



# **Producer Price Indexes for Road Freight Services within Australia**

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**Daryl Williams, Subhashni  
Subrail, Paul Boling and  
Rebecca Eales**

**Australian Bureau of  
Statistics**

## ABS PRODUCER PRICE INDEX OF ROAD FREIGHT SERVICES

### INTRODUCTION

**1** The Australian Bureau of Statistics (ABS) currently publishes a producer price index (PPI) for Road Freight Transport services. The scope of this index is based on the Australian and New Zealand Standard Industrial Classification 1993 (ANZSIC93) class 6110 'Road Freight Transport Services'. The time series of this index commenced in March 1997 and was first published in April 2000. It is currently released as part of *Producer Price Indexes, Australia* (ABS Catalogue no. 6427.0), a quarterly suite of PPIs available within four weeks of the end of the reference period. The key use of the road freight transport services PPI is as a deflator in the preparation of the Australian national accounts. This price index also contributes to the stage of production producer price indexes.

**2** The output producer price indexes compiled by the ABS measure the prices received by producers regardless of the destination of the good or service. Thus, producer price indexes measure business-to-business transactions but also include transactions, where appropriate, to the household sector, to government and to non-profit institutions serving households. This scope aligns with the use of the PPIs as measures of inflation and as deflators in the national accounts.

**3** The road freight price index measures the transport by road of commodities on behalf of a buyer/owner or a seller. Provision of such services may be under contract, regular schedule or on demand. Different cost pressures for each type of service may affect price volatility at different times, and the service industry PPIs are designed to capture these price movements.

### 1 DEFINITION OF THE SERVICE BEING PRICED

**4** Road freight transport services (ANZSIC93 class 6110) covers establishments mainly engaged in the transportation of freight by road. It also includes units mainly engaged in renting trucks with drivers for road freight transport. ANZSIC93 class 6110 broadly corresponds to International Standard Industrial Classification (ISIC) Rev 3.1 6023 'Freight transport by road'.

**5** The activities covered by ANZSIC93 class 6110 also broadly correspond to a range of different services classified according to the Central Product Classification (CPC). ANZSIC93 class 6110 is the industry of origin for products classified according to CPC as follows:

- class 6433, Road transport services of freight;
- subclass 64331, Road transport services of freight by refrigerator vehicles;
- subclass 64332 Road transport services of freight by tank trucks or semi-trailers;
- subclass 64333 Road transport services of containerized freight by trucks equipped with a container chassis;
- subclass 64335 Moving services of household and office furniture and other products;
- part of subclass 64336 Road transport services of letters and parcels; (transport of materials in bulk form between centres of collection or distribution is included in ANZSIC93 class 6110, whereas all other types of delivery are covered elsewhere under postal and courier services); and
- subclass 64339 Other road transport services of freight.

**6** The primary types of activities in scope of ANZSIC93 class 6110 are

- Delivery Service (road);

- Furniture removal service (road);
- Log haulage (road);
- Road freight transport service;
- Taxi truck service (with driver); and
- Truck hire (with driver).

Note that the ABS road freight service PPI is restricted in coverage and does not attempt to price the following activities: Delivery service (road), Taxi truck service (with driver) and Truck hire (with driver). This restriction in coverage is due to the limited volume of such activities within the Australian economy.

**7** The ABS has recently revised its industrial classification to a new version of ANZSIC (ANZSIC06), which is progressively being introduced across all ABS statistics. Under ANZSIC06, class 4610 broadly corresponds to ISIC Rev 3.1 6023 and ANZSIC93 class 6110 with the exceptions that it excludes Delivery services but includes Road vehicle towing.

**Output 8** Road Freight conducted by manufacturers, resource extraction industries, animal growers and grain farmers or anyone else on their own account is not included in the ABS road freight price index. Transport of Mining output using lease of equipment would therefore be excluded. Road freight forwarding (ANZSIC93 class 6642 and part ISIC Rev 3.1 6309) is not included in the index, but is interwoven through many of the road freight operators along with warehousing, storage and packaging activities. Many of the national operators and some others promote themselves as providing 'supply chain solutions' where there may be cross subsidisation of prices by activities other than road freight. The ABS price index of road freight endeavours to measure changes in road freight prices only.

## 2 PRICING UNIT OF MEASURE

**9** The Australian road freight industry employs a range of different pricing mechanisms. There are no fee guidelines or standards currently in use for specific activities within or across this class. Each market area has different requirements, usually depending on factors such as customer type, operating policies and type of freight being transported. Given the diverse approaches used to price road freight, the ABS adopts a specification pricing approach, with representative specifications identified with the consultation of the provider.

**10** Pricing mechanisms employed by the road freight industry frequently vary with differences in point-of-origin and point-of-delivery. As such, specifications must define the service in a detailed form, including origin and destination points, the type of vehicle (either implicitly or explicitly), type of product being transported, and customer type. The ABS is able to price to constant quality by focussing on detailed specification pricing.

**11** Over recent quarters, the ABS has identified a shift in pricing mechanisms due to recent increases in the price of fuel. The ABS has observed that the road freight industry has been adding explicit fuel surcharges to the actual freight costs, and hence in the recent quarters the price of freight has been pushed up by such costs. The ABS has responded to this change in industry practice by also including fuel surcharges as part of the specifications for most of the activities selected for pricing in the road freight PPI.

### 3 MARKET CONDITIONS AND CONSTRAINTS

#### Size of Industry

**12** The road freight transport industry is an important industry not only in its own right but also in terms of its role in the general economy. The past two decades have seen tremendous changes in the road freight transport industry and in the economic and regulatory environments within which it operates. The size of the road freight industry has been affected by the growth of economic activities, changes in real road freight rates (excluding inflation effects), improvements in road freight infrastructure and the quality of road freight services, and competition from other modes of transport.

**13** There is limited separate data for pure road freight and the blended operations of freight forwarders, those offering logistics management or as it sometimes described 'supply chain solutions'. Currently<sup>1</sup> production of road freight services is valued at \$16.5 billion AUD. By way of comparison, this service accounts for 24.2% of the production of transport and storage services (valued at \$68.1 billion AUD). Total Australian production is valued at \$1,100 billion AUD.

**14** In Australia, the owner-drivers and small freight operators account for less than 12% of the industry's operating income<sup>2</sup>. However, this group of providers represent nearly two thirds of the total number of operating businesses. Owner operated establishments carry the majority of the road freight by volume. A significant proportion of the remainder is carried by companies with their own road freight fleet that move freight specifically on the company's own account; these are out of scope of ANZSIC93 class 6110.

**15** Greater integration is being observed within the road freight transport industry, with the road freight sector undertaking more freight forwarding activities and becoming logistic operators. This can include other related transport services such as warehousing and stock control facilities.

#### Special conditions or restrictions

**16** The road freight transport industry in Australia is made up of several tiers of operators. The tiers are: large national operators with fleets of vehicles, contracting companies that may be State based and either family-owned or private companies, and many small independent operators and owner-drivers.

**17** The market is continually adjusting itself to the economies of the sector. Large operators with other modes of freight operation (such as rail freight or coastal sea freight) may switch between modes at different opportunities. Some large companies maintain a fleet of road vehicles for their core business and contract out the remainder between independent operators, which may have a vehicle in company livery, and to smaller operators. This is done to keep an ability to respond to the demands of the market through its cycles and seasonal influences without over capitalising and minimising the number of directly employed drivers and associated costs.

**18** The changes taking place in fuel prices are forcing most operators to include a fuel surcharge as a variable in their quotes and contracts. Competition remains the dominant feature of this industry and profit margins are becoming tighter. In addition, a looming driver shortage could have a significant impact on the road freight industry in the future. Recent media coverage indicated that freight companies might start looking overseas for drivers as Australia's truck drivers are aging and there are not enough new drivers entering the industry.

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<sup>1</sup> Production values determined using 1998-99 input output tables. See *Australian National Accounts: Input-Output Tables (Product Details) - Electronic Publication, 1998-99* (ABS cat. no. 5215.0.55.00)

<sup>2</sup> Bureau of Transport and Regional Economics, December 2003, "Working paper 60: An Overview of the Australian Road Freight Transport Industry".

**19** Australia's road freight industry is also restricted to domestic road transport. Australia's geographic positioning means that there are no international road transport services. That is, whilst road freight can be exported (sold to non-resident economic agents), no road transport activities themselves *physically* cross Australia's customs frontier (without becoming part of air or sea freight transport services).

#### Record keeping practices

**20** Record keeping practices in the road transport industry for the purposes of collecting price and value data tend to vary by type of commodity being transported. Dangerous goods, refrigerated goods and containers have detailed record keeping because of mandatory Federal and State regulations due to the nature of the commodities. General and express freight operators are not required to keep such detailed records. Although no definitive standards apply, most businesses price on an hours travelled or distance covered basis which inherently therefore contains a component for fuel, labour and normal running costs. Additional costs such as tolls and special conditions may be factored into the total.

**21** Owners and drivers in Australia are required to maintain records and logbooks to ensure that maximum driving hours are not exceeded and at least the minimum rest breaks are taken. Record keeping by the industry is not geared towards reporting costs or prices on a \$/tonne/Km basis. This is why the ABS prices specific services from pick-up to destination for a particular customer. Owner operators who do not subcontract are a large part of the road freight industry as well. Due to the competitive environment and the variety of customers they service it is less likely they would be able to price the specification over time. As the ABS's pricing method is based on particular specifications for a customer between origin and destination, there is more certainty in consistently pricing the same service over time. This method picks up any changes in the nature of the service and a quality adjustment is applied where necessary.

**22** Under Australia's Federal system of government, constitutional responsibility for the regulation of road transport lies with States and Territories. Road transport regulation includes control over driver and vehicle operations and standards, weights and dimensions. Formerly the National Road Transport Commission (NRTC); now the National Transport Commission, was established to develop national approaches to road transport regulation. The NRTC's initial work was associated with developing key elements of national road transport law and establishing national heavy vehicle charges.

**23** Attachment A lists in detail the regulations and standards in the transport industry.

**24** There has been a great impact from recent technological development in the freight industry in Australia. The technology employed by the road freight transport industry is rapidly changing. Over the past decade, the trend towards using larger trucks has continued and has reduced the demand for labour and fuel per tonne-kilometres performed. Competition within the industry has ensured that the benefits of these technological developments have been passed onto users of road freight services.

**25** Some of the primary examples are:

- use of B-Doubles, a prime mover (tractor) with what amounts to two trailers.
- mobiles phones;
- faxes;
- computers;
- the internet; and

- global positioning system (GPS) and/or satellite navigation.

**26** The introduction of electronic tags for containers has made the loading/unloading process more efficient and quicker thus reducing the time and cost of labour to the service provider. The introduction of e-tags (electronic vehicle tagging) for tolls has shortened the travel time for freight thus improving the service. These two developments have improved the competitiveness of road freight service providers.

**27** The rapid diffusion of the new telephone technologies, notably mobile phones, has greatly improved communications between customers and carriers making it easier for customer to track goods in transport. The larger operators have set themselves up for e-commerce which has a lot of benefits, including improved customer service, better tracing of goods, reduction in empty loading, timely delivery of goods, reduction in processing errors and lowers administration cost. However the larger number of small operators often still face difficulties embracing the most recent technologies, because of initial set-up costs or the need to develop new skills.

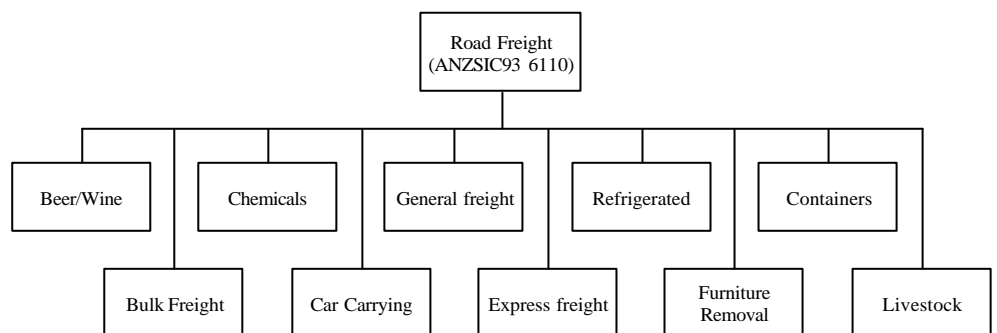
**4 STANDARD CLASSIFICATION STRUCTURE**

Current practice

**28** Road freight transport services are classified to ANZSIC93 class 6110. Whilst the 4-digit class level is the deepest level of Australia’s industrial classification, this level of detail is not sufficient to capture different price determining characteristics for road freight activities. Subsequently the price index of road freight uses a specifically designed structure below the 4-digit class level, developed with the aim of classifying road freight activities into homogenous sectors that align better with industry practice.

**29** As noted above, the origin, destination and type of commodity transported are the key price determining characteristics for Australian road freight services. The index structure used for the price index of road freight service is therefore structured primarily according to type of commodity being transported. Separate components exist for carriage of containers, chemicals, refrigerated goods and so forth. Such a structure reflects industry practice, especially when there are specialised vehicles with high initial capital cost used for transporting particular types of freight such as tobacco, chemicals or certain beverages. Such commodities are usually transported by specialist transport companies.

FIGURE 1 CURRENT STRUCTURE OF THE PRICE INDEX OF ROAD FREIGHT



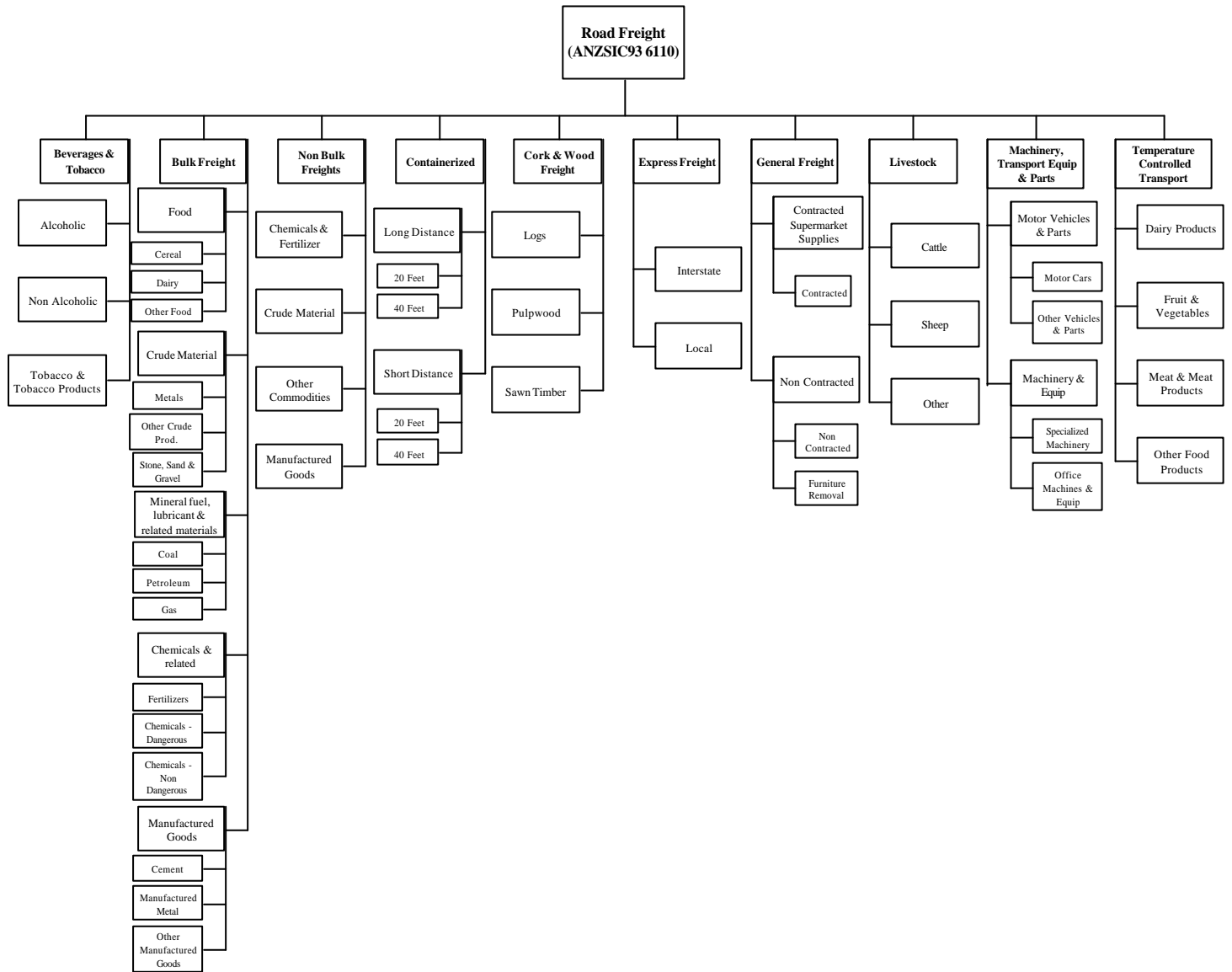
**30** In the current structure, the three most significant contributions in weight<sup>3</sup> are from General freight, Express freight and Bulk freight that account almost equally for almost 75% of the measured activity. Beer/Wine freight, Container freight and Livestock freight account for little more than 3% of the industry. Car carrying, Chemicals, Furniture removal and Refrigerated freight account almost equally for the remaining 22%.

<sup>3</sup> 1996-97 input - output data price updated to March quarter 2002

Future directions **31** As part of its ongoing sample review and maintenance program, the ABS will shortly be implementing a new structure for the price index of road freight to better reflect recent changes within the road freight industry. In setting up the structure, consideration has been given to the nature of the factors that affect the industry to allow for item substitution in the index with minimum risk of future structural change being required.

**32** The benefits of the proposed structure are that the resulting elementary aggregates are more homogenous in terms of price level, price behaviour, and item substitutability. The current structure reflects these differences to a certain degree (such that transporting of coal differs from transporting of new cars, for example). The proposed new structure introduces a greater degree of detail, allowing for variability within broad headings.

FIGURE 2 PROPOSED NEW STRUCTURE OF THE PRICE INDEX OF ROAD FREIGHT





**33** In this new structure, the most significant contributions are made by Bulk freight 24%, General freight 18%, Non-bulk freight 14%, Express freight 11% and Container Freight 11%. Temperature controlled freight contributes much less in this structure than refrigerated freight does in the current index

**34** Current analysis of the market indicates that where there exist specialised vehicles with high initial capital cost used for transporting particular types of freight, the likelihood of this being performed by small or owner operated businesses is significantly reduced.

**35** The level of detail in the proposed index structure also better reflects desired outcomes for both editing and imputation practices. For example, addition of greater detail into the index design allows the index structure to better reflect different practices that arise for containerised goods, both for long haul and short haul, and for containers of different sizes.

## 5 EVALUATION OF STANDARD AGAINST MARKET CONDITIONS

**36** The road freight sector is tending to engage more in freight forwarding activities in recent years. This trend reflects the road freight industry's desire to lower their costs and to provide a better logistic service to its clients. Higher fuel costs have also led to a tightening of profit margins within the road freight industry. The age profile of truck drivers is increasing and leading to skill shortages. Very recent media reports of industry association plans to support the import of truck drivers from overseas to address this and other issues and the alarm this has caused in labour organisations with the threat to drivers' wage levels, indicate some interesting times ahead for the industry.

**37** The road freight transport industry in Australia is generally believed to be highly competitive because of minimal entry barriers and the large number of participants in the industry. Anyone holding a truck driver's licence and having a registered truck, whether obtained with the collateral finance or emerging operating leases, can operate a road transport business on any route, with rates determined by the market.

## 6 NATIONAL ACCOUNTS CONCEPTS AND MEASUREMENT ISSUES

**38** Within the production approach to GDP as measured by the Australian national accounts, road freight (ANZSIC93 6110) is the sole contributing class to the ANZSIC93 group 611 Road Freight transport. This class (and group) adhere to the same classification principles as outlined above. The production approach to the Australia national accounts uses the "output indicator" method for measurement of quarterly chain volume estimates of industry value added for the road freight industry.

**39** The output indicator method is the one most commonly used by the ABS. It involves extrapolating reference year estimates of current price gross value added using movements in a volume indicator of output. In a few cases the output indicator is just a single statistic, but in most cases it is a composite of several statistics. In no cases do these output statistics precisely meet the national accounts definition of output, but in most cases they approximate the national accounts definition reasonably closely. In some cases the output statistics are merely highly correlated with the national accounts definition of output, as when turnover data are used as the output indicator for wholesale and retail trade. The principal output of these industries is their margin on the goods they sell (the margin is the difference between the price at which goods are sold and the price at which those goods are bought by the wholesaler or retailer).

**40** The output indicator used for the measurement of road freight is income from sales of goods and services collected in the Quarterly Business Indicators Survey (QBIS). These sales estimates are deflated by the producer price index of road freight.

## 7 PRICING METHODS AND CRITERIA FOR CHOOSING VARIOUS PRICING METHODS

Representativeness of current period population

**41** The previous discussions regarding output of the industry indicate that pricing mechanisms depend on type of commodity, origin and destination. As with many services, potential exists for price discrimination between customers and so customer (or customer type) is often a price-determining characteristic. It is for these reasons that the ABS prefers the use of *specification pricing* for the price index of road freight. However, data availability and the bookkeeping and contractual requirements of individual respondents also influence the pricing methods employed by the ABS. Consequently, the pricing method adopted in the road freight PPI is determined on a firm-by firm and even a commodity-by-commodity basis.

**42** A frequent issue that arises in pricing road freight is the use of a contract negotiated to cover a range of services provided to a particular customer. Such contracts frequently extend beyond provision of road freight services to include also freight forwarding or storage services. Pricing road freight activities separately when such contracts are encountered frequently imposes a greater burden on the selected provider.

**43** The types of pricing methods used within the road freight services in the ABS are:

- *Specification pricing*: where clearly identified representative services are selected along with conditions of sale;
- *Contract pricing*: where ongoing large contracts with a respondent's key clients are monitored (which in turn requires use of quality adjustment when respondents change customers).

**44** Prices collected under specification pricing are actual prices charged for a service. They are not a list price. This is achieved through use of very detailed specifications, specifying the length of freight trip or alternatively the beginning and end location of a trip, type of freighter being used and type of commodity being freighted. The specifications are also structured in such a way as to capture discounting where it is applied.

**45** The ABS ensures continued representivity of its producer price indexes through a *sample review and maintenance program*.

**46** Most of the ABS producer and international trade price indexes have detailed aggregation structures below the fixed level of the regimen item, down to the elementary aggregate (but not including the specifications within an EA). The ANZSIC93 class 6110 Road Freight is a regimen item for the broader price index of transport and storage services. The structure below this regimen item includes components that represent transportation of different types of goods (such as live animals or refrigerated goods).

**47** A *sample review* is a review of any single index structure below the regimen item level. Such a review can introduce new components, change index structures, split or combine price samples, and incorporate new weights for lower level components. Any new value aggregate data introduced must still sum to the value aggregate at the regimen item level. Note that whilst a sample review can change the value aggregate associated with an elementary aggregate, the sample review activity itself does not change specifications within an elementary aggregate (see sample maintenance below).

**48** The key benefit of the sample review strategy is that since the review is done below the regimen item level, it can be done in isolation from other parts of the price indexes. For example a review of road freight transport services could be undertaken without reviewing sea freight, air freight nor any of the other components of the Transport and Storage price index. Classification, value data and market behaviour need to be determined for only the “branch of the index” being reviewed.

**49** The sample review strategy allows reviewing resources to be targeted to those sectors of the economy that are undergoing rapid transformation, in terms of what is being produced, how it is being produced, and how it is being sold. This allows indexes to be updated to adequately represent shifts in market share, changes in production function, and changes in both customer types and suppliers.

**50** Sample reviews also allow periodic reassessment of industry pricing mechanisms – the manner in which producers charge for their goods and services – so that the pricing methods detailed in product specifications adequately capture the behaviour in the marketplace. Sample reviews also allow reassessment of different pricing methods to reflect emerging international best practice, or to adopt consistently new techniques to price to constant quality.

**51** Sample reviews can also be used to incorporate new products. However such activity may be limited within a sample review depending upon how revolutionary is the new product. A new product can be introduced as part of a sample review if it is different enough that it is not considered an evolution of an existing product, but can be still considered a product of a broad general type covered by an existing regimen item.

**52** Furthermore, sample reviews are often undertaken simultaneously with *sample maintenance*.

**53** Sample reviews as described above can update the value aggregate associated with an elementary aggregate, but such activity does not change the specifications being priced from quarter to quarter. Updating specifications, adding different items, removing transactions that are no longer representative, or changing the micro-index weights are all part of the within-elementary aggregate activity known as sample maintenance.

**54** Sample maintenance is an activity that is undertaken on a continuous basis, most often as data are received from respondents selected in the *Survey of Producer Prices*. Such activity changes the contents of the smallest “price baskets” that contribute to the producer and international trade price indexes. Although sample maintenance can change the within-EA micro-index weights, it does not change the value aggregate associated with an elementary aggregate. Another way of considering this is that sample maintenance is an activity that gives a better measure of the price changes for an elementary aggregate, whilst sample reviews (and index reviews) are changes to the way the elementary aggregates are combined to form upper level price indexes.

**55** Sample maintenance is also the mechanism whereby new respondents are introduced to the price sample, or existing respondents leave.

**56** *Reviews versus maintenance:* Index and sample reviews differ from sample maintenance in that they are both “above EA” type activities, whereas maintenance is concerned with specifications within an elementary aggregate. However the two types of activities also differ in another important aspect, namely that sample and index reviews are a proactive step, initiated by the ABS to update the price basket to reflect new or emerging issues across broad sectors of the economy. On the other hand, sample maintenance is a reactive activity, whereby the ABS reacts to changes identified through interactions with selected respondents.

Transaction Price and  
Output Price  
Constant Quality Maintained

Timely measure

**57** The most recent review of road freight has indicated two potential issues concerning the sample. First, the sample could be better structured in terms of homogeneity, and a new index structure has been proposed to address this issue (as described previously). Second, it is apparent that a characteristic, “time of delivery” or “time till delivery”, has potential to impact on the quality<sup>4</sup> of the road freight service. Whilst this characteristic is definitively included in the pricing of “express freight”, the ABS is concerned that the quality of other types of freight service might also be better described through the inclusion of a time descriptor.

**58** Reported prices are actual transaction prices that have occurred in the marketplace, accurately reflecting the amount received for the provision of road freight services. The valuation basis is basic prices, which accords with the use of the price index in the Australian national accounts.

**59** The quarterly price index of road freight services is published within four weeks of the end of the reference period as part of *Producer Price Indexes, Australia* (ABS cat. no. 6427.0). The release date for each instance of this publication is announced six months prior to actual release.

**60** Constant quality within the price index of road freight transport is maintained via three distinct mechanisms. First, the practice of specification pricing ensures that the service being priced is tightly defined, through tailoring of specifications to individual providers; this ensures that all price-determining characteristics for a particular producer-product pair are included. Second, the quarterly *Survey of Producer Prices* measures not only prices but also captures reasons for price movement and identifies any changes in the services being priced. Third, when quality changes are identified, the previous period price is quality adjusted so that the price movement is determined from the perspective of the current (or ongoing) quality

**61** Attachment B provides the PPI Quality Assessment Tool Framework for ABS road freight transport services index.

## 8 QUALITY ADJUSTMENT METHODOLOGIES

**62** In order to identify changes in quality it is necessary to collect a considerable amount of detailed information concerning the services being priced. Some of this information is obtained in the course of collecting and checking data during compilation of the price indexes. Respondents are asked to provide details of any changes to the services provided. Furthermore, instances of unexplained price changes that are outside set tolerances are checked to determine whether they have been caused by a legitimate price change or a change in quality. Telephone contact with the respondent is the main source of information on quality change and quantifying the changes that have occurred.

**63** If changes to price determining characteristics are identified, quality adjustment of the previous period price is undertaken. For road freight transport services, the overlap method of quality adjustment is used to price to constant quality. Therefore in interactions with service providers it is necessary to determine the true market price at which the changed service would have sold in the previous period.

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<sup>4</sup> Quality in this sense is viewed from the perspective of utility to the purchaser. See *Producer Price Index Manual*, 7.119 "... Yet the discussion in Section B.2 argues for uniformity of treatment via a user-value concept for price index numbers used on the supply-and-use side of national accounts, in the context of this Manual, for PPI input and output indices."

## 9 EVALUATION OF COMPARABILITY WITH TURNOVER/OUTPUT MEASURES

**64** Compilation of the Australian national accounts utilises revenue data obtained from the Quarterly Business Indicators Survey (QBIS). The QBIS measures output of Types of Activity Unit (TAUs) classified by ANZSIC93. The TAU is comprised of one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry sub-division (and the TAU is classified to the relevant sub-division of the ANZSIC93). Where a business cannot supply adequate data for each industry, in most cases a TAU is formed which contains activity in more than one industry sub-division. However, if the business has significant activity in more than one industry the TAU is 'split' by the ABS to produce estimates in respect of each industry.

**65** An area of potential concern regarding the production of statistical measures for road freight transport services is the blurring of activities between different levels of the industrial classification. As discussed previously, many providers of road freight transport services also provide other services such as freight forwarding or courier services. The emerging trend for businesses is to provide "logistic solutions" to customers, delivering many services bundled together. It is this bundling that creates concern, for both output (revenue) measures and the compilation of price statistics. The solution taken by QBIS, and hence by the output measures in the national accounts, is to classify all outputs of a business according to the primary activity of the TAU. The approach adopted in the compilation of producer prices (which needs to measure prices in homogenous groups) is to measure price changes of discrete service activities. This causes a concern if dispersion exists between the price movements of the primary and secondary activities of the industry. For road freight services, the major influences on cost continue to be fuel, maintenance and labour; these costs are also associated with the secondary activities of freight forwarding and courier services.

**66** Given the similarity in price movements between the primary and secondary activities of providers of road freight services, the concern regarding the different approaches to classification is largely mitigated.

**67** Revenue data are not readily available below the 4 digit ANZSIC93 class level. To determine revenue data below the regimen item level (for weighting purposes), volume data (tonne-kilometre travelled) were combined with average price measures. Average prices were determined on a type-of-commodity transported basis from previous price collections.

## 10 SUMMARY

**68** The ABS compiles a quarterly producer price index of Road Freight Transport. The scope of the index is determined by the ANZSIC93 class 6110 Road Freight Transport, with some small exclusions due to limited economic significance. This price index is then used in the production of chain volume measures in the Australian national accounts for the same ANZSIC93 class.

**69** Whilst the classification of road freight services is uniform across ABS economic statistics, industry practice shows that providers of road freight transport services have increasingly diverse business structures. Large establishments develop the ability to substitute between road freight and other modes of transport (particularly rail). The competitiveness of the industry sees other establishments changing business operations to provide “supply chain” or “complete logistic solutions”. Such additional activities blur the distinction between road freight transport services and activities such as courier services or freight forwarding.

**70** A recent review of the ABS producer price index of road freight transport services shows that significant improvements can be made by structuring the price index into more homogenous groups of service activity.

## Attachment A

Under Australia's Federal system of government, constitutional responsibility for the regulation of road transport lies with States and Territories. Road transport regulation includes control over driver and vehicle operations and standards, weights and dimensions.

Formerly the National Road Transport Commission, and now the National Transport Commission, were established to develop national approaches to road transport regulation. The NRTC's initial work was associated with developing key elements of national road transport law and establishing national heavy vehicle charges.

Since it was formally established in 1992, the NRTC has developed national policies and

laws (where appropriate) for the following road transport reforms:

- Safety reforms such as national road rules, vehicle standards, truck and bus driving hours, arrangements for transport of dangerous products and driver licensing arrangements;
- Efficiency reforms such as uniform mass limits, uniform national heavy vehicle charges, national standards for restricted access vehicles and a national registration scheme.
- Reforms focussed on compliance outcomes such as the introduction of 'chain of responsibility', vehicle accreditation systems and outcome-focussed sanctions, penalties and enforcement rules.
- Environment reforms such as tighter vehicle emission standards, cleaner fuel standards with lower sulphur content and lower noise standards.
- Additional reforms currently in progress are built into a strategic framework to provide internationally cutting-edge improvements on issues that are priorities for reform in the road transport sector.

They include:

- a comprehensive review of heavy vehicle driver fatigue and safety;
- a comprehensive approach to heavy vehicle compliance and enforcement, including tougher national laws for truck overloading, exceeding dimensions and poor load restraint; and
- a performance-based approach for regulating heavy vehicles.

The Content Development Framework (CDF) for Service Sector Statistics lacks a device by which countries can gauge how similar are the market conditions from reporting countries. This is essential in determining applicability of solutions developed by individual countries. For example, an industry dominated by a government enterprise in one country will present different challenges to a country that has a dozen fierce competitors; an industry which has limited entry due to licensing requirements will behave differently to one which does not; measuring activity in an industry which has legislated practices and/or bookkeeping will be quite unlike measurement of an industry that has no such requirement, and so forth. I think the CDF needs an addition under heading 3 "Market Conditions and Constraints" as follows:

Content Development Framework additions under "**Market Conditions and Constraints**" as follows:

*(1) Report on Government Regulation*

- Restrictions on entry to the market. Restrictions on entry are not necessarily limited to Government regulation. Restrictions can be due to capital cost, licences and other requirements needed to manage and operate trucking companies, drivers may in some cases need nationally recognised certificates or qualifications for some operations.
- Other licensing requirements. There are no licensing requirements in Australia for entry into the road transport market, but there are some State based regulations which regulate operation.
- Subsidies. There are currently no subsidies for operation or the entry into the market.
- Rebates. Rebates on either or both of the service or business inputs like fuel. Non-discriminatory rebates should affect everyone equally, so there should be no affect competition. Separate rebates to groups such as farmers may have a marginal affect on competition but such farmer freight is done on own account so is out of scope.
- Price control or price setting by Government regulation. Government control of prices is limited to ensuring there is no collusion by competitors in the market. There are no known instances of price setting, either maximum or minimum. Price lists may be set with the intention of introducing some stability in the industry to allow for planning by customers etc. To some extent these may remove the effect of seasonal influences on demand and supply by forgoing other profit opportunities to maintain a regular customer base. If there is any collusion it would be severely discouraged by the Australian Competition and Consumer Commission.
- Government controlled competition. There is no Government operation in competition with private enterprise for road freight. The Government may control the competition by limiting the market players without being a competitor itself. The Australian Defence Force may have a monopoly on some specialised transport such as mechanised armour.



## **(2) Report on Competition**

- Total number of businesses. Not all businesses who have a road freight activity would be coded to road freight in surveys. For instance, there are many manufacturing businesses that transport products on their own account. This causes uncertainty in the apparent volume of road freight and distorts the perceived market and competition. Owner operated and other small excavation operations are probably coded in construction, yet invariably they move fill, sand, aggregate, gravel and rubble in their own trucks. Many other parts of the economy transport products on their own account.
- Proportion of total industry turnover covered by largest 10 businesses. The estimate based on Business Activity Statement BAS (a Taxation document for GST) data is somewhere between 15 and 20%
- Number of businesses that account for 50% of total industry turnover. Easily more than 50% of road freight is performed by owner operators, small (family) businesses, etc who also may contract to larger businesses for part of their turnover. The latest best estimate (based on BAS data in early 2006) suggests there are almost 70,000 operators in Australia that are classified to ANZSIC 6110. There are almost 29,000 with individual turnover less than \$100k, sharing about 11% of turnover, and almost 41,000 with individual turnover greater than \$100k, sharing about 66% of turnover. Data shows that about 64% of the industry revenue is coded to ANZSIC 6110 as a primary activity. The large number of operators reporting less than \$100k in turnover contains a significant number whose turnover is so small that they could not be considered as active players in the market. It suggests that there are a lot of small business carrying not very much not very far. This further distorts the parent market segmentation ratios.
- Imports. There is no international road freight to or from Australia.
- Proportion of total turnover run by government agency or government controlled agency. n/a

## Attachment B - PPI Quality Assessment Tool Framework

Points	Category and Questions	Score
	<p><b>1. Shipment Price (Weight = .10)</b>  <i>Select a. or b.</i></p>	
0	a. Price represents order pricing, actual price at shipment may well be different.	
100	b. Price represents the completion of service or a proxy measure for the completed transaction.	✓
	<p><b>2. Representative of current period production (Weight = .10)</b>  <i>Select a. or b.</i></p>	
50	a. Emergence of new product lines or critical new product features has not occurred since the index reference period or since sample augmentation last done.	✓
0	b. Emergence of new product lines or critical new product features has occurred since the index reference period or since sample augmentation last done.	
	<i>Select c. or d.</i>	
50	c. Product substitution usually occurs when an item becomes obsolete or, if model pricing applies, the models are regularly updated to reflect changes.	
0	d. Product substitution usually does not occur when an item becomes obsolete or, if model pricing applies, the models are not regularly updated to reflect changes.	✓
	<p><b>3. Transaction price (Weight = .25)</b>  <i>Select the one most prevalent in the industry</i></p>	
100	a. The price is the real transaction price or a list price that can always be assumed to be equal to the transaction price.	✓
50	b. The price is a list price not equal to the transaction price.	
100	c. The price is a unit value for a homogeneous group of products.	
50	d. The price is a unit value for a non-homogeneous group of products.	
75	e. The price is a model price.	
50	f. The price is constructed from input cost plus profit and overhead mark-up.	
	<p><b>4. Output price (Weight = .25)</b>  <i>Select the one most prevalent in the industry</i></p>	
100	a. Recorded price reflects an actual transaction or average of actual transactions.	✓
75	b. Recorded price reflects a model transaction incorporating the pricing of all features found in an actual transaction.	
50	c. Recorded price reflects a model transaction incorporating the pricing of only some of the features found in an actual transaction.	
50	d. Recorded price reflects some components of a transaction.	
50	e. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of all features found in an actual transaction.	
25	f. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of some of the features found in an actual transaction.	
0	g. Recorded price reflects charge out rates for fixed labour inputs not directly tied to a specific quantity of output.	
	<p><b>5. Timely measure (Weight = .10)</b>  <i>Select a. or b.</i></p>	
50	a. Pricing data reflect the service provision in the current period and are not lagged.	✓
0	b. Pricing data are lagged.	
	<i>Select c., d., or e.</i>	
50	c. Pricing data reflect an average over the entire period.	

- 40 d. Pricing data reflect an average of multiple measurements over a portion of the period.
- 25 e. Pricing data reflect a single point in time.

✓

**6. Constant quality maintained (Weight = .20)**

*Select a. or b.*

- 100 a. Rapid changes to product specification are not expected or, if they are, a good method to explicitly quality adjust is in use.
- 0 b. Rapid changes to product specification are expected and no explicit quality adjustment method is in use.

✓

**Total =**

**92.5**

**Type A point range = over 90**

**Type B point range = 70 to 90**

**Type C point range = less than 70**

PPI QUALITY ASSESSMENT TOOL SCORE: 92.5, Type A range