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7 (b): Analysis of Asymmetries of Trade Statistics between Germany and China

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This paper was prepared by Mr. Klaus Geyer-Schaefer from the German Federal Statistical Office.

Delegates are invited to comment on the document.

For further information, please contact Mr. Klaus Geyer-Schaefer at
e-mail: klaus.geyer-schaefer@destatis.de

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1. Background

1.1 *Dynamic development of the Sino-German trade in goods*

1. China is Germany's most important trading partner in Asia. In 2006, approximately one quarter (26,4 %) of total German exports were destined for China. As far as imports are concerned, China accounted for as much as 40,3 % of all imports from Asia
2. Germany's external trade with China has developed very dynamically since 1995.
3. Up to 2006 imports from China rose six fold, German exports to China fivefold.
4. In 2006, imports of Chinese products rose to 61,3 billion US Dollar, which is a 19,4 % increase on the previous year. The total value of German exports to China amounted to 34,6 billion US Dollar in 2006 (+29,6 % on the previous year).
5. Among Germany's most important trading partners China ranked 3 measured by German imports in 2006 (1995: 11) and 11 measured by its exports (1995: 15). From China's perspective, Germany ranks first among the EU states.

1.2 *Asymmetries between German and Chinese trade statistics*

6. Comparing corresponding external trade figures between Germany and China shows that there are significant asymmetries. Whilst German imports from China are much higher than China's export figures, Chinese results exceed German figures in the opposite direction of trade (*tables 1 and 2*).

Table 1

Year	German imports Country of origin China	Chinese exports Country of final destination Germany	Asymmetry*
	Million US Dollar		%
2003	29 051	17 536	-39,6
2004	40 789	23 756	-41,8
2005	50 815	32 528	-36,0
2006	61 212	40 315	-34,1

* (exports-imports) / imports

Table 2

Year	German exports Country of destination China	Chinese imports Country of origin Germany	Asymmetry*
	Million US Dollar		%
2003	20 661	24 341	-15,1
2004	26 112	30 368	-14,0
2005	26 418	30 724	-14,0
2006	34 555	37 879	-8,8

* (exports-imports) / imports

1.3 *Nomination of a Sino-German working group on trade statistics*

7. On the background of the mirrored asymmetries, the 12th meeting of the Sino-German Joint Commission on Economic Cooperation appointed a working group on trade statistics on 11 November 2005.

8. The working group's political mission and objective is to analyse the asymmetries in German and Chinese trade statistics and to reduce them as much as possible. The reference years 2003-2005 were defined as the period of examination.

2. **General causes of asymmetries**

9. Mirrored external trade figures are generally expected to be basically identical for a pair of countries. The asymmetries, which occur in practical life despite the use of standard methods, are caused by a number of reasons, which may be of different importance depending on the counterpart country concerned. The phenomenon of asymmetries is not a specifically Sino-German problem, asymmetries between mirrored data may occur in the transactions with all partner countries – even within the EU.

10. One of the most frequent and most important causes is controversial information about the partner country involved. Frequently exporters do not know the country of final destination at all or at least not at the time of declaration. On the other hand, importers are not always aware of an imported product's real origin. Experience has often shown that asymmetries in a pair of countries' data occur whenever a transaction involves more than two interested parties (e.g. intermediary vendors or goods are shipped to third-party countries prior to reaching the final customers concerned).

11. Other causes of asymmetries are different approaches to the evaluation of goods. The internationally accepted evaluation in terms of CIF (Cost Insurance Freight) for imports (value of goods at the country of destination's outside border, i.e. including transport and other costs up to there) and in terms of FOB (Free On Board) for exports (value of goods at the country's national outside border, i.e. including transport and other costs up to there) leads to differences in the registration of transport costs, which is a factor causing asymmetries. The importance of this factor largely depends on how far the partner countries are apart from each other (transport channel, mode of transport) and what kind of product (e.g. weight) is transported.

12. There are still other causes such as the different use of statistical methods (evaluations, simplifications, exemptions) or exchange rates. Asymmetries between mirrored data may also be caused by transactions, assigned to different periods because of long shipment times, or by declaration and processing errors. However, goods assigned to different items of classification or blocked for secrecy reasons affect comparisons of mirrored data at commodity level only.

3. Analysis of asymmetries of trade statistics between Germany and China

3.1 General remarks

13. As already mentioned under number 2, assignment to different countries is a frequent and major cause of mirror asymmetries. Hong Kong seems to be an important cause concerning the asymmetries in external trade statistics between Germany and China. In this context, Hong Kong as a place of transshipment plays a particularly important role for the transactions between China and its overseas trading partners.

14. A large share of German imports from China is first carried to Hong Kong, before the goods are shipped to Germany. It can be presumed that a Chinese exporter quite frequently indicates Hong Kong as the (provisional) country of destination, whilst the German importer of the goods indicates China as the country of origin. That is the reason why German statistics on imports of Chinese origin exceed Chinese statistics on exports to Germany.

3.2 German imports versus Chinese exports

15. The table of German imports from China by country of origin (*table 1*) includes all imports of goods originating from China, irrespectively of the country from which they were actually dispatched. *Chart 1* below shows very clearly that a large percentage (38 % or 19.1 billion US Dollar) of the goods of Chinese origin imported in 2005 (50.8 billion US Dollar) is shipped to Germany via different countries of consignment.

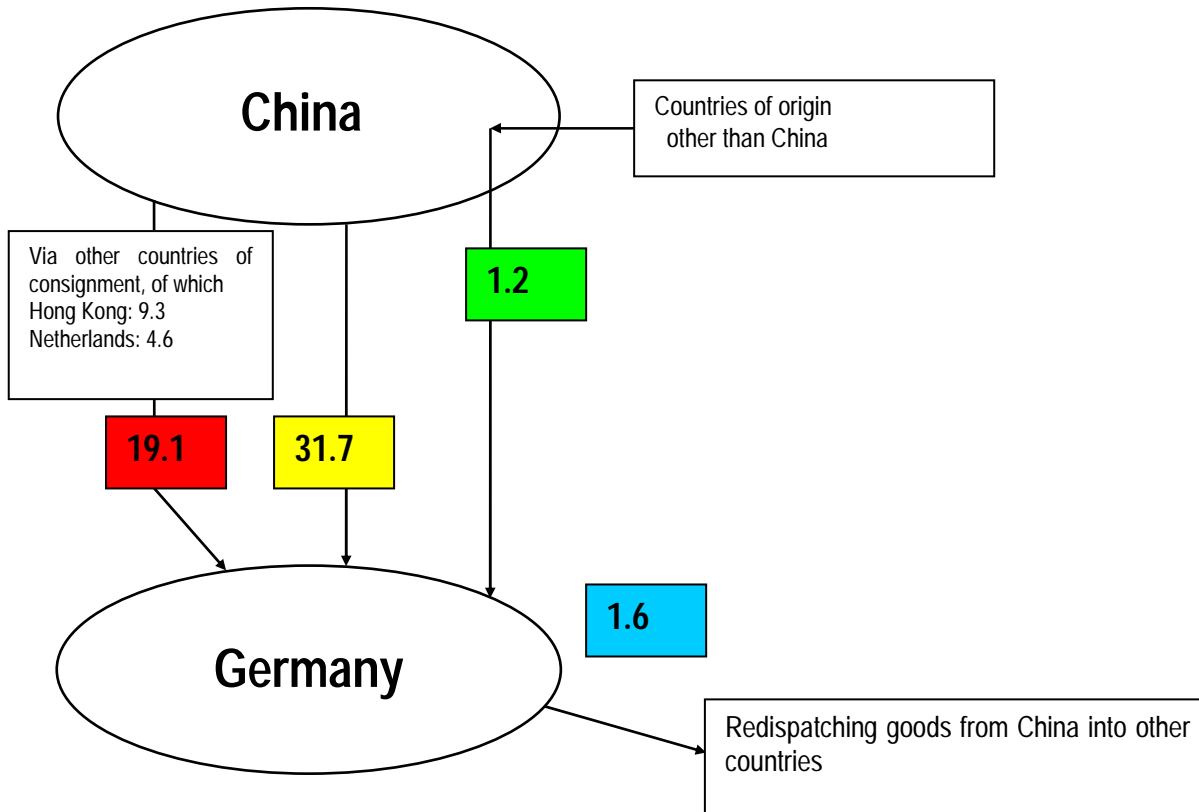
16. In 2005 Germany imported goods worth 32.9 billion US Dollar directly from China. Most of these goods were Chinese products (31.7 billion US Dollar), goods of different origin (other than China) having a share of only 1.2 billion US Dollar.

17. Hong Kong plays an important part as it has a high share in import transactions effected via third-party countries of consignment. In 2005 about one half (9.3 billion US Dollar) of all Chinese goods, which were not shipped from China directly to Germany, were dispatched via Hong Kong. Another important country of consignment for Chinese goods was the Netherlands having a share of nearly one quarter or 4.6 billion US dollars.

18. However, not all of the goods originating or imported from China remain in Germany; in 2005 goods worth 1.6 billion US Dollar were transmitted to other countries.

Chart 1: Structure of German imports from China in 2005 in billion US Dollar

(Source: Federal Statistical Office)



Data on the country of consignment as a basis of comparison

19. The country of consignment approach applied in the presentation of German imports below (*Table 3*) considerably reduces the number of asymmetries inherent to the country of origin approach (indicated in brackets *in italics*). Comparatively good matches are obtained for 2003 and 2005. At present the German side has no plausible explanation for the higher discrepancies in 2004.

20. To improve comparability you need to convert German imports into FOB values. The evaluation of the average delivery cost rate between Germany and China is still going on. Presuming a 6% rate and converting the import figures into FOB Values, the asymmetries rise but are still tolerable. We are still going on to examine this topic together with our Chinese colleagues. As far as we know Chinese commodities are shipped from harbours near by Honkong (e.g. Yan Tian). German carriers tell us they often find the notice “Honkong” in the bills of loadings in these cases. Maybe the German importer declares Honkong as country of consignment instead of China. Provided our Chinese colleagues confirm what German carriers observed the asymmetries would still decline.

Table 3

Year	German imports China as the country of consignment <i>(China as the country of origin)</i>	Chinese exports Germany as the country of final destination	Asymmetry* (CIF/FOB)	Asymmetry* (FOB/FOB)
	Million US Dollar		%	
2003	17 690 (29 051)	17 536	-0,9 (-39,6)	5,1
2004	26 225 (40 789)	23 756	-9,4 (-41,8)	-4,0
2005	32 934 (50 815)	32 528	-1,2 (-36,0)	4,7
2006	40 865 (61 212)	40 315	-1,3 (-34,1)	4,6

* (exports-imports) / imports

3.3 German exports versus Chinese imports

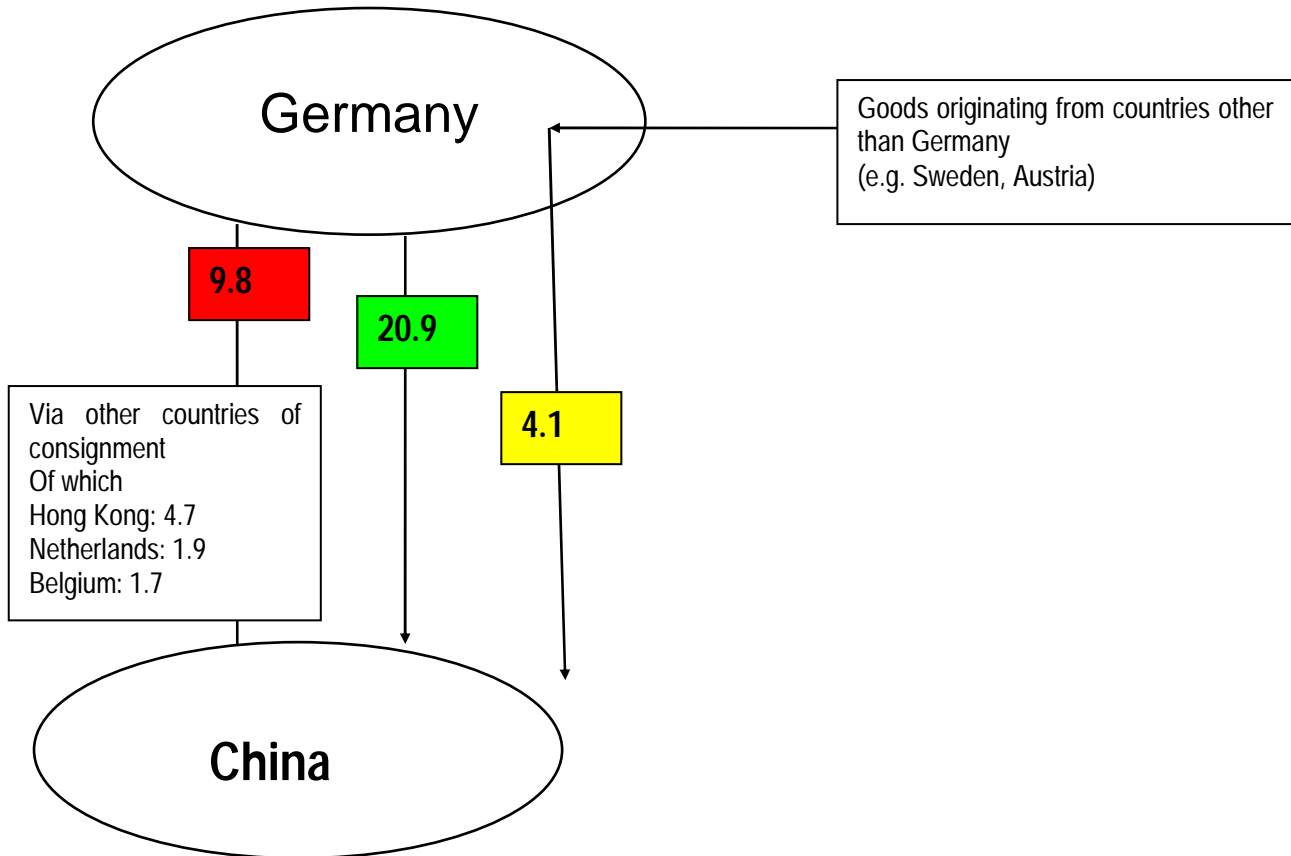
21. As initially mentioned, the approach used to record and present German exports is based on the country of destination.

22. A glance at the structure (*chart 2*) of the goods “made in Germany” (30.7 billion US Dollar) imported by China in 2005 shows that almost one third (9.8 billion US Dollar) of these imports are obtained via other countries of consignment. Direct deliveries of goods from Germany amounted to 25.0 billion US Dollar. They include products originating from countries other than Germany representing a total value of 4.1 billion US Dollar.

23. With a share of 4.7 billion US Dollar, Hong Kong plays a prominent role as a country of consignment for goods of German origin in this direction too. Other important countries of consignment for German goods in 2005 were the Netherlands (1.9 billion US Dollar) and Belgium (1.7 billion US Dollar).

Chart 2: Structure of Chinese imports from Germany in 2005 in billion US Dollar

(Source: Chinese statistics)



Data on the country of consignment as a basis of comparison

24. This direction of trade should also be examined by comparing only those deliveries of goods which are shipped directly between Germany and China, since goods moved via third-party countries presumably cause discrepancies in country assignment. The asymmetries caused by this approach are much smaller than those caused by the use of the country of origin and seem to be tolerable again (*table 4, country of origin data indicated in italics*).

Table 4

Year	German exports China as the country of destination	Chinese imports Germany as the country of consignment <i>(Germany as country of origin)</i>	Asymmetry*
	Million US Dollar		%
2003	20 661	19 341 <i>(24 341)</i>	+6.8 <i>(-15.1)</i>
2004	26 112	24 844 <i>(30 368)</i>	+5.1 <i>(-14.0)</i>
2005	26 418	25 026 <i>(30 724)</i>	+5.6 <i>(-14.0)</i>

* (exports-imports) / imports

25. As we mentioned before in Chinese statistics Netherlands and Belgium occur as important countries of consignment for commodities originating from Germany (3,6 billion US Dollar in 2005). We suspect these figures and prepare a further examination together with our Chinese colleagues. Object of our investigation are the commodities with German origin shipped from harbours in Netherlands (Rotterdam) and Belgium (Antwerp).

26. According to the EU customs provisions goods that should be exported have to be transferred to the two-stage export procedure. This means that in a first step the goods have to be shown and declared to the responsible customs office for exports in the country of dispatch. In a second step, the commodities again have to be shown to the customs when they leave the EU customs territory. Statistically these exports are as a basic principle allocated to the country where the export procedure started. Normally this is the country where the exporter is established and where the commodities were physically located before the beginning of the transport. Only in exceptional cases as i.e. intermediate storage, changes of the destination the declaration of the export may be done in another EU Member State as the country of actual export.

27. The Dutch foreign trade statistics collects for exports also information on the origin of the commodities. In the year 2005 goods with a German origin for a total of only about 350 million US Dollar were exported from the Netherlands to China. In the import statistics of China however, German commodities for 1.9 billion US Dollar were accounted for coming via the country of dispatch Netherlands. The difference amounts thus to circa 1.5 billion US Dollar. There is not any information on the dispatches out of Belgium, but it can be assumed that the Chinese import data for Belgium is also inflated.

28. With respect to the described discrepancies we adjusted the Chinese import data and completed the asymmetry shares converting the Chinese import figures into FOB/FOB (*table 5*).

Table 5

Year	German exports China as the country of destination	Chinese imports Germany as the country of consignment (adjusted)	Asymmetry* (CIF/FOB)	Asymmetry* (FOB/FOB)
	Million US Dollar		%	%
2003	20 661	19 341 (24 341)	-6,4	-0,8
2004	26 112	24 844 (30 368)	-5,9	-0,2
2005	26 418	25 026 (30 724)	-5,6	-0,0

* (exports-imports) / imports

29. By this approach, the figures are matching quite well. With regard to the FOB/FOB column the asymmetries are nearly totally reduced.

4. Summary

Different data on the partner country involved

30. A first analysis has shown that different registration of the partner country involved seems to be the main cause of the large discrepancies between Chinese and German external trade statistics. Conflicting country assignments are mainly caused by transactions which involve third-party countries. In the trade between Germany and China, Hong Kong should be mentioned as a particularly important hub of transshipment for the flows of goods between China and its overseas trading partners. The first place to which Chinese goods are frequently dispatched is Hong Kong, where the goods are temporarily stored, before they are shipped to Germany. It can be assumed that Chinese exporters quite often indicate Hong Kong as the (provisional) country of destination, because they are unaware of the real country of destination or because the country of destination is not yet known the very moment the goods are being exported from China. German importers, in their turn, indicate China as the country of origin for the goods concerned.

31. Concerning the opposite direction the asymmetries may be explained by a “Rotterdam Effect”. Rotterdam and Antwerp are playing a significant role as an important hub of transshipment for the flows of goods between Germany and China. It can be assumed that Chinese importers indicate the Netherlands and Belgium as the country of consignment as they find this noted in the bills of loadings. In most of these cases Germany would be the methodological correct country of consignment.

Discrepancies in valuation

32. Another, though less significant, cause of the discrepancies relates to the fact that imports are always recorded in terms of CIF, exports, however, in terms of FOB. Due to the long itineraries between China and Germany, the difference between FOB and CIF valuation makes itself felt there more strongly than it does in inner-European trade. Prior evaluations have shown that imports from China “free German border” exceed imports in terms of FOB (free Chinese port of loading) on average by about 6%. The percentage may vary strongly depending on the type of goods and the mode of transport.