability implication of long-term partnerships

Business model and customer offer

- Understanding what value means to customers and consumers (not producers and suppliers)
- Developing the capability to design and deliver services rather than products
- Developing a service culture
- Embedding all of the above into a service organisation