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STATISTICS DIRECTORATE

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## Working Party on International Trade in Goods and Trade in Services Statistics

### POTENTIAL FOR DEVELOPING CONTAINER STATISTICS

4-6 October 2010, OECD Headquarters, Paris

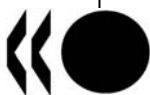
*Item 7 b) of the agenda.*

*The document describes the experience of the Australian Bureau of Statistics in investigating, in conjunction with the Australian Customs and Border Protection Service, the feasibility of compiling container statistics from information on Customs documentation. It is submitted to WPTGS delegates for discussion and comment.*

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## **3RD MEETING OF THE WORKING PARTY ON INTERNATIONAL TRADE IN GOODS AND TRADE IN SERVICES STATISTICS**

### **OECD Conference Centre 4 - 6 October 2010 Potential for developing container statistics**

#### **Introduction**

1. Following a submission from an industry association, the Australian Bureau of Statistics (ABS) and the Australian Customs and Border Protection Service have cooperated in investigating the feasibility of producing statistics on containers used in international merchandise trade. This paper describes the requirement for the statistics and the investigations that have been undertaken.

#### **Industry requirement**

2. The ABS produces a wide range of detailed merchandise trade statistics including, for imports, data by commodity code by overseas port of loading by Australian port of discharge and the final Australian state of destination. Similar details are available for exports. An industry association requested that these statistics be complemented by statistics on containers used in international trade. As a result of this request the ABS hosted a workshop with clients and stakeholders in November 2008 in order to:

- Gain a better understanding of industry and government information needs and how container statistics address these requirements, and
- Assess the issues and costs involved in producing container statistics.

3. The workshop was attended by representatives of the shipping industry, Australian Customs and Border Protection Service and federal and state agencies involved in ports, transportation or infrastructure. The workshop confirmed that there was a strong industry requirement for container statistics. Industry representatives said that ships and ports represent huge investments in infrastructure but planning cannot be effective without good container statistics which identify the number of containers moving through ports, the commodities included in the containers and the destination or origin of the cargo. Container statistics could also:

- Provide information on access corridors around ports i.e. how goods are transported to and from the ports,
- Identify how goods are transported from regional areas to ports (e.g. some containerised goods from South Australia are trucked to Sydney or Melbourne and then loaded onto international carriers), and
- Enhance the ability of security agencies in policy development, undertaking risk assessments and assessing the impact of security measures on the physical flow of cargo.

4. A range of information is currently available on containers including information from port authorities and reports produced by the Bureau of Infrastructure, Transport and Regional Economics. However these do not provide the full range of information required by industry. This is partially due to the lack of common definitions used across ports and the inability to cross classify any of the existing container counts by commodities.

#### **Information available from Customs documentation**

5. The Australian Customs and Border Protection Service manages the security and integrity of Australia's borders including the administration of import and export activity. There are a number of reports that must be filled in and returned (subject to certain criteria) before goods can be legally imported or exported. For the purpose of container statistics the key import reports include the Sea Cargo Report, the Import Declaration and the Impending Arrival Report.

6. The ABS receives data from the import reports (and similar export reports) via a daily file provided by Australian Customs and Border Protection Service. The data received by the ABS is at the lowest level possible which is at the 10-digit commodity level for imports. The ABS processes the daily data to produce a range of detailed merchandise trade import and export statistics which are a significant input to the balance of payments and national accounts.

7. Initial investigations confirmed that the details required enabling the collation of container details are reported on several of the Australian Customs and Border Protection Service's reports. However, not all the fields required to produce container statistics are currently provided to the ABS in the daily files.

8. Selected information available on the key import reports are:

9. The ABS conducted a survey of clients potentially interested in container statistics. The clients identified their ideal containers dataset as including:

- Number of Containers and
- Number of Containers standardised to a Twenty foot equivalent
  - cross classified by:
    - Type of Container (dry vs reefer; empty; tanker; bulker; half height; flat racks)
    - Commodity
    - Australian postcode of origin / destination
    - Overseas country of production/consumption
    - Port of loading / discharge

with Customs value, Gross weight of container contents (also payload weight and net container weight) and Arrival date.

10. Ideally clients would like monthly data. In terms of commodity the most detailed level of the commodity classifications would be preferred. For imports, the 6-digit Harmonized System is extended by two additional digits for duty purposes and another two digits for statistical purposes. For exports, the 6-digit Harmonized System is extended by two additional digits for statistical purposes. The 6-digit level of the Harmonized System would be a fall-back position.

11. In terms of their minimum requirements clients advised that value information for commodities would only be useful if gross weight was also available and that the data would lose most of its usefulness if postcode was not available.

### **Methodological and other issues**

12. While the initial investigation identified that the compilation of container statistics was feasible, a number of methodological and other issues need to be resolved. Some of these issues are described in this section.

#### ***Identifying a unique container***

13. Only counting each container once is obviously important for accurate counts of containers but as a single container can include commodities from a number of different consignments and a single container can be used many times, this is not always straight forward. After investigation, the Australian Customs and Border Protection Service determined that a unique import container can be best identified by creating a string from three fields - Vessel identifier, Voyage number and Container number.

#### ***Twenty foot equivalent containers***

14. Shipping containers typically exist in 20 foot and 40 foot lengths and the twenty foot equivalent (TEU) is the standard measure of containers in international trade. The existing information on Customs documentation does not identify the size of the container. Information about individual containers is available as a free text field but the container size can not always be determined from this field. Therefore, a method of identifying and converting non-20 foot containers to a TEU is required.

15. One method considered is to use the weight of the container. Theoretically 20-foot containers are able to hold 20+ tonnes however due to practical cargo configuration limitations, the maximum weight is rarely achieved. Industry typically uses figures between a lower and upper bound 12 - 18 tonnes per TEU. The average container weight is typically set at 13 tonnes per TEU. Any containers above a set weight (e.g. 18 tonnes) could be considered to be 40 foot containers. The preferred method assumes that all but the largest five Australian ports use 20 foot containers. For the five largest Australian ports the average proportion of 20 foot to 40 foot containers, obtained from information released by the Bureau of Infrastructure, Transport and Regional Economics, is applied to the total count of containers.

#### ***Gross Weight***

16. Gross weight is not available for each line of a lodgement on Customs import documentation. Standard ABS output allocates the Gross weight to the first line of a lodgement. As gross weight is one of the clients' key requirements methodology is required that would allocate gross weight to each line in a multi-line lodgement. One option is to allocate gross weight based on the Customs value of each line in the lodgement but there is not always a strong correlation between value and weight of different goods. This would also result in inconsistencies with the standard merchandise trade statistics.

17. This issue is complicated by:

- An Import Declaration including multiple commodities being shipped in multiple containers, and
- A single container including commodities from multiple Import Declarations.

### ***Arrival Date***

18. Clients would prefer arrival date to be used for import container statistics. However, this could result in inconsistency with the current merchandise trade import statistics which, for practical reasons, are based on the date the Australian Customs and Border Protection Service finalised each transaction.

### ***Confidentiality***

19. While the ABS releases very detailed merchandise trade statistics, producing the level of detail in the container statistics required by clients (e.g. postcode) could result in the identification of the activities of individual businesses. It would be necessary to carefully examine this issue before deciding what level of detail it would be practical to release.

### ***Processing***

20. The daily files from the Australian Customs and Border Protection Service received by the ABS would need to change considerably to include the additional fields required to produce container statistics. The ABS systems which load, edit, aggregate, apply confidentiality restrictions and disseminate the data would also need significant change to accommodate these fields. Including considerable additional information in these processes may pose a risk to the current timing of releases (e.g. processing of imports statistics is currently finalised six working days after the end of each month). The ABS does not have internal funding available to undertake these changes and would need industry and / or government departments to provide funding before any changes could proceed.

### ***Initial Results***

21. Initial investigations have produced some interesting results. For example the Australian Customs and Border Protection Service produced counts of import containers for 2007-08 that were about 7% higher than existing information from the Bureau of Infrastructure, Transport and Regional Economics and individual ports. The initial analysis by the Australian Customs and Border Protection Service also confirmed the potential of using postcode information to overlay container information on a map to visually show the destination of cargo after leaving a port.

22. The quality of the container statistics is yet to be fully assessed but initial work indicates that the quality will be lower than that for current merchandise trade statistics due to the methodological issues identified and the low level of detail required.

### ***Summary***

23. The ABS is committed to maximising the use of available administrative data for statistical purposes. Clients have identified container statistics as an important need that is not currently addressed. The Australian Customs and Border Protection Service has undertaken some significant work to identify information from different documentation that can be used to generate container statistics. The production of container statistics is feasible but a number of issues remain to be addressed including funding.