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PLAYFUL DRAGON: MESSING AND MISSING TRADE

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Abstract

An examination of available data reveals large trade misinvoicing between the People's Republic of China and identified trade partners. The analysis finds a net trade misinvoicing of US$ 287.6 billion between 2000 and 2005, while the full magnitude of unrecorded trade is estimated at US$ 1.4 trillion. Further analysis also finds that there is an accounted misinvoicing or missing trade of US$ 53.7 billion for the same period. China needs to have more effective management of its trade flows. At the same time, the international community needs to contribute to put up more effective governance mechanisms to address trade misinvoicing.

Key Words   International trade; trade misinvoicing; China

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1. INTRODUCTION

The significant economic role that the People's Republic of China [henceforth, China] is playing today in the Asia-Pacific region and the global economy in general has ignited considerable – but quite welcome – discussions. And it is understandable that there are on-going debates because China is fast emerging as an economic and political powerhouse. Data for 2005 show that China already contributes close to 75 percent of the Asia-Pacific output and 5 percent of global output. Its economy has been expanding at 10 percent each year over the past decades, particularly since market-reforms were introduced.

The expectation is that China maintains its robustness in the coming years. What makes this recent development much more interesting is that in the economic history of the developing

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world, no other country has actually sustained a comparable economic performance for a long period of time. In fact, given its size, China has no other comparator economy. Some analysts have forecasted that China is going to be the largest economy in the globe by the mid of the 21st Century (e.g., Fogel 2007). Moreover, with a huge and increasingly becoming richer population – comprising 20 percent of the global population (and still rising) – China is already enjoying an unprecedented domestic economy that is expected to contribute more to its growth momentum and development in the coming years. In other words, China is poised to stand on its own as it graduates as a middle-income country, continues to integrate with the global economy, and takes advantage of huge opportunities made available by globalization.[1] Its role in global economics and politics is clearly going to be more decisive that it can reconfigure the international political economy.

Without doubt, the dynamic performance of China in the present period is underpinned by robust international trade. Yet, it needs to be emphasized that China has been a cautious reformer when it embarked on reforms. While there have been a lot changes introduced during the run up to and since admission into the World Trade Organization (WTO) in 2001, there are burgeoning signs that the already enormous (and still expanding) international trade is putting strains on the structures for managing trade flows, albeit they are already limited in capacity. As will be pointed out below, large trade misinvoicing is an indication of a weakening trade management. Indeed, when trade governance starts to fall apart or unable to cope with the rapid changes following trade liberalization, the opportunities for unrecorded transactions are not only created but are also well exploited. Additionally, trade misinvoicing may also have some regressive effects on the wealth distribution through the transfer of tax burdens on the poor, or contribute to balance of payment problems, although in the case of China this is not an apparent issue. Trade misinvoicing may in the long run pose as a threat to economic growth and stability, in turn undermining the economy unless the countermeasures are promptly put in place.

As trade misinvoicing results in a lot of resources ending up beyond the social control of

the government or worse, the funds are skirted away into safe havens, China may be held back from fully utilizing potential resources to raise its economic performance to higher growth trajectories.[2] Such issues ought to press China to formulate policies that address, if not eradicate, trade misinvoicing activities. China is thus an interesting case study because given its impressive performances in recent decades and the steady introduction of reforms, there remains large unrecorded international flows.[3] There are indications that trade misinvoicing may worsen unless actions are taken to redress the situation.

This paper presents analysis of one characteristic of international trade concerning China: trade misinvoicing. With its accession into the WTO, unrecorded trade transactions are expected to decrease over time as WTO accession commitments are being met. The paper raises concerns about trade management in China because the evidence reveals that trade misinvoicing is rather large. Arguably, as trade volumes continue to increase, the magnitude of trade misinvoicing will rise as well if trade governance mechanisms are not put in place or existing mechanisms are not strengthened. As such, China needs to re-evaluate its trade policies and to re-assess the design of its trade liberalization program to avert future complications that might result in undermining its economy in the long-term. While expanding international trade remains desirable for China in the long-term, there are without doubt tough challenges ahead in the short to medium-term. Thus, this paper recommends that China rethinks its trade agenda and determine alternatives to effectively manage trade flows. It is certainly unwise to recoil from dealing with these challenges because of the tough actions to be taken, like reorganizing agencies and enhancing governance mechanisms to control trade misinvoicing. But it is important that China remains steadfast in the introduction of trade reforms and to succeed in these endeavors if only to demonstrate that indeed effective trade management can be had simultaneously with globalization and that such policy interventions can be beneficial not only to China and its people but also to the global economy.

The paper has five sections. The next section discusses a standard method for estimating trade misinvoicing. The discussion of the results follows, then followed by a discussion of the

policy implications for China and its trade partners. The last part concludes the discussions.

2. MEASURING TRADE MISINVOICING

There are different approaches to measure trade misinvoicing. The method employed in this paper is a standard approach, which is to determine the discrepancies in the official data by comparing official trade statistics between trade partners, a procedure pioneered by Morgenstern (1950) and developed by Bhagwati (1964) and Bhagwati (1974).[4] The first step in this procedure is to obtain the baseline export misinvoicing (ΔX) and import misinvoicing (ΔM) figures, using the formulas: $\Delta X = PX - CIF \cdot X$ and $\Delta M = M - CIF \cdot PM$, where PX in this case is the imports of trade partners from China and PM is the exports of the same to China; X and M are the exports to and imports from the same trade partners by China, respectively; and CIF is adjustment for the cost of freight and insurance.[5] If positive ΔX is obtained, it means export under-invoicing, while a negative value means export over-invoicing. Positive ΔM means imports over-invoicing, while a negative value means import under-invoicing. In either case, the estimated figures are "explained" unrecorded trade. Adding the export and import discrepancies obtains the net trade misinvoicing (MIS), or $MIS_{NET} = \Delta X + \Delta M$. As such, positive MIS suggests a net under-recording in the official trade statistics. The converse is the case if MIS is negative. Adding instead their absolute values obtains the absolute trade misinvoicing, or $MIS_{ABS} = |\Delta X| + |\Delta M|$, which measures the magnitude of the "explained" unrecorded trade.

Following the calculation of MIS, the major trade misinvoicing partners of China can be identified, namely those with MIS_{NET} and MIS_{ABS} with unmistakably large amounts. Thereafter, the reverse (bilateral) trade misinvoicing is obtained using the same procedures above. That is, the reference country is the identified major trade misinvoicing partner (say, the United States) and its export and import misinvoicing with China are calculated, obtaining their MIS_{NET} and MIS_{ABS} as well. Conceptually, because the calculations for China with its trade partners and that of the trade partner with China are basically mirror procedures, the expectation is that there should not be

significant difference in the results. If the amounts differ, the figures are negligible. Accordingly, the calculated bilateral trade misinvoicing results "fully" explain the unrecorded trade between two trade partners. When the difference is significant, however, there is "unexplained" unrecorded trade or missing trade.[6] That is, if China's trade misinvoicing with the United States is smaller than that of the United States with China, the difference is called missing trade.

Trade data used in the calculations cover all commodities exported and imported between China and identified trade partners (and vice versa) for the period 2000 to 2005.[7] The data were obtained from the United Nations Commodity Trade Statistics.

3. PLAYFUL DRAGON: MESSING AND MISSING TRADE

This section presents the results of the calculations. Before proceeding, it needs to be noted that the measurement can be tricky in the case of Hong Kong, which serves as entrepôt of trade to and from China. This situation may be problematic when identifying the country-of-origin of goods from China and Hong Kong. In the classic example, China sends goods to Hong Kong, thereafter they are sent to the United States. Trade records in China may show the commodities as exported to Hong Kong only (and not to the United States), while that in the United States is reported as imported from China (not from Hong Kong). So even if there was no unrecorded transaction, the calculations could still find that China had under-invoiced its exports to the United States. This problem is thus one important issue in trade data analysis. While anecdotal evidence is plenty, there is no concrete information that suggests what the proportion of trade misinvoicing is due to the entrepôt factor. Thus, the approach adopted here is to compute the bilateral trade misinvoicing between China and Hong Kong and between Hong Kong and identified trade partners to verify whether or not there is an entrepôt effect, which is reflected as missing trade. Presumably, the United Nations database from which the raw data were obtained has reviewed the validity of the trade statistics from China, Hong Kong, and the identified trade partners.

[Insert Table 1 Here]

The trade misinvoicing of China in its trade with identified trade partners is presented in Table 1.[8] Details of the calculations are available in Appendix 1. The results in Table 1 show that China has a net unrecorded trade of US$ 287.5 billion and an absolute unrecorded trade of US$ 1.4 trillion for the period 2000 to 2005. On average, there is US$ 47.9 and US$ 235.7 of net and absolute trade misinvoicing, respectively. Needless to say, these are large amounts of unrecorded transactions. The results in Table 1 also show that the bulk of the trade misinvoicing is with Hong Kong, Japan, and United States, together comprising at least 50 percent of net unrecorded trade and at least 80 percent of absolute unrecorded trade. The other trade partners have relatively small trade misinvoicing, both in net and absolute terms. Moreover, the results for Hong Kong confirm the entrepôt problem since results for the bilateral trades between Hong Kong and Japan and that of Hong Kong and United States suggest that trade misinvoicing is "fully" explained, as detailed in Appendix 2.

Table 2a and 2b present the bilateral trade misinvoicing results for the pairings of China and Hong Kong, Japan, and United States, respectively. The results show that bilateral trade between China and each of those three countries have "unexplained" unrecorded trade. In Table 2a, the results show that China has a net unrecorded trade with Hong Kong of US$ -333.3 billion, while in Table 2b, Hong Kong has a net unrecorded trade with China of US$ -319.3 billion. That is, both China and Hong Kong have overstated their trade with each other over the period 2000 to 2005. Accordingly, there is about US$ 14 billion of missing trade between China and Hong Kong. In other words, China has overstated its trade with Hong Kong more than Hong Kong has with China and this situation may be because of the entrepôt position of Hong Kong. From the earlier studies of Chen (2003), Gunter (2004), and Zhu et al. (2005), it is possible to deduce that this missing trade may also be an amount taken out of China via Hong Kong as capital flight, at least flight via the trade sector.

[Insert Tables 2a and 2b Here]

There are also other interesting results in Table 2a. In particular, China has understated its

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bilateral trade with Japan and United States, respectively, totaling US$ 484.2 billion, of which about 45 percent was with the United States. The corresponding bilateral trades of each Japan and United States with China likewise show that they have also understated their trade with China, totaling US$ 523.9 billion as also shown in Table 2b. The United States again comprises the larger portion of the amount. Hence, there is a missing trade of US$ 39.7 billion; that is, Japan and United States together have understated their trade with China more than China with them. As such, the results in Tables 2a and 2b suggest that Japan and United States have actually carried out much larger trade misinvoicing with China. Arguably, this "explained" amount constitutes "reverse" capital flight from Japan and United States to China.[9]

Therefore, with capital flight from China via Hong Kong of US$ 14 billion and "reverse" capital flight into China from Japan and United States of US$ 39.7 billion, there is a *net* inflow of funds into China of the amount US$ 25.7 billion. Overall, between 2000 and 2005, there was net missing trade of US$ 53.7 billion, of which US$ 14 is trade between China and Hong Kong, US$ 17.4 billion is trade between China and Japan, and US$ 26.3 billion is trade between China and United States. If all net trade misinvoicing figures are counted as capital flight, there is a total of at least US$ 800 billion of capital flight between 2000 and 2005. Again, what needs to be stressed is that such amounts are only for the trade sector. Additional unaccounted flows can be obtained when financial transactions are analyzed following techniques in Boyce and Ndikumana (2001) and Beja (2007), as indicated by the studies of Chen (2003), Gunter (2004), and Zhu et al. (2005).

The results on the absolute trade misinvoicing reveals are more remarkable. From Tables 2a, the absolute trade misinvoicing of China with Hong Kong, Japan, and United States is US$ 1.1 trillion between 2000 and 2005. Table 2b shows that the absolute trade misinvoicing of Hong Kong, Japan, and United States with China is US$ 1.3 trillion for the same period. Unaccounted absolute trade misinvoicing is therefore US$ 228.8 billion and most of that amount (more than 80 percent) is bilateral trade between China and Hong Kong. The results clearly show a lot of trade misinvoicing occurs between China and its trade partners. The results imply that with the trade

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volumes rising over time, the unaccounted flows are likely to be also increasing if the institutional setup remains unchanged. Thus, rather than putting the singular blame on China for messing up global trade, trade partners need to cooperate and find solutions to control trade misinvoicing.

4. POLICY CHALLENGES FOR CHINA AND ITS TRADE PARTNERS

An important implication of the findings of this paper is that trade misinvoicing messes up the overall picture of international trade flows. And in the case of China, the results reveal large unrecorded trade, and the calculations only explain most of the unrecorded trade – large amounts of trade are missing, as shown in Section 3. But the bottom line is that trade misinvoicing is a form of resource misallocation – the large the amounts the bigger the resource misallocation. Such misallocation can be the consequence of imbalances in the trade regimes and/or weaknesses in domestic regulatory systems that cannot support sustained expansions in the tradable sector. In the same way, this misallocation can be a symptom of burgeoning domestic structural constraints that need to be addressed if robust economic expansions are to be sustained. Uncertainties in the global economy can contribute to the misallocation of resources in the tradable sector; that is, as precautionary responses to trade uncertainties.

If trade misinvoicing represents unaccounted resources, by extension, it suggest that trade misinvoicing has unaccounted effects on the economy.[10] The challenge for China is how to attract the lost resources back into domestic economic circulation so they actually contribute to further enlarge production in China, increase incomes, and expand the average welfare in the people. As such, there is justification for the government to intervene to redress the situation. In particular, it is necessary to institute policies that lead to effective monitoring of trade flows and to put in place measures that control trade misinvoicing practices. If missing trade are resources that have been "skirted" away from China, they also do not contribute to any expansion of domestic economic activities and accordingly, government actions are needed to bring these resources to good use. Total unrecorded trade can be seen as resources that could have been employed usefully in the

domestic economy to, say, fund small-scale enterprises and create more jobs, support social services like building houses, expand health services, or provide basic education. Addressing the trade misinvoicing issue is therefore compatible with fair trade.

There are possible actions for adjusting trade policy and management available to China. What is being suggested is to make trade misinvoicing riskier and capital flight more difficult with sound trade management and tough penalties. What is being proposed in particular is the creation of a trade intelligence agency, empowered and capable of investigating trade transactions from China to the rest of the world, and vice versa. This proposal means posting agents or setting up corresponding offices abroad. Close collaboration between trade partners is important in this endeavor, especially with regards to sharing information and monitoring of trade flows from each other. The plan can be achieved easily because economies have customs departments. What needs to be done is to make them autonomous from political and business interests and given more authority. As such, the existing customs departments have to be refurbished so they become the lead agency in reviewing trade flows and trade-related information.

Technical capacity is the key to effective analysis of trade flows. As the lead agency in the analysis of trade flows, it enjoys inter-agency authority to collect trade-related information from all sectors of the economy for analysis of possible irregularities, etc. Suspected activities are to be flagged and investigated, with corresponding prosecution of offenders and penalties imposed on the guilty parties. It also needs to be the lead agency for apprehension and prosecution of offenders of trade-related malpractices. In other words, this agency becomes an ombudsman and trade police. Given the challenges, the trade intelligence agency needs people who are loyal to the organization. It is also vital that the agency maintains capacities to succeed in their operations. However, the standard customs mandate remains with the agency, except that in this change, some control over revenue collection is going to be useful. What is proposed is that a portion of customs revenues are to be used by the trade intelligence agency to finance operations and capacity building.

Trade partners must take similar setups to have an effective global trade management.[11] As a network of customs-cum-police agencies, this inter-governmental arrangement can function like an international trade police. Close coordination and collaboration is crucial to the success of inter-country operations. Accordingly, in addition to the changes raised earlier to make detection effective, apprehension successful, some adjustments in both the domestic and international trade laws are also needed to ensure a correspondence of the regulations and operations. Finally, it is important to point out that the proposed changes actually do not go against the WTO rules – in fact, the rules have room for this proposal. Or, existing WTO rules may be revised through a collective initiative of governments to make the current international trade arrangements benefit all those who actually play by the rules.

5. CONCLUSION

This paper presented an analysis of trade misinvoicing between China and its trade partners. Net trade misinvoicing was estimated at US$ 287.6 billion between 2000 and 2005. The total volume of unrecorded trade was US$ 1.4 trillion for the same period. Further analysis showed that US$ 53.7 billion was missing trade, of which US$ 14 billion was a net outflow from China via Hong Kong and US$ 39.7 was a new inflow to China from Japan and United States. These are large amounts of funds that remain beyond the social control of the government.

China needs to have more effective management of its trade flows. At the same time, its trade partners need to contribute to have more effective governance in international trade. In fact, the international community needs to cooperate and coordinate trade if trade misinvoicing has to be controlled. Accordingly, setting up a trade intelligence agency was suggested as a step towards effective global trade management. This agency shall have jurisdiction over all trade transactions, covering monitoring and policing, apprehension of offenders, and the like, becoming like a trade police. At the same time, trade partners need to put similar agencies and/or empower the existing agencies to do the expanded responsibilities. Moreover, a network of customs-cum-trade police

agencies has to be created and to function like an Interpol. Close coordination and collaboration is very important to succeed in their operations. There is also a need to adjust both the domestic and international trade laws to have correspondence of regulations, make detection more efficient, and apprehension of offender more successful. WTO rules are not incompatible with this suggestion, thus was it needed is political will.

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Table 1: Trade Misinvoicing with Partners, US$ Billion

China's trade with	Net	Absolute
Brazil	3.6	6.5
India	12.9	17.1
South Africa	6.5	9.1
Japan	115.2	148.1
United Kingdom	45.5	50.0
United States	369.0	388.3
Hong Kong	-333.3	627.1
Singapore	2.4	24.8
South Korea	19.1	44.3
Indonesia	-4.4	22.0
Malaysia	28.3	35.0
Philippines	7.3	24.1
Thailand	15.1	18.1
Total	287.5	1,414.5
Average	47.9	235.7

Note: Figures are sums for 2000 - 2005. Details in the Appendix.

Table 2a: Bilateral Trade Misinvoicing, US$ Billions

China with…	Net	Absolute
Hong Kong	-333.3	627.1
Japan	115.2	148.1
United States	369.0	388.3
Total	150.9	1,163.5

Note: From Table 1

Table 2b: Bilateral Trade Misinvoicing, US$ Billions

…with China	Net	Absolute
Hong Kong	-319.3	816.6
Japan	128.6	161.5
United States	395.3	414.2
Total	204.6	1,392.3

Note: Calculations of the author.

APPENDIX 1

Trade Misinvoicing, According to Broad Economic Categories, 2000-2005

ΔX=PX-CIF·X	BEC 1	BEC 2	BEC 3	BEC 4	BEC 5	BEC 6	BEC 7	Total
Brazil	-5.3	-82.7	-265.8	1,834.0	-96.7	-814.7	-0.7	568.1
India	-28.4	-1,814.1	383.7	1,490.3	50.5	-196.3	101.4	-12.8
South Africa	-47.6	-430.4	-18.6	1,998.8	-204.6	-566.2	41.9	773.4
Japan	-68.5	8,009.8	-496.0	20,726.3	-1,962.4	37,264.2	2,437.9	65,911.4
United Kingdom	98.5	4,474.6	1.6	8,405.0	-720.1	30,414.7	552.4	43,226.8
United States	1,497.2	16,265.7	-55.3	109,227.1	-1,754.8	211,870.0	10,717.2	347,767.1
Hong Kong	-402.0	3,912.9	-480.5	-10,017.1	-6,966.5	142,879.7	-34.2	128,892.3
Singapore	331.1	76.3	-568.2	10,782.5	-1,568.0	-580.5	90.4	8,563.6
South Korea	-819.7	-952.7	390.2	5,219.6	-2,001.0	-2,652.7	-136.5	-952.8
Indonesia	-386.3	-3,071.2	-746.5	-4,495.0	-1,409.4	-1,821.0	-131.0	-12,060.4
Malaysia	-264.0	140.7	-110.3	6,270.4	-633.6	-1,584.1	998.6	4,817.7
Philippines	-591.3	-1,711.5	-429.0	-2,506.9	-911.3	-1,945.4	4.7	-8,090.6
Thailand	34.7	2,042.8	-161.4	5,058.9	-357.9	1,025.8	-61.3	7,581.7
Total								586,985.5

ΔM=M-CIF·PM	BEC 1	BEC 2	BEC 3	BEC 4	BEC 5	BEC 6	BEC 7	Total
Brazil	1,197.9	1,974.3	18.0	17.4	-146.9	24.0	32.8	3,117.5
India	1,937.1	1,845.5	5,190.3	3,974.6	33.2	-60.3	8.3	12,928.7
South Africa	29.1	4,517.1	64.7	13.1	-39.7	17.5	1,183.7	5,785.5
Japan	-89.5	15,535.9	-46.9	42,454.8	1,991.7	3,244.0	-13,794.7	49,295.2
United Kingdom	-68.4	1,059.0	192.2	2,603.9	-386.0	19.9	-1,048.9	2,371.6
United States	2,326.8	11,033.9	344.1	15,288.2	-4,820.8	102.5	-3,007.8	21,267.0
Hong Kong	-9,501.8	-194,602.8	-1,834.3	-218,836.7	-12,221.3	-25,333.1	88.5	-462,240.0
Singapore	-255.9	-1,198.4	2,401.6	-4,580.1	-925.1	-1,071.6	-439.1	-6,068.6
South Korea	-377.9	9,096.0	-536.8	16,717.8	-3,571.5	-1,589.4	322.2	20,060.5
Indonesia	142.7	5,342.1	-1,169.9	3,207.5	37.5	57.2	25.3	7,642.4
Malaysia	-400.5	4,282.0	652.5	19,216.7	-143.4	125.5	-211.9	23,520.8
Philippines	217.7	869.1	-148.1	14,673.1	-82.6	-89.7	3.1	15,442.7
Thailand	-312.0	1,903.9	-348.2	6,501.0	-91.0	67.1	-150.3	7,570.5
Total								-299,307.7

Source of raw data: United Nations Commodity Trade Statistics. Note: Calculations of the author.

APPENDIX 2

Bilateral Net Trade Misinvoicing, US$ Billions

Hong Kong with…	Net	United States with	Net	Japan with…	Net
Japan	-102.4	Japan	-30.1	United States	-30.1
United States	-243.6	Hong Kong	-243.6	Hong Kong	-102.4

Note: Calculations of the author.

Bilateral Absolute Trade Misinvoicing, US$ Billions

Hong Kong with…	Total	United States with	Total	Japan with…	Total
Japan	105.4	Japan	94.7	United States	94.7
United States	253.4	Hong Kong	253.4	Hong Kong	105.4

Note: Calculations of the author.

ENDNOTES

[1] In this paper, globalization refers to "economic globalization," characterized by the integration of economies into the global economy through trade and investments, international finance, labor flows, and diffusion of technology. There are other types of globalization, such as socio-cultural globalization and communication transformations, both contribute to economic globalization. See Bhagwati (2004) for an interesting exposition on economic globalization. In this paper, economic globalization is applied specifically to international trade.

[2] Social control refers to the actual or potential, and formal or informal, regulations on capital, covering societal norms and expectations on the use of foreign exchange, the extralegal or non-governmental exactions on the use of resources, government taxation, and the government's capacity to direct resources into productive endeavours engendering economic growth, which can be extended or reduced depending on the circumstances. See also Bowles and Gintis (1988) for a related discussion.

[3] Epstein (2005) presents recent comparative analyses of capital flight from developing countries.

[4] Recent approaches and empirical studies use the price-comparison or unit-values approach, as suggested by Gabrisch and Szalai (2002), Pak, et al. (2003), and de Boyrie, et al (2005).

[5] See also Gulati (1987), Boyce and Ndikumana (2001), and Beja (2007) for discussions on this formula. The standard CIF of 1.1 is used in the calculations. Note also that the calculations cover selected trade partners.

[6] See Goldfeld, et al. (1976), Sen (1992), and Trefler (1995) for some similar applications. Note that at the aggregated-level of data reporting (e.g., IMF's Direction of Trade Statistics), the cross-country trade misinvoicing results are equal. Thus, lower level of aggregation is useful to check for missing trade.

[7] There is no attempt to impute global trade misinvoicing for China. The estimates here are to be

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seen as indicative figures. The calculations cover Broad Economic Categories (BEC) for exported and imported commodities, as reported in the United Nations Commodity Trade Statistics. The BEC aggregate categories are BEC-1 food and beverages, BEC-2 industrial supplies, BEC-3 fuels and lubricants, BEC-4 capital goods, parts and accessories except for transport equipment, BEC-5 transport equipment, parts and accessories, BEC-6 consumption goods not elsewhere classified, and BEC-7 goods not elsewhere classified. Most studies on trade misinvoicing use manufacture trade data. See Appendix 1 for detailed results.

[8] The trade partners: Brazil, India, and South Africa representing the Southern Engines of Growth; Japan, United Kingdom, and United States for the Organization of Economic Cooperation and Development; Hong Kong, Singapore, and South Korea as the first tier Newly Industrializing Economies (NIE); and Indonesia, Malaysia, Philippines, and Thailand for second tier NIEs and the Association of Southeast Asian Nations. Detailed calculations are available from the author.

[9] See Beja (2007) for a balance of payments explanation of the various types of unrecorded capital flows.

[10] See Beja (2005) on how to calculate the cost of capital flight in terms of output and jobs.

[11] This proposal applies to international capital flows as well, including external borrowings.