

CROSS CUTTING ISSUE BUNDLING OF PRODUCTS

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SESSION FORMAT

- What is a product
- Definitions
 - Composite product
 - Price bundle
- Classification
- Turnover/Output
- SPPIs
- Discussion

WHAT IS A PRODUCT?

- Central Product Classification
 - a good or service that is the **result of production** in any economy
- North American Product Classification System (NAPCS)
 - products are **created and transacted** (sold or transferred) by the reporting units to economic entities outside the individual reporting units
- **Proposed definition:**
 - A product is defined as a good or service produced and transacted.

PROPOSED DEFINITIONS

Service Product – a simple or composite service that is the result of production and is transacted to a consumer of the product.

Composite service – A primary service combined with a secondary service that would not otherwise be available without the purchase of the primary service. Can be considered as core service with characteristics (e.g. hotel room with maid service).

Price Bundle – a single transaction that includes more than one service product when the total change in the condition of the consumer is no greater than the sum of the individual service products. In simple terms, a combination of independent services that are available separately but are sold as a group (e.g. telephone and cable television services).

SERVICE PRODUCT VS. PRICE BUNDLE

Service Product		Price Bundle
A simple or composite service that is the result of production and is transacted to a consumer of the product.		A bundle of services and/or goods that are available separately but are grouped together and sold as a group.
Simple Service	Composite Service	
The smallest level of service that is available separately	Services that are not otherwise available unless tied to a core service	

COMPOSITE SERVICES VS. PRICE BUNDLES

Composite services

- Individually priced characteristics of a service (similar concept to interior trim and options on an automobile)
- Secondary services that can be added onto the primary service but are not otherwise offered
- Examples:
 - Hotel with maid service
 - Wireline phone with caller ID
 - Financial fee-based services such as chequing, account statements, ATM transactions, etc.

Price Bundle

- Primary services of the firm's industry (similar concept to bulk discounts)
- Secondary services available separately
- End-to-end services (value chain)
- Goods and services
- Examples:
 - Hotel with breakfast in public dining room
 - Cell phone and telecom plan
 - Telecommunications bundles: Telephone, Internet, Cable/Satellite, Cell phone service

BUNDLING IN PRODUCT CLASSIFICATIONS

- Products – it is critical to identify the common or core good or service at the elemental transaction level.
- If the core service is not properly identified in the classification, substantial problems can arise with measurement.

EXAMPLES OF CORE SERVICE DEFINITIONS FOR WIRED TELECOMMUNICATIONS

Access to the wired telecommunication network

- No additional services or characteristics are available without access to the network
- Individual options such as telephony, video services, or Internet access are characteristics of the core service.
- Composite service where the core service is uniquely identified and the additional features or characteristics can be collected.
- Conceptually aligns with how wired telecom firms report their revenue, market share, profitability etc. They focus on subscribers and revenue per subscriber.

Multiple core services: telephony, video and Internet access services

- Services are sold individually with distinct separate prices
- Also offered with quantity discounts for purchasing multiple services.
 - Telephone and cable bundled together are one price
 - telephone and internet bundled together are offered at a different price
 - all three are bundled together at yet a different price.
- Price bundles

RECOMMENDATIONS FOR PRODUCT CLASSIFICATIONS

1. A service product should be identified in a classification if it results in a unique change in condition for the consumer of the service.
1. A price bundle of services, for which the total change in the condition of the consumer is no greater than the sum of the individual service products, should not be identified in product classifications.

EXAMPLES - CHANGE IN CONDITION OF CONSUMER

Buildable plans

- Consider an architect who subcontracts engineering services to produce buildable plans for customer
- Developed from architectural services and engineering services
- The final service output is greater than the individual services provided.
- Buildable plans are a unique product not a price bundle

Wired telecommunications

- Three services provided to customer: voice, data, video
- The sum of the condition change for the consumer is the simple sum of the individual services
- Grouping all three together in a single transaction produces a discounted price but does not change the condition of the consumer over three individual transactions.
- Price bundle

BUNDLING - TURNOVER/OUTPUT

- Relatively straight forward regardless of the product composition if records available
 - Measurement of output not affected if there are products and/or bundles
 - Output is normally collected at nominal values – quality adjustment is not an issue

RESELLING OF GOODS AND SERVICES

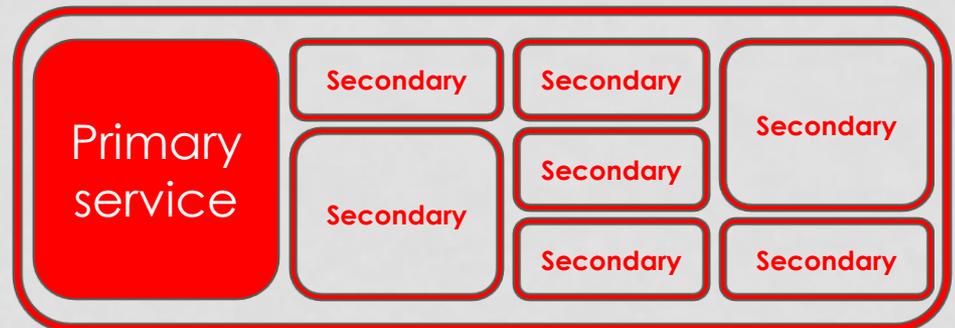
- Reselling of services should be treated as a net or margin activity when there is simple pass through (no change in condition of customer)
- If the combination of outsourced services with firm's own services transforms the condition of the customer than a gross measurement approach is appropriate (e.g. Buildable plans)

RECOMMENDATIONS FOR TURNOVER/OUTPUT

3. Firms should be asked to report turnover by product. Where products overlap product categories, respondents should be asked to provide an estimate of the products to the best of their ability.
4. In some cases, turnover surveys may need to be very specific in instructions to respondents regarding bundling to ensure proper treatment and to eliminate double counting.
5. In areas where bundling is extremely prevalent, collecting additional information to better understand what is being bundled and the prevalence of these bundles is desirable.

COMPOSITE SERVICES IN SPPIS

- When the corresponding relationship between primary service and secondary service is clear and defined, it is relatively easy to conduct price surveys.
- However, when secondary services are increasingly tied with primary service and, as a result, the variety and quality of secondary services become diverse, it is more difficult to survey prices in practice. In other words, it becomes more difficult to follow pure price changes with service quality fixed.



COMPOSITE SERVICES - SPPI

- The primary service should be followed in the price.
- Secondary services are regarded as characteristics of the primary service

PRICE BUNDLES - SPPI

- Unlike composite services, it is difficult to identify primary service
- Pricing index structures are based on defining homogeneous service products
- A bundled price, consisting of various products, does not provide the disaggregated price components that are required

SHOULD THE PRICE REDUCTION DUE TO BUNDLING BE REFLECTED IN PRICE INDEXES?

NO

It should not be reflected because this reduction is a kind of quantity discount (i.e. altered selling terms)

YES

Price developments of a price bundle may differ from the individual price movements of the components

- Results would differ if the bundled service accounted for a disproportionate proportion of the activity
- In practice, it is hard to know in what proportions customers buy the bundles or buy the single component.
- If we regard it as a pure price change, how to reflect it?

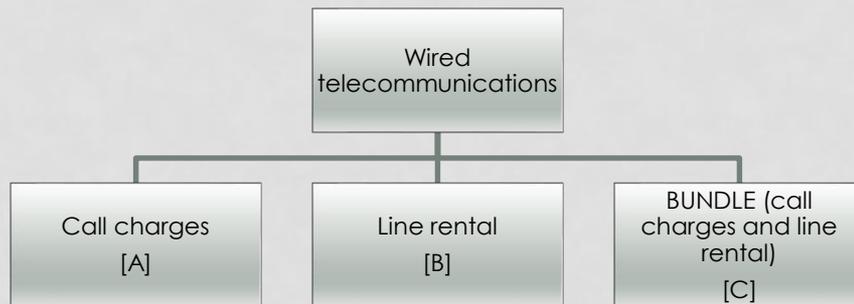
OPTIONS FOR BUNDLED SERVICES

1. 'Ignore' them
2. Include bundled services as a separate product in the aggregation structure
3. Assume same price movement for each of the products included in the bundle
4. Calculate price for each bundle component

OPTION 1 – IGNORE PRICE BUNDLES

- If bundling is not a significant activity in the product/industry you are measuring, it is reasonable to ignore them
- If representative products from firms in sample are primarily individual products, do not select bundles to price

SERVICE BUNDLE WITHIN THE SAME PRODUCT CATEGORY



Option 2 - Include bundled services as a separate product in the aggregation structure

- Best to have weights for A, B and C
- Consider index level needed for deflation
- Industry level SPPIs could adopt this with bundles of primary outputs

SERVICE BUNDLE ACROSS PRODUCT CATEGORIES

Option 3 - Assume same price movement for each product

- Less costly and easy to implement solution but less precise
- Reduced cost (e.g. improved productivity) in one product may lead to decline in price of bundle that would be applied to other products as well
- Consider prevalence of bundles

Option 4 Calculate price for each bundle component

- Ideally, the prices for each service would need to reflect their discounted levels
- Collect best estimate of individual prices from respondent (using production cost approach)
- Response burden

EVEN IF COMPONENT PRICES CAN BE PROVIDED...

- Are the components proportionately equal in price?
- Are some components at full price and others discounted?
- Does the level of discounting depend on the volume of each component purchased?
- Do bundle prices change if the component prices change, and vice versa; so if the components change price, is there an impact on the bundle?

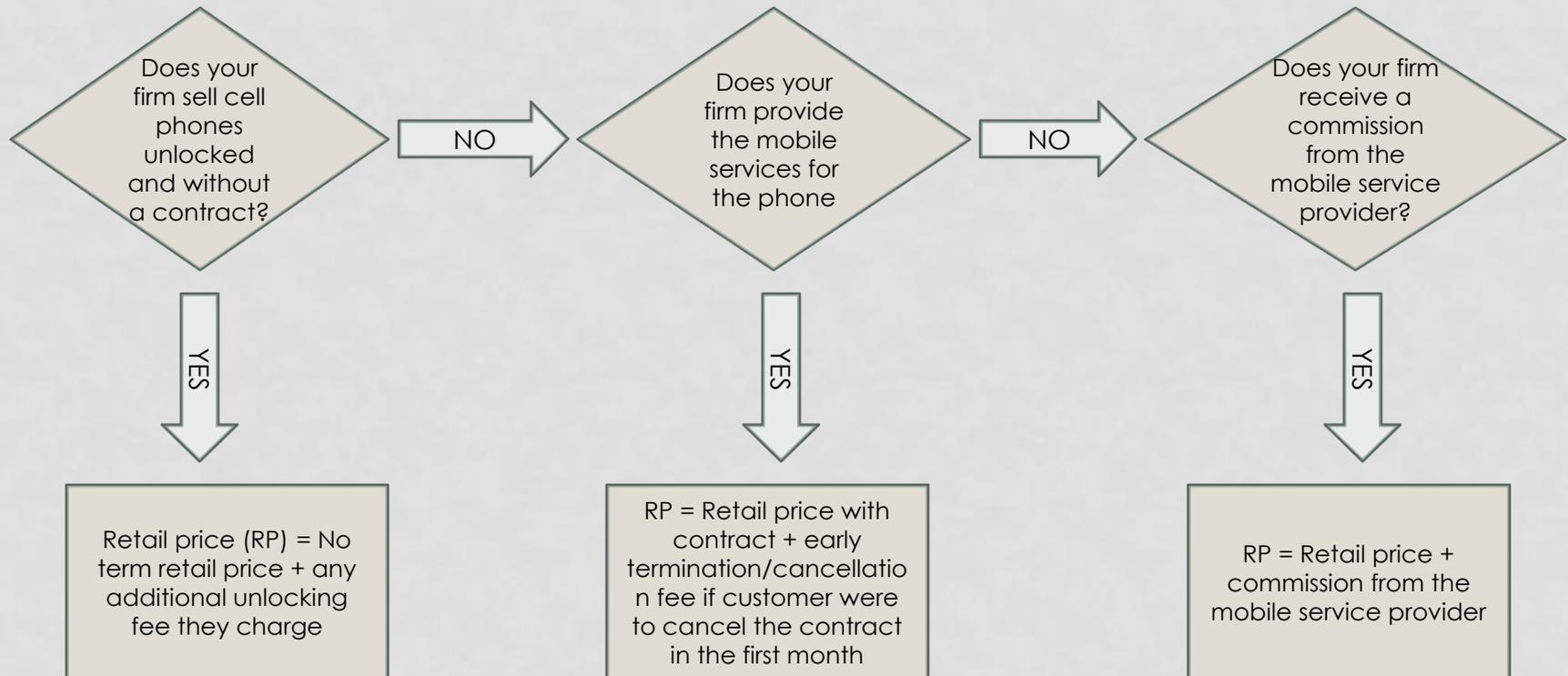
PRICE BUNDLES OF GOODS AND SERVICES

- Eurostat-OECD Methodological Guide for Developing SPPIs:
“The bundle should be priced excluding of hardware so that the price index is only capturing services.”
- The individual components in a bundle of goods and services have great influence on each other in price determination
 - For example, Company A may discount the price of copy machines sold with a maintenance package but increase that maintenance fee with a view to maximizing its revenue
- Goods and services are provided at different periods, so unbundled prices can be easy to follow
- To ensure the appropriate measures at an economy-wide level, select samples that captures both activities by a specific provider.
 - In other words, ask Company A to report the prices of both “copy machines” and of “maintenance services for copy machines” and then reflect them to the indexes respectively.

RETAIL MARGINS WITH GOODS AND SERVICE BUNDLES

- Many retailers offer discounted cell phones when sold with a telecommunications contract
- Vendor's price > Retail selling price = negative margins
- But retail selling price at the cash register is not the true revenue received by the retailer
- Need to ask additional questions to collect the true margin earned by the retailer

RESPONDENT INITIALIZATION FLOW CHART FOR CANADIAN RSPI



RECOMMENDATIONS FOR SPPI

6. In the case of composite services, the primary service should be followed in pricing.
7. If all products included in a price bundle fall within the same product category (or are primary activities of an industry-level SPPI), the prices of simple and bundled services should be followed simultaneously when the bundle is a significant component of turnover. Ideally, each product and bundle would be weighted according to the corresponding proportion of turnover.
8. Where price bundles consist of a combination of products across product categories, it is recommended that SPPIs try to collect an unbundled price from respondents for the individual services using a production cost approach.
9. In product replacement, the sum of two simple services is not equivalent to a price bundle of the services as there is a change in the terms of transaction. The bundle may be considered as a volume discount.
10. Where a firm discounts the price of machinery and equipment in order to secure a service contract, it is best that both the good and the service be followed in the appropriate samples of the corresponding producer price indexes.

IMPACT ON THE SNA

- Alignment of turnover statistics and SPPIs is important
- Decisions on treatment of bundles should reflect product level in SNA and integration of data from turnover and SPPIs
- While GDP could be calculated with bundles of goods and services, doing so limits their ability to calculate detailed and accurate measures of productivity and efficiency. With more granular supply use data, researchers can better evaluate productivity improvements and the overall economic impact of the expansion of a particular industry.

DISCUSSION

Small group discussions:

- Definitions
- Classification recommendations
- Turnover
 - Reselling of services
 - Recommendations
- SPPI
 - Should the price reduction due to bundling be reflected in price indexes?
 - Price treatment of goods and services
 - Recommendations
- Any further comments or suggestions?