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Global Value Chains: What Role for Aid for Trade?

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Background

The emergence and spread of Global Value Chains (GVCs) in the last three decades has given a multilateral dimension to the production process with more and more countries participating in producing a single final product. This increased fragmentation of production process across different countries and continents has added new dynamics to international trade. *Exporting more* can no longer be necessarily associated with *producing more*, and much less with *gaining more*. Relying on higher manufactured exports has long been seen by the policy-makers as a solution to many problems including deteriorating terms of trade for commodities, unemployment, low productivity and slow industrial growth. This necessarily arose from the guaranteed links between rising exports of manufactures and rising production activities generating higher employment. However, linking into GVCs is likely to have delinked exports from value-added production.

This issue of *Commonwealth Trade Hot Topics* highlights the features of Global Value Chains related to value-added production and trade, and points out the nature of development assistance programmes that would be most useful for capacity-constrained developing countries.

Given the rise of GVCs and integrated production processes, imports of intermediate products now play a much greater role. Many developing countries have consequently experienced a rise of manufactures in their total exports accompanied by a fall in the share of manufacturing value added in total value added (Table 1). Most of the fast growing developing countries experienced a steep rise in their share of manufactures in total exports, especially China which saw an increase from 30 per cent in the 1980s to 82 per cent in the 2000s, while its manufacturing value added as a percentage of GDP actually fell from 36 per cent to 32 per cent in the same period. Similar decline in relative significance of manufacturing value added accompanied by rise in exports has been experienced by Brazil, Kenya, Bolivia, Chile, Colombia, Ecuador, Mexico, Morocco, Peru, Philippines, Turkey and Venezuela.

Aid for Trade for increasing exports

The Aid for Trade (AfT) initiative was established with the objective of enhancing the participation of recipient countries in international trade, based on the premise that higher participation will increase their productive capacities bringing them gains linked to production activities. The two areas that have received highest aid for trade support are economic infrastructure, and building productive

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Table 1: Share of Manufactures in Total Exports and Total Value Added

	Manufacturing exports as a share of exports of goods and services (%)			Manufacturing value added (% of GDP)		
	1980-89	1990-99	2000-11	1980-89	1990-99	2000-11
China	30	80	82	36	33	32
Brazil	41	47	42	33	20	17
India	45	57	44	16	16	15
Mexico	26	64	74	23	21	19
Korea, Rep.	82	79	77	28	27	28
Philippines	18	46	72	25	24	23

Source: World Development Indicators and COMTRADE

capacity, while areas like trade policy and regulation and trade-related adjustment have received much lower attention. In 2011, out of the total AfT of US$33.1 billion, $17.7 billion was disbursed for economic infrastructure while $14.5 billion went to building productive capacity. Around 50 per cent of the total AfT went to transport and storage and energy sectors. Out of 169 countries, 21 per cent of total AfT went to the top four recipient countries (India, Vietnam, Afghanistan and Morocco), while another 9 per cent was 'unspecified bilateral'.

Although AfT aims at improving productive capacities as well as lowering the costs of trading so as to provide trade-related gains to the recipient countries, trade under GVCs makes it difficult to assess the extent to which these gains actually accrue to recipient countries. Nevertheless, 'linking into GVCs' *per se* is increasingly being considered as the new development challenge by policy-makers. Industrial policies are being reinvented in order to adjust to this new dimension of trade; and foreign direct investments are being encouraged to promote GVC linkages. However, very little attention has been given to measuring the distribution of total value created in GVCs among different countries, so that some meaningful assessment can be made on the extent to which recipient countries can gain.

It has been argued by many studies that distribution of gains is asymmetrical and biased towards countries that are at the upper end of GVCs. Most of these countries are developed countries that have competitive advantage in providing services like designing, branding, marketing, etc. Many studies have pointed out the 'smiley curve' in GVCs which shows the importance of services in GVCs is much higher than manufacturing activities. Further, linking at lower end in GVCs by exporting raw materials can be counterproductive for countries and may lead to 'hollowing-out' of the manufacturing sector — and countries may get stuck at the bottom, unable to climb up the value chain, and may continue exporting low-end and low-value added inputs, with lower gains in terms of domestic value addition.[1]

Governance of GVCs has also been a much discussed issue. Studies have pointed out that corporate control of the production process is far more profitable than manufacturing activity itself, which has led many developed countries' producers to become *lead firms* controlling the governance and distribution of rents. Maximum rents are derived by those lead firms which are active in providing pre-manufacturing services like research and development (R&D), designing, etc., and then post-manufacturing activities such as packaging, branding and marketing. The longer the value chains, the higher is the fragmentation of production processes and the higher are the rents for the lead firms. With greater trade being covered under GVCs, more developing countries, given the trends, are likely to be losing out on their bargaining power. This could be a probable reason why countries which participate more in GVCs are experiencing higher trade in manufactures but a fall in the share of manufacturing in total value-added production. From this perspective, any development assistance programme, especially like AfT, needs to be assessed against the kind of assistance required by recipient countries and in what part of the GVCs should this assistance focus so as to maximise the gains from trade for the recipient countries.

1 See Kaplinsky (2005) and Milberg (2009) amongst others.

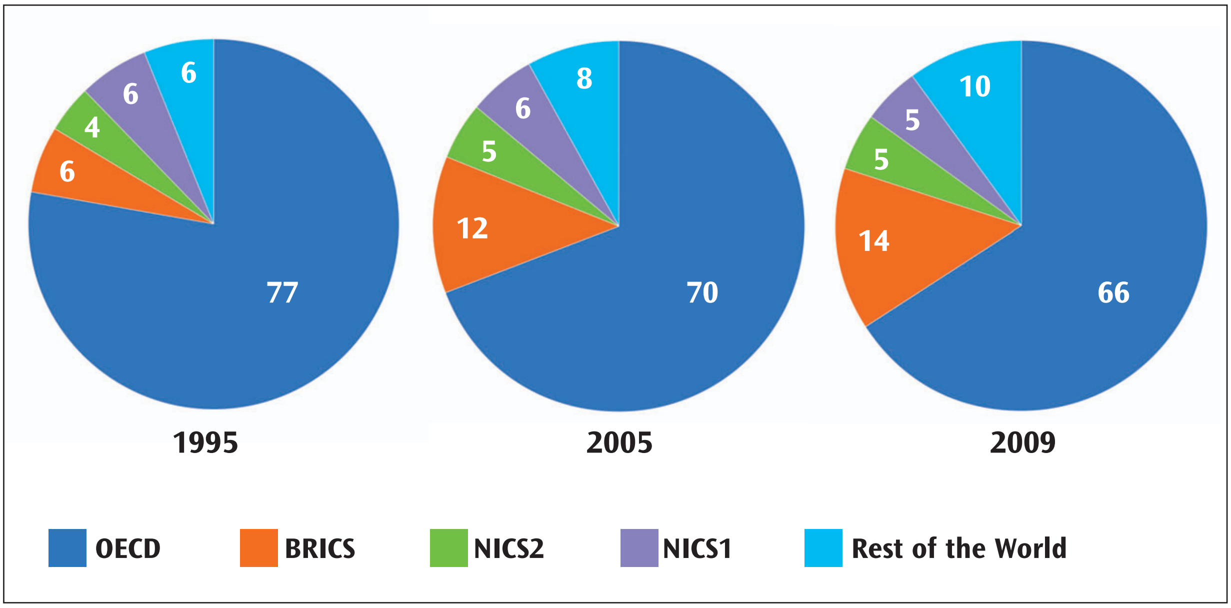
Measuring participation and distribution of value added created in GVCs

It has long been accepted that trade in products may not truly reflect the gains from trade and it is value-added trade which needs to be measured. However, paucity of consistent value added database has made it difficult to have any such measures. In May 2013, OECD-WTO released dataset on value added in exports for the years 1995, 1998, 2005 and 2009, for 58 countries including 34 OECD countries; the 5 BRICS states— Brazil, Russia, India, China and South Africa; newly industrialised Asian countries (NICs) — 8 countries; and for the category of the 'rest of the world' which comprises all developing countries excluding BRICS and NICs.

Using this dataset, one can estimate the distribution of total foreign value added created across different countries. For a particular country, especially a developing country, linking into GVCs could either be through forward linkages (where the country provides inputs into exports of other countries) or through backward linkages (where the country imports intermediate products to be used in its exports). Using this sequential production process *participation in GVCs* for a particular country can be measured as a sum of 'foreign value added in its gross exports' (backward linkage or imports of foreign value added) and its 'domestic value added which goes into other countries' gross exports (forward linkage or exports of domestic value added). Share of a country in total value added created by forward and backward linkages (i.e., summing over all countries) can provide a measure of extent of a country's participation and its relative gains in GVCs.

Figure 1 shows the distribution of global value added created by GVCs in 1999, 2005 and 2009. The share of OECD countries in total value added created is found to have declined from 77 per cent in 1995 to 70 per cent in 2005 and further to 66 per cent in 2009. The share of 'rest of the world' (ROW), which includes non-BRICS and non-NICs — which comprises all LDCs and developing countries in Africa, Latin America and other parts of the world — has increased from 6 per cent to 8 per cent and further to 10 per cent in these years. China's share has increased the most from 1.6 per cent to 6.9 per cent and then to 8.9 per cent, while the share of the USA has declined from 11.2 per cent to 9.1 per cent and further to 8.8 per cent. Focusing on the total value added created in 2009, it is found that 75 per cent of the total GVC value added went to OECD countries and China. Within OECD countries, the top five countries after the USA are Germany (9%), Japan, France, Republic of Korea and UK (with 4% each). The share of seven countries — USA, China and the above-mentioned five countries — is around 43 per cent.

Figure 1: Distribution of Value Added Created in GVCs (%): 1995, 2005 and 2009



Note: NICS1 comprises Hong Kong China, Republic of Korea, Taiwan, Province of China and Singapore while NICS2 includes Thailand, Malaysia, Indonesia and Philippines

Source: Author's calculation based on data from *OECD Stat and OECD-WTO Trade in Value Added, 2013*

Gains in terms of net value added in GVCs for top recipients of Aid for Trade

To assess the effectiveness of AfT in top recipient countries in terms of gains in net value added created by participation in GVCs, we compare the net value-added exports over time in these countries. However, higher participation in GVCs may not ensure higher gains. A break-up of forward linkages and backward linkages can provide a useful insight into the net gains that accrue to a country in terms of value-addition from its participation in GVCs. If gains are measured in terms of 'net value added', then the higher the forward linkages as compared to backward linkages, the higher are the gains. This would imply that by its participation in GVCs, a country is creating and exporting more domestic value added than the foreign value added which it is importing. The ratio of forward to backward linkage therefore can be a good estimate of the extent of net gains.

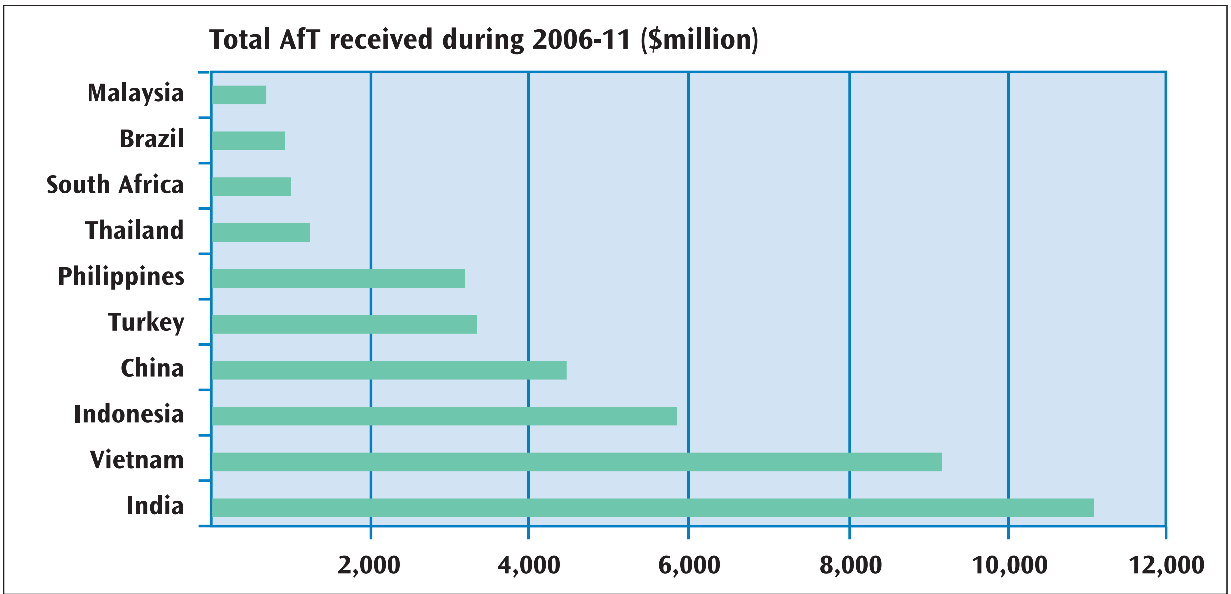
In terms of total AfT received from 2006 to 2011, the top 10 countries are reported in Figure 2 for which the corresponding data on value-added trade is available. India, Vietnam, Indonesia, China and Turkey together have received 20 per cent of total disbursed AfT.

Table 2 reports the ratio of forward to backward linkages for these selected recipient countries for which the data is available. Although there is a rise in value-added exports in these countries, the ratio has declined for India over time from 1.5 to less than 1, indicating the net value added loss by participation in GVCs, that is, India is importing more foreign value added in its exports as compared to its domestic value added that enters other countries' exports. Decline in net value-added trade by participation in GVCs is also seen in the case of Vietnam. India and Vietnam are the two biggest recipients of AfT. This indicates that AfT may not be either sufficient or effective. Indonesia and Malaysia have strengthened their net value added gains from their participation in GVCs, while China seems to have become weaker in terms of gaining out of its participation in GVCs. These results are in line with some of the results arrived at by some of the case studies. For example, case study for China shows that for Apple iPod, only $4 out of the total value of $150 can be attributed to producers located in China while most of the value accrues to the USA, Japan and South Korea (Kraemer et al. 2009). Countries which export primary inputs like raw materials will show higher than 1 ratio as their domestic value added entering exports of others will be higher than foreign value added in their exports, but in terms of participation (sum of forward and backward linkages) they will show much lower rate of participation (Banga, 2013).

Making AfT effective for value added gains in GVCs

The above analysis shows that in the era of GVCs there is a need to tailor development assistance in a way that would fit into the needs of the countries and help them in *gainfully linking into GVCs*. The objective of these development assistance programmes like AfT needs to be shifted away from merely *increasing trade and reducing trading costs* to enhancing the competitiveness of the countries so that they can gain in net value added terms. Higher value-added trade

Figure 2: Selected Recipients of AfT



Source: Based on the data obtained from the OECD CRS database (downloaded April 2013).

Table 2: Ratio of Forward to Backward Linkages

	1995	2005	2009
India	1.5	1.2	0.9
Vietnam	0.5	0.5	0.4
Indonesia	1.3	1.8	2.0
China	1.2	0.3	0.4
Turkey	1.2	0.7	0.7
Philippines	0.5	0.6	0.7
Thailand	0.4	0.5	0.5
South Africa	2.7	1.0	1.1
Brazil	2.2	2.0	3.0
Malaysia	0.4	0.7	0.7

Note: Forward linkage – Domestic value-added exports which enter other countries' exports.
Backward linkage – Foreign value added content in value-added exports of a country.
A ratio higher than 1 implies gains in terms of net value-added trade.
Source: OECD Stat and OECD-WTO TIVA, May 2013

should be able to deliver commensurating gains linked to increased production activities, generating employment, and improving productivity, etc.

At present, the focus of AfT assistance is on developing economic infrastructure to increase exports. Empirical studies show that doubling of AfT is associated on average with a 3.5 per cent increase in merchandise exports by the recipient countries (Laurent and Razzaque, 2011). However, interventions and aid are needed in developing particular economic infrastructures which help in increasing net value-added exports of the recipient countries.

One of the areas which has been largely ignored and receives very little AfT is the services sector. Participation in GVCs for developing and least developed countries can improve their gains if disbursement under AfT focuses on providing training programmes and developing skills of the workforce in the recipient countries. Strengthening services sector in terms of R&D services, banking and financial services, branding, packaging and marketing services can bring tangible gains to the recipient countries from their participation in GVCs. This will also help them in retaining the rents in GVCs, which at present seem to slip away from them into the hands of the lead firms due to improved import facilitation infrastructure.

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This Trade Hot Topic is brought out by the International Trade and Regional Co-operation (ITRC) Section of the Economic Affairs Division (EAD) of the Commonwealth Secretariat, which is the main intergovernmental agency of the Commonwealth — an association of 54 independent states, comprising large and small, developed and developing, landlocked and island economies — facilitating consultation and co-operation among member governments and countries in the common interest of their peoples and in the promotion of international consensus-building.

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8-9 April 2013: Consultative Meeting on Multilateral Trade Issues for Commonwealth Small States held in London, UK

4-8 March 2013: Commonwealth Workshop on Trade Policy and Negotiations Skills for the Eastern Caribbean Region held in Castries, St. Lucia

4-8 February 2013: Commonwealth Workshop on Trade Policy and Negotiations Skills for the Pacific Region held in Port Vila, Vanuatu

29-31 October 2012: Commonwealth Investment Guide and Promotion of the New Negotiator's Handbook for Developing Countries held in Port of Spain, Trinidad & Tobago

11-13 September 2012: South Asia Economic Summit (SAES V) held in Islamabad, Pakistan

7-8 September 2012: Istanbul Programme of Action for LDCs (2011-2020): LDC IV Monitor Expert Group Meeting held in Dhaka, Bangladesh

3-4 September 2012: Strengthening Competitiveness of South Asia through Regional Supply Chains — consultation workshop on leather and Leather products, held in Chennai, India

29-August 2012: A Commonwealth Roundtable with Prof. Joseph Stiglitz on 'Aid for Trade: Perspectives on Progress and Emerging Issues' held in Marlborough House, London

9-13 July 2012: A Briefing Session on Commonwealth Secretariat's Work Programme on International Trade, 24th WTO Geneva Week, held in Geneva, Switzerland

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Selected Ongoing Policy Research Projects

- Aid for trade in small states and Sub-Saharan Africa
- Trade and climate change issues for LDCs
- Rise of emerging developing countries and implications for Sub-Saharan Africa and small vulnerable economies (SVEs)
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- Development issues under EPAs
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