Waste Management and Remediation Services: Turnover Measures and Practices at the U.S. Census Bureau

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Newport, South Wales

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Definition of the Service

Revenue received for the provision of waste management and remediation services

- Market Provision of Services
  - Employers
  - Non-employers
- Government Provision of Services
  - Cost of services (expenses as proxy for revenue)
  - Employment
## 2007 Size Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Estabs.</th>
<th>Employment</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employers</td>
<td>22,202</td>
<td>393,179</td>
<td>$76,924,944,000</td>
</tr>
<tr>
<td>Non-Employers</td>
<td>20,866</td>
<td>N/A</td>
<td>$1,677,620,000</td>
</tr>
<tr>
<td>Government</td>
<td>N/A</td>
<td>249,847</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>??</td>
<td>664,000?</td>
<td>$78,602,564,000 +</td>
</tr>
</tbody>
</table>
Turnover Data Availability

- **Comprehensive Economic Census Data**
  - Collected in years ending with 2 and 7
  - Detailed industry and product turnover data

- **Service Annual Survey**
  - Sample based estimates
  - Industry turnover estimates
  - Product turnover estimates at Industry Group level

- **Quarterly Services Survey**
  - Sample based estimates
  - Industry group revenue estimates
  - Class of customer breakouts
Additional Data Collected

• Economic Census
  - Class of customer breakdown
  - Value of exported services
  - Employment/payroll
  - Value of employer benefits
  - Franchise status

• Service Annual Survey
  - Operating expenses (personnel costs, expensed materials and supplies, expensed purchased services, other expenses)
  - e-commerce revenue
Census Collection Practices

• Single survey form covers multiple NAICS industries

• Industry assigned by respondent based on kind-of-business (kb) activity inquiries

• Common product list collected across many (but not all) industries

• Both sections (kb and product) of the survey form are considered

• Resulting data tabulated at 2, 3, 4, 5, and 6 digit levels of NAICS
Other Practices

- Service Annual Survey (SAS) uses industry group specific forms including product lines but no KBs
- SAS sample augmentation for births
- SAS benchmarked to Economic Census
- Quarterly Services Survey (QSS) subset of SAS
- QSS benchmarked to SAS
- SAS – mandatory
- QSS – voluntary
Additional Details Collected in 2007 and Later

• **Business Expenses** – In Census years, the SAS program collects 20 expense groupings, including estimates for expenditures on cost of purchased software; cost of purchased repair and maintenance services, cost of data processing and purchased computer services; and cost of rental and lease payments.
Iterative Process

Revenue and Product Details

• 1997 – 10 sources of revenue below the industry included on a single form for all waste management and remediation (Pre-NAPCS)

• 2002 – Over 80 detailed NAPCS products included on the waster management and remediation services questionnaire

• 2007 – Separate questionnaires for waste management services and remediation services – detailed products about the same but tailored to particular types of businesses
Example Product Collection

• Split between residential and non-residential waste, recyclable materials, and both when presorted for both hazardous and non-hazardous
  – Specific request for receipts for subcontract work
• Detail for document and file destruction services
• Detail for event waste management receipts
• Snow plowing receipts
• Waste management facility maintenance receipts split between closed, open, and separate closure services
• Disposal tipping fees for hazardous and non-hazardous waste
Categories of Hazardous Waste

- Organic solvents
- Oils, greases, and residues
- Inorganic sludge
- Heavy metal solutions
- Pesticides, herbicides, and fungicides
- Polychlorinated biphenyls (PCBs)
- Biological infectious waste
- Radioactive waste
- Used tires
- Used batteries
- Other hazardous waste

Categories of hazardous waste will differ among countries based on specific regulations
Other Services Collected

• Sale or brokerage of waste materials
• Sale or brokerage of recycled materials
• Sale of new or used waste management equipment
• Rental and leasing fees received for waste management equipment
• Waste to energy receipts
• Environmental consulting services
• Other waste management consulting services
### Product Distribution by Industry (1)

**Distribution of Nonhazardous Waste Collection Services (non-residential) by Industry**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Establishments</th>
<th>Value ($ approx)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>562111</td>
<td>4,842</td>
<td>11,643,308,000</td>
<td>97.5%</td>
</tr>
<tr>
<td>562112</td>
<td>79</td>
<td>111,145,000</td>
<td>1.0%</td>
</tr>
<tr>
<td>562211</td>
<td>66</td>
<td>58,253,000</td>
<td>0.5%</td>
</tr>
<tr>
<td>562212</td>
<td>135</td>
<td>99,825,000</td>
<td>0.8%</td>
</tr>
<tr>
<td>562219</td>
<td>17</td>
<td>32,909,000</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

**Total**

11,945,440,000 100%
## Product Distribution by Industry (2)

### Distribution of Site Remediation Services by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Establishments</th>
<th>Value ($ approx)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>562111</td>
<td>34</td>
<td>48,976,000</td>
<td>0.95%</td>
</tr>
<tr>
<td>562112</td>
<td>82</td>
<td>22,135,000</td>
<td>0.43%</td>
</tr>
<tr>
<td>562119</td>
<td>36</td>
<td>10,018,000</td>
<td>0.20%</td>
</tr>
<tr>
<td>56221X</td>
<td>44</td>
<td>61,416,000</td>
<td>1.19%</td>
</tr>
<tr>
<td>562910</td>
<td>1,919</td>
<td>4,923,662,000</td>
<td>95.00%</td>
</tr>
<tr>
<td>562290</td>
<td>18</td>
<td>442,000</td>
<td>0.01%</td>
</tr>
<tr>
<td>56299X</td>
<td>121</td>
<td><strong>114,845,000</strong></td>
<td><strong>2.22%</strong></td>
</tr>
</tbody>
</table>

| Total      |                | **5,181,494,000** | **100%** |
## Comparability of Price and Product Data

Limited areas that there is equal coverage:

<table>
<thead>
<tr>
<th>Covered</th>
<th>Not Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>3811/562111</td>
<td>3700/221320</td>
</tr>
<tr>
<td>3812/562112</td>
<td></td>
</tr>
<tr>
<td>3821/562212, 562213, 562219</td>
<td></td>
</tr>
<tr>
<td>3822/562211</td>
<td></td>
</tr>
<tr>
<td>3830/562920</td>
<td></td>
</tr>
<tr>
<td>3900/562910, 562991, 562998</td>
<td></td>
</tr>
</tbody>
</table>

However, the one comparable area covers almost 48 percent of the total market activity.
Additional Work

Detail important missing products in NAPCS – particularly related to increased detail for recyclable materials

Implement system changes to allow a single product number across all industries
Questions?

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