



Sector Paper

Commercial and Industrial Machinery Repair and Maintenance - 3312



Overview

- Introduction
- Status
- Classifications – industry and product
- Turnover
- SPPI
- Main conclusions



Introduction

- Commercial and Industrial Machinery Repair and Maintenance Service sector presents challenges
 - Diverse machinery for repair
 - Repair and Maintenance as secondary activities
 - Bundling of services
- Summary of experiences of France, Japan, Mexico, Sweden and US as presented at Voorburg 2012
- Recommendations based on these experiences and shaped by market conditions and practices, data availability and resources



Status - Commercial and Industrial Machinery Repair and Maintenance Service sector ISIC 3312

ISIC 3312	Coverage	No. of Countries
	a. PPI details \geq CPC	1
	b. PPI details \geq CPC soon	0
	c. Turnover details \geq CPC	9
	d. Turnover details \geq CPC soon	0
	e. Industry prices calculated	12
	f. Industry turnover collected	19
	1. Detailed turnover and prices well aligned	1
	2. Detailed turnover and prices well aligned soon [?]	0
	3. Industry level turnover and prices aligned [?]	11
	4. Industry level turnover and prices aligned soon [?]	2
	5. Other - no industry coverage for prices and/or turnover, etc. [?]	8



Classification – Industry

Classification	Section
ISIC 4.0	C Manufacturing
Nace Rev.2	C Manufactured Products
2012 NAICS	<i>81 Other Services</i>
JSIC Rev.12	<i>R Services, N.E.C.</i>

Classification	Division
ISIC 4.0	33 Repair and installation of machinery and equipment
Nace Rev.2	33 Repair and installation of machinery and equipment
2012 NAICS	81 Other Services
JSIC Rev.12	R Services, N.E.C.



Classification - Products

CPC Version 2

87120: Maintenance and repair services of office and accounting machinery

87156: Maintenance and repair services of commercial and industrial machinery

CPA 2008

33.1: Repair services of fabricated metal products, machinery and equipment

33.10: Medical and surgical equipment and orthopaedic appliances

33.11: Repair services of fabricated metal products

33.12: Repair services of machinery

33.12.1: Repair and maintenance services of general-purpose machinery

33.12.2: Repair and maintenance services of special-purpose machinery

33.13: Repair services of electronic and optical equipment

33.14: Repair services of electrical equipment

33.15: Repair and maintenance services of ships and boats

33.16: Repair and maintenance services of aircraft and spacecraft

33.17: Repair and maintenance services of other transport equipment

33.19: Repair services of other equipment

33.2: Installation services of industrial machinery and equipment



Classification – Products (continued)

NAPCS US

- 8113.1.0: Maintenance and repair and related services for commercial and industrial machinery and equipment
- 8113.1.1: Maintenance and repair services for agricultural, construction, mining, and oil and gas field machinery and equipment
 - 8113.1.1.1: Maintenance and repair services for agricultural machinery and equipment*
 - 8113.1.1.2: Maintenance and repair services for construction machinery and equipment*
 - 8113.1.1.3: Maintenance and repair services for mining and oil and gas field machinery and equipment*
- 8113.1.2: Maintenance and repair services for commercial and service industry machinery and equipment
- 8113.1.3: Maintenance and repair services for manufacturing and metalworking machinery and equipment
- 8113.1.4: Maintenance and repair services for other commercial and industrial machinery and equipment
 - 8113.1.4.1: Maintenance and repair services for commercial refrigeration equipment
 - 8113.1.4.9 : Maintenance and repair services for other industrial and commercial machinery and equipment, nec.
- 8113.1.5 : Cleaning services for commercial and industrial machinery and equipment

*indicates product in US version



Turnover Statistics

- Data Availability
 - Good. 19 of 22 respondents to the 2012 Voorburg Detailed Status report compile turnover data, 9 at product level
 - Relatively small sector in respect of national output
 - Varying degrees of industry concentration
- Collection of Data
 - Annual from a variety of sources
 - Sub-annual generally published as indices
- Data Issues
 - Secondary activity
 - Bundling of repair and maintenance with other activities (installation)
 - Own account production
 - Repairs v capital formation
 - Labour v parts??



Recommended Approaches

Category	Data Source	Level of Detail Collected	Frequency	Cost	Comment
Best	Survey/Census	Industry turnover <u>and</u> product turnover detail	Annual and/or sub-annual collection	- Most expensive - Largest response burden	- Due to secondary activity issues - cross industry product level detail desirable. - Distinguish where possible between repair and production
Good	Survey/Census	Industry detail <u>only</u>	Annual and/or sub-annual collection	- Expensive - High response burden	Industry level detail may not be sufficient due to secondary activity issues
Minimum	Administrative (tax data, industry association data etc.)	Industry detail <u>only</u>	Annual	- Least expensive - Little or no respondent burden	Least timely Units may be misclassified to incorrect industry/secondary activity



SPPI Data

- Data Availability
 - Reasonably good. 12 of 22 respondents to the 2012 Voorburg Detailed Status report compile SPPIs, 1 at product level
- Collection of Data
 - Dedicated surveys
 - CPI cannot be used
- Pricing Methods and Issues Arising
 - Highly heterogeneous service outputs
 - Often non-recurring (model pricing)
 - Routine/flat fee (direct use of prices of repeat services)
 - Performed under contract (contract pricing) or warranty
 - Labour and parts used (mixture of pricing mechanisms – mixture of pricing methods. Also changes in productivity)



SPPIs - Recommended Approaches

Service Type	Pricing Mechanism	Pricing Method	Data type in survey	Quality and Accuracy
Routine, repeatable	Flat fee	Direct use of repeated services	Real transaction prices	High if transactions remain representative and at constant quality
Unique and non-recurring	Often a combination of costs of labour and parts	Model	Estimated by respondent	Good if model remains representative
Preventative maintenance	Contract	Contract	Real transaction prices	Good if transactions remain representative and at constant quality, escalation clauses accounted for. Does the resulting index reflect price development in the sector?



Main Conclusions

- Well developed measurements
- International classifications are not very well harmonised
 - services or industry?
 - differences at industry and product level (more pronounced)
- Secondary activity services present a challenge (product level measures)
- Bundling, warranties and contracts
- Mix of pricing mechanisms and methods