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Maintenance and Repair of Motor Vehicles

Discussant's remarks

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Outline

- Classification
 - Industry
 - Product
- Market conditions
- Surveys of turnover
- Prices
- Observations



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Classifications



ISIC

- Structure

- G : Wholesale and retail trade; repair of motor vehicles and motorcycles

- 45: Wholesale and retail trade and repair of motor vehicles and motorcycles

- 452 : Maintenance and repair of motor vehicles



452 : Maintenance and repair of motor vehicles

Definition

- This class includes:
 - Maintenance and repair of motor vehicles:
 - Mechanical repairs
 - Electrical repairs
 - Electronic injection systems repair
 - Ordinary servicing
 - Bodywork repair
 - Repair of motor vehicle parts
 - Washing and polishing etc.
 - Spraying and painting
 - Repair of screens and windows
 - Repair of motor vehicle seats
 - Tyre and tune repair, fitting or replacement
 - Anti-rust treatment
 - Installation of parts and accessories not as part of the manufacturing process
- This class excludes:
 - Re-treading and rebuilding if tyres



Comparison of industry classifications

UK SIC	JSIC	NAICS (Mexico)	NAICS (Canada)
G : Wholesale and retail trade; repair of motor vehicles and motorcycles	R: Services nec	81: Other Services	
45: Wholesale and retail trade and repair of motor vehicles and motorcycles	89: Automobile maintenance services	811: Repair and Maintenance Services	
452 : Maintenance and repair of motor vehicles	891: Automobile maintenance services	8111: Automotive Repair and Maintenance	
4520 : Maintenance and repair of motor vehicles	8911: General automotive maintenance services	81111: Automotive Mechanical and Electrical Repair and Maintenance	
	8919: Miscellaneous auto maintenance services	81112: Automotive Body, Paint, Interior and Glass Repair	
		81119: All other automotive repair and maintenance	



NAICS (Mexico)	NAICS (Canada)
811111: General mechanical repair for automobiles and trucks	811111: General automotive repair
811112: Electrical system repair for automobiles and trucks	811112: Automotive exhaust repair
811113: Motor parts rectification for automobiles and trucks	811119: All other automotive repair
811114: Transmission repair for automobiles and trucks	
811115: Suspension repair for automobiles and trucks	
811116: Wheel alignment and balancing for automobiles and trucks	
811119: Other mechanical repair for automobiles and trucks	
811121: Tinwork and paint for automobiles and trucks	811121: Automotive body, paint and interior repair and maintenance
811122: Upholstering for automobiles and trucks	811122: Automotive glass replacement shops
811129: Glass installation and other body repairs for automobiles and trucks	
811191: Minor tire repair	811192: Car washes
811192: Washing and lubricating of automobiles and trucks	811199: All other automotive repair and maintenance
811199: Other repair and maintenance services for automobiles and trucks	



Definitions of the industry

Classification	Definition at “common” level
ISIC: 454	Maintenance and repair of motor vehicles; tyre and tune repair, fitting or replacement; anti-rust treatment; installation of parts and accessories not as part of the manufacturing process
UK SIC: 454	Maintenance and repair of motor vehicles; tyre and tune repair, fitting or replacement; anti-rust treatment; installation of parts and accessories not as part of the manufacturing process
JSIC: 891	Establishments engaged in providing maintenance and repair service of motor vehicles and motorcycles
NAICS: 8111 (Mexico)	Economic units primarily engaged in the repair and maintenance of cars and trucks, such as mechanical and electrical repair cars and trucks, body metal, upholstery, glass installation and other repairs to the bodywork, the minor repair of tires and tubes, washing and lubrication of automobiles and trucks.
NAICS: 8111 (Canada)	This industry group comprises establishments primarily engaged in repairing and maintaining motor vehicles, such as cars, trucks, vans and commercial trailers.



CPA 2008 (UK)

45.20 Maintenance and Repair of Motor Vehicles

45.20.1 Maintenance and Repair of cars and light goods motor vehicles

45.20.11 Ordinary maintenance and repair services (except electrical system, tyre and body repair) of cars and light motor vehicles

45.20.12 Electrical system repair services of cars and light goods motor vehicles

45.20.13 Tyre repair services, including wheel adjustment and balancing of cars and light goods vehicles

45.20.14 Body repair and similar services (door, lock, window, repainting, collision repair) of cars and light motor vehicles

45.20.2 Maintenance and repairs of other motor vehicles

45.20.21 Ordinary maintenance and repair services (except electrical system, tyre and body repair) of other motor vehicles

45.20.22 Electrical system repair services of other motor vehicles

45.20.23 Body repair and similar services (door, lock, window, repainting, collision repair) of other motor vehicles

45.20.3 Car-washing, polishing and other similar services

45.20.30 Car-washing, polishing and other similar services



NAPCS 0.1 (Canada)

811001 - Maintenance and repair services for automobiles, trucks and other road transportation vehicles, and motor homes, travel trailers and campers

811001.1.1 - Maintenance and repair services for automobiles and light trucks

811001.1.1.1 - Maintenance and repair services for automobiles and light trucks, except cleaning and washing, and regulatory safety and emissions inspections

811001.1.1.2 - Washing and cleaning services for automobiles and light trucks

811001.1.1.3 - Regulatory safety and emissions inspection services for automobiles and light trucks

811001.1.2 - Maintenance and repair services for motor homes, travel trailers and campers

811001.1.3 - Maintenance and repair services for heavy trucks and buses

811001.3.1.1 - Maintenance and repair services for heavy trucks and buses, except cleaning and washing, and regulatory safety and emissions inspections

811001.3.1.2 - Washing and cleaning services for heavy trucks and buses

811001.3.1.3 - Regulatory safety and emissions inspection services for heavy trucks and buses



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Market conditions



Market conditions

	Number of establishments	Indicator of Concentration and/or size	Revenue	Revenue (Mexican Pesos)
UK	34,014	Companies with over 300 employees represent .15% of enterprises, but 30% of revenue	£23.5 billion	495.0 billion
Japan	59,323	91% of firms have fewer than 10 employees	¥ 6.44 trillion	929.9 billion
Mexico	185,720	Average establishment employs 2.6 people	46.6 billion Pesos	46.6 billion
Canada	34,000	Top 20 firms generate 13% of revenue	\$13.1 billion	155.0 billion

Data on the table represent the following reference years: UK – 2011; Japan – 2009; Mexico – 2009; Canada – 2009



Specific market conditions - UK

- UK
 - UK industry covers three sectors:
 - Car servicing and repairs
 - Car body repairs
 - Car breakdown/recovery services
 - Service providers
 - Franchised car dealers
 - Independent garages
 - Garage chains and auto centres
 - Car body repairs
 - Fast-fit centres
 - Other characteristics
 - New cars generally carry a three year warrantee, requiring annual maintenance at a car dealer
 - Vehicles older than three years are inspected annually. Consumers usually have annual service performed at the same time
 - Smaller firms tend to focus on household trade



Specific market conditions - Japan

- Drivers required to have periodic inspections (every one to three years depending on class of vehicle and whether it is an initial or renewal inspection)
 - Inspections done at national inspection centres or sanctioned car maintenance facilities. Most choose the latter.
- Mandatory periodic checkups (12 and 24 month services)
 - 24 month check-ups are often done the same time as inspections.
- Turnover by type of service:
 - Inspections (37.6%)
 - Periodic checkups (36.9%)
 - Accidents (20.3%)
 - Other (5.2%)



Specific market conditions - Mexico

- In 2008, for NAICS 8111, turnover concentrated in:
 - NAICS 811111: General mechanical repair for automobiles and trucks (34.39%)
 - NAICS 811121: Tinwork and paint for automobiles and light trucks (16.86%)
 - NAICS 811119: Other mechanical repair for automobiles and trucks (10.23%)
- Number of establishments concentrated in:
 - NAICS 811111: General mechanical repair for automobiles and trucks (33.56%)
 - NAICS 811121: Tinwork and paint for automobiles and light trucks (14.90%)
 - NAICS 811191: Minor tire repair (11.99%)



Specific market conditions - Canada

- In 2009, turnover in the industry can be broken down by:
 - General automotive repair (58%)
 - Body, paint and interior repair and maintenance (35%)
 - Other automotive repair and maintenance (8%)
- Nearly three-fifths of sales are to individuals, most of the remaining sales to businesses.
- Vehicle repair and maintenance services are sold by other industries as well (i.e. new motor vehicle dealers).
 - Sales by NAICS 8111 account for about one-tenth of the overall market



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Surveys of turnover



Surveys of turnover

	Economic Census	Annual survey	Sub-annual survey
UK		yes	monthly
Japan	2012 Economic Census of Business Activities	Under consideration	monthly
Mexico	Every five years	yes	monthly
Canada		Yes	quarterly



Surveys of turnover - Japan

- **Monthly Survey on Service Industries**
 - Includes intra-firm services (i.e. no turnover)
 - Collects turnover (which includes sales of service as well as parts)
 - Considering a breakdown of sales by type of service
- **2012 Economic Census for Business Activities**
 - Will show turnover for entire sector
 - Will become the benchmark for the monthly survey
- **Proposed annual survey**
 - Determine regional turnover and greater industrial detail



Surveys of turnover - Mexico

- **Monthly survey**

- **Variables:**

- Employment (number of employees, payroll, days worked)

- Revenues and expenses (vehicle repair and secondary activity)

- **Annual survey**

- **Variables:**

- Same as monthly with addition of:

- Production value

- Fixed assets

- Identification of suppliers and customers

- **Economic census**

- **Variables:**

- Same as monthly with addition of:

- Stocks

- Fixed assets

- Units and transport equipment

- Innovation and research



Surveys of turnover - Canada

■ Annual

- Data collected through the Annual Survey of Service Industries: Repair and Maintenance. Information on auto repair collected along with electronic, precision equipment and commercial and industrial machinery equipment repair and maintenance
- Variables
 - Revenues and expenses
 - Sales by product (broken down into parts, labour)
 - Inventories of parts and accessories
 - Turnover by product

■ Quarterly

- Quarterly Industry Revenue Indices
- Collects data on turnover only
- Estimates based largely on GST records (a value-added tax)



National Accounting concepts and measurement issues - turnover

	Relationship with SNA
Mexico	<p>For purposes of calculating Gross Domestic Product (GDP) and the Global Indicator of Economic Activity (GIEA), the National Accounts makes an indirect calculation based on the relationship between indicators of physical volume of automobiles production, considering that the vehicle fleet with an average age of five years or more, require frequent repair services and maintenance, also included in the calculation, the variables of incomes and expenses provided by the Economic Censuses and Surveys.</p>
Canada	<ul style="list-style-type: none">• data on motor vehicle maintenance and repair published in the Input-Output Accounts, monthly GDP program. Sales of these products are also used in estimates of personal expenditure• Annual survey designed to specifically meet the needs of the SNA• Sub-annual data not timely enough for use by the SNA



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Prices



Background

- UK
 - Originally two sources of data used:
 - Third-party source – focusing on large players
 - RPI – covered small businesses not covered by third-party source
 - Sources were weighted 60/40 respectively
 - Concerns over the quality of the third party source led to the SPPI based 100% on the RPI
- Canada
 - SPPI program targeted the business sector focusing on business-to-business transactions, as well as the development of the Retail Service Price Index
 - As these services are covered by CPI, this industry was excluded from development activities



Current methods - UK

- UK SPPI is a quarterly average of RPI prices
- Component services specified in terms of a defined service or a defined unit of time
- Cost of parts excluded from the service price (unless they cannot be removed)
- Conceptually the discounts received for business-to-business transactions is excluded



Current methods - Canada

- *Motor vehicle repair and maintenance* is included in the Transportation major component of the CPI
 - Covers only passenger vehicles
 - Category is further broken down into:
 - Passenger vehicle parts, accessories and supplies
 - Passenger vehicle maintenance and repair services
- Price collection occurs at point of sale, based on a representative sample of establishments – prices are collected for several products
- Excludes business-to-business transactions
- Prices are collected at varying frequencies through the year
- Methodology under review
 - Selection of sampling units from the Business Register
 - Use Quarterly Retail Commodity Survey and other sources to refine weights
 - Quality adjustment methods (hedonic models, group imputation) being considered.



Quality adjustments

■ UK

- Direct comparison
 - Replace with another product that is directly comparable – unlikely to be used
- Direct quality adjustment
 - Place a value on the quality change so base price can be adjusted
 - Preferred method – difficult to implement
- Imputation
 - Applied average change in aggregate index to the new products base price
 - Used if no information is available to quantify a difference in quality



Quality adjustments - Canada

- Approaches:
 - Explicit adjustments
 - Assessing the difference in worth between new and replaced items
 - Most common approach
 - Splicing, or linking in of new products
 - Collect prices for initial item and replacement item and use the ration of these prices to adjust over time
 - Hedonic methods
 - Not used for *Passenger Vehicle Maintenance and Repair Services*



National Accounting concepts and measurement issues - turnover

- UK
 - National accounts uses RPI directly
- Canada
 - CPI is expressed in purchasers' price
 - Converted to a basic price by removing taxes, subsidies and other trade margins
 - Turnover surveys break out labour and parts -IO commodity includes only the service, a mock-up on parts is computed and recorded as retailing margin
 - Issue: CPI includes parts
 - While CPI covers passenger vehicles, IO includes light trucks.



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Observations



Observations

- Classifications – some place in retail, others in ‘other services’, nevertheless, the essential definition is very similar
- Industry vs. activity
 - Sales of the service can occur in establishments that are not classified to repair and maintenance of motor vehicles (i.e. other types of retail establishments)
 - Need all of the activity to understand the complete market (turnover)
 - Can samples for CPI/PRI be representative if they only include establishments that are classified as ISIC 4520?



Observations

- Services vs. parts
 - Turnover in the industry involves the sales of both parts and services
 - It is desirable to break-out the sales of both (particularly in the production of Input-Output accounts)
 - It would similarly be desirable to have prices for each



Observations

- Given use of CPI/RPI as a proxy of SPPI, is there any value in developing a specific SPPI for this industry?
 - Do business prices move the same as consumer prices, or do the differences provide a good enough business case to move ahead?
 - Is there a significant coverage issue?