Servicizing, Green Servicizing & the Sustainable Economy: an introduction

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A worldwide, US-led service transformation

And statistics understate the reality

Why?

Statistics divide the economy artificially into product & service sectors

In the real economy, value often created by a combination of product and service

Source: World Development Indicators
Business-as-usual: Product-service bundles create value

+ WARRANTY

+ CALL & DATA SERVICE

+ DELIVERY

... But in the economy overall, the service component of bundled offerings is growing
SERVICIZING: pervasive & real

Meeting economic needs and wants in more service-intensive ways.

(Also called innovative product-service systems (Europe))

- Third Party Logistics (3PL)
- Car-Sharing
- Chemical Management Services (CMS)
- Energy Services Companies (ESCOs)
- Mass Customization
- IT “Lifecycle Solutions”

And on and on and on...
Why Servicizing?

Firms develop “servicized” offerings to:

- Respond to market preferences for one-stop, integrated offerings.

- Capture more of the value-added associated with a product.
  
  e.g. IT equipment sales + software + network & configuration services.

- Defend home markets against competition (services require local presence and knowledge).

- Among many other reasons...
SERVICIZING: many “flavors”

Both business-to-business

And business-to-consumer

Product leasing, joint use, pay-per-service unit.

Paying for performance or results

Product sale + maintenance, warrantee, financing, supply of consumables, take-back, etc.

Shifting this way compared to BAU = servicizing

Adapted from Tukker et al 2006
Servicizing: Challenges and opportunities for the sustainable economy

**Issue:**
“service-led economy” is not intrinsically green.

High dependency on the industrial economy.
- IT services → IT hardware,
- Trade → vehicles, fuel

**Opportunity:**
achieving a more “function-focused” economy
How can “functional sales” be green? (and why aren’t green products enough?)

EXAMPLE: Delivering mobility

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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</thead>
<tbody>
<tr>
<td>Indiv. ownership</td>
<td>Long-term lease</td>
<td>Car-share</td>
<td>“Mobility System”</td>
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</tbody>
</table>

- Reduces total # of cars owned, VMT
- Further reduces # of cars owned, VMT
International interest, research & experience

**EU**

Very significant research investment in innovative product-service systems (PSS) under FP5; PSS became a part of the “sustainable production and consumption” field under FP6.

**KOREA**

Major investment in ESCO promotion. Env. Ministry launched 3-yr CMS promotion project in cooperation with KCMA. Multi-year sustainable product services project; small pilots in CMS, car-sharing, etc. to date.

**JAPAN**

Concept research, government launch support for SME-based green services, promotion of ESCOs, 3PL, car-sharing.
Green Servicizing: Real (US) examples. . .

**Car Sharing**
Provides short-term use of cars located in special reserved parking spaces distributed throughout a service area (e.g., an urban area or campus.)

**Chemical Management Services (CMS)**
Certain chemical management activities (e.g., inventory management, application, collection, disposal) are outsourced to a CMS provider, who profits primarily from service provided and efficiencies achieved.

**Energy Services Companies (ESCOs)**
Provide energy-efficiency services and assume performance risk—that is, their compensation and profits are tied to savings in energy costs actually obtained by the client.

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Car-share members reduced VMT by 44% across several studies. Every US car-share vehicle "removes" between 6 and 23 vehicles from the road, depending on the study. 30% of US car-sharing vehicles are hybrids or powered by alternative fuels.

Over 50% of CMS customers reported reductions in total chemicals use

Over 45% of CMS customers reported increased chemical reuse/recycling

Over 30% of CMS customers reported increased process efficiencies; approximately the same number reported beneficial chemical substitutions

Reduced energy consumption on the part of ESCO customers by 23%, or 47 kWh/m2/yr;

A small percentage of ESCO projects also reduce water consumption.
Is all servicizing green?

“Green” = Lifecycle environmental performance that is clearly & significantly superior to the BAU way of satisfying a customer’s need.

NO.

But when servicizing sells function or efficiency, it is almost always greener.
What makes servicizing green?

Hard to generalize.

For **functional procurement/efficiency services** models, some rules of thumb.

<table>
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<th>CMS, ESCOs, 3PL, RM contracting</th>
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<tr>
<td>Contract structured so eco-efficiency gains = profit</td>
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<tr>
<td>Sufficient scope of services</td>
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<tr>
<td>Sufficient scale of customer operations</td>
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<tr>
<td>Sufficient provider capacity</td>
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<tr>
<td>Deliberate decision to use green products and suppliers</td>
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The bottom line

1. Servicizing is real.
2. Green servicizing is real
3. Green servicizing (+ Green Products)

Can significantly improve the eco-efficiency of the US economy... and its overall competitiveness

But policy support likely needed to fully achieve this potential
Why Policy Support?
(fiscal instruments, information, convening agent, direct procurement and (maybe) regulation.)

- We don’t fully understand servicizing market drivers, barriers, and “determinants” of greeness. . .
- But for many servicizing business models, we know:
  - Some key drivers of market adoption are weak
  - Some barriers are significant
  - Greener and less-green variants exist
  - . . . and individual firms have limited capacity to address these issues

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Towards achieving green servicizing’s potential: key questions/information needs:

- Drivers, Barriers, Determinants?
- Performance and benefits – economic and environmental, providers and customers
- Potential supporting actions:
  - Providers
  - Customers
  - Government
- Common answers within classes of servicizing models? for green servicizing generally?
“Green Servicizing” for a More Sustainable US Economy:
Key concepts, tools and analyses to inform policy engagement

Thank-you.
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More information...