THE IMPACT OF
THE GLOBAL ECONOMIC CRISIS ON INDUSTRIALIZATION
OF LEAST DEVELOPED COUNTRIES

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Abstract

The author examines the impact of the external shock resulting from the recent global economic crisis on industrialization of least developed countries (LDCs). LDCs are marginalized in international trade and output, yet they are highly integrated into the world economy, suffer from structural weaknesses, balance of payments and fiscal constraints, and are dependent on production and exports of primary commodities and external sources of finance. The commodity boom of 2003-08 which allowed them to accelerate their GDP and MVA was followed by a "bust". Food and fuel importing LDCs, in particular, have suffered from both the "boom" and the "bust".

As a result of the decline in their exports, workers' remittances and external sources of finance, most LDCs have suffered from significant decline not only in their GDP and MVA, the closure of a number of their factories, thus resulting in unemployment, but also in their investment in production capacity

The exposure of their manufacturing sector to severe external competitive pressure (resulting *inter alia* from changes in the rules of the game on international competition), increased the need for nurturing their manufacturing sector. Yet, their policy space has diminished due to premature trade liberalization and "market-oriented" strategies imposed on them. As a result, despite the acceleration of growth in their MVA during the boom years, most LDCs have experienced increased de-industrialization compared to the situation in early 1980s.

The global economic crisis is a wake-up call for LDCs to reconsider their long-term industrial and development strategies. There is no "one-size-fits-all" strategy, but we have made, in this paper, some common as well as specific policy proposals for industrial development of various groups of LDCs. These countries still have some room to manoeuvre despite their loss of policy space. Further, in order to avoid the risk of human tragedy, particularly in Sub-Saharan countries we calls for changes in WTO rules and reconsideration of policies of International Financial Institutions (IFIs) towards LDCs, and resistance to the proposed Economic Partnership Agreements (EPAs).

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Executive Summary

The recent global economic crisis has been unprecedented since the great depression of 1929-32. The least developed countries have been affected by the crisis severely. Although they are not a homogeneous group, the LDCs have some common characteristics which make them extremely vulnerable to external shocks: they are marginalized in international trade and output, particularly for manufactured products; highly integrated into the world economy; suffer from structural weaknesses, balance of payments and fiscal constraints; and are mostly highly indebted and dependent on production and exports of primary commodities and external sources of finance. The commodity boom of 2003-08 allowed increases in national savings, investment and the acceleration of GDP and MVA of LDCs. Nevertheless, it was followed by a "bust" with detrimental impact on their long-term industrialization and development. Food and fuel importing LDCs, in particular, suffered from both the "boom" and the "bust"; the emergence of the economic crisis took place at the time they were facing high international prices of food and petroleum.

As a result of the global economic crisis, the prices of non-oil commodities and petroleum fell, from the peak to the trough, by over 36 per cent and 68 per cent respectively. Nevertheless, food prices did not fall as much as the prices of other commodities, and have instead picked up faster than other commodities after reaching a trough in December 2008.

It is projected that the growth rate of GDPs of LDCs as a whole will decline from 7.6 per cent in 2007 to 3.3 per cent in 2009. African and Island countries will be particularly affected, and so will the petroleum and mineral exporters be, some of which will show negative GDP growth in 2009. The demand for manufactures, in general, will suffer not only from the fall in exports but also from changes in domestic demand as a result of the decline in the rate of growth of private consumption, which is projected to fall by 3 per cent, for example, in Sub-Saharan African countries—most of which are LDCs. The decline in workers' remittances is another important cause of the decline in domestic demand for manufactured goods in many LDCs. For example, for six African countries, remittances were equivalent to more than 100 per cent of their total exports in

2007; the fall in the remittances is projected to reach over three per cent of GDP in some cases. A number of "manufactures exporter" LDCs will suffer, in particular, from the drop in their inflow of workers' remittances as they account for a significant proportion of their GDP. For example, in 2008, workers' remittances as a percentage of GDP reached over 27 per cent in the case of Lesotho, and 18 per cent, 17.8 per cent and 11 per cent in the cases of Haiti, Nepal and Bangladesh respectively. Moreover, what is axed more is investment which has detrimental effects on the growth of production capacity. The deterioration in the balance of payments and fiscal constraints has led to a reduction in financial resources available for investment, and thus cancellation of some projects and a significant drop in investment outlays. For example, the rate of growth of investment is projected to decline by over 12 per cent in Sub-Saharan Africa.

The combination of fall in external and domestic demand together with the increased exposure of the manufacturing sector of LDCs to competitive pressure in internal and international markets has led to the closure of a number of factories in the manufacturing sector of LDCs in Asia and Africa, causing unemployment. The increased competitive pressure has taken place mainly due to changes in the rules of the game on competition in the international market and premature trade liberalization, and the pursuance of "market-oriented" strategies imposed on the economies of LDCs by IFIs and bilateral donors. Changes in the global economy—including rapid technological change, globalization, new methods of production, and the emergence of China as a massive exporter of labour-intensive products—have increased the competitive pressure on the manufacturing sector of least developed countries, particularly on textiles and clothing which account for over two-thirds of their manufactured exports. Such changes have increased the need for nurturing the manufacturing sector in countries which are at early stages of industrialization. Yet, the policy space available to them has diminished. As a result, despite acceleration of growth in their MVA during the boom years, most LDCs have undergone de-industrialization since the early 1980s.

The global economic crisis is a wake-up call for LDCs to reconsider their long-term industrial and development strategies as the short-term counter-cyclical macroeconomic policy tools available to them are very limited. Some selective import restrictions under the "balance of payments" clause of the World Trade Organization

(WTO) and capital controls would be helpful, but not sufficient. Debt moratorium, debt forgiveness and other concessional financial flows are urgently needed to provide LDCs some temporary relief. But what is essential for the long-term development of LDCs is to increase their capacity to take the risk of external shocks and instability in export earnings. To do so, a different development and industrial strategy is required to diversify and upgrade their structure of production and trade.

We have argued in this study that there is no "one-size-fits-all" development strategy for LDCs as they include diverse economies despite their common problems. Accordingly, we have made some common as well as specific policy proposals as follows. First, the market is not the only tool of coordination of economic activities; there are roles for market, enterprises and government, the relative importance of which should change during the process of industrialization and development. At early stages of development, the government's role is crucial; thus, the capacity of the government machinery for formulation and implementation of policies should be strengthened. As the country develops, the relative role of market and enterprises increases and that of the state should decrease.

Secondly, highly-populated countries have a better chance of pursuing trade and industrial policies on their own; landlocked and smaller countries, which are in proximity to each other, may enter into industrial collaboration and production sharing and follow joint industrial policies. In both cases there is need for a dynamic, flexible and targeted industrial policy based on the principle of dynamic, rather than static, comparative advantage.

Thirdly, the development of a competitive industrial structure also requires development of the agricultural sector—where feasible—in order to enhance the supply of food, particularly noting that international food prices seem likely to remain high in the future.

Fourthly, foreign direct investment (FDI) in general, and in export processing zones (EPZs) in particular, should be managed, controlled and targeted in order to serve the objectives of industrialization and development of the home country. Control of capital flows in general should be a part of long-term development strategy.

Finally, remote Island countries which depend on tourism may consider following a policy consisting of foreign reserve management and specialization in various types of tourism. For example, some may specialize in sports tourism, others in health tourism, luxury tourism, academic tourism etc. Further, they may invest in areas which provide backward linkages to the tourism sector such as food processing etc. They may also get involved in production sharing in cases where they are in proximity to each other (e.g. some Asian Pacific Islands).

There are some constraints, imposed through WTO rules, on implementation of the industrial policy proposed above, but LDCs still have room to manoeuvre. They should, however, resist further loss of their policy space through the WTO and especially Economic Partnership Agreements (EPAs). IFIs also should reconsider their policies towards LDCs. The alternative is not only underdevelopment, but also the risk of human tragedy, particularly in Sub-Saharan countries where the masses of people are facing extreme poverty, AIDS and malnutrition.

I. Introduction

The recent financial crisis has led to a widespread and severe global economic crisis, which has been unprecedented since the Great Depression of the late 1920s. According to WTO, the volume of world merchandise trade will decline by 9 per cent in 2009 after its growth rate had declined from 7 per cent, on average, during 2006-07 to 2 per cent in 2008 (WTO, 2009). The forecast by the IMF is even more on the downside predicting a drop of 11 per cent for the volume of world trade in merchandize goods and services and 14.6 per cent for their prices. The prices of petroleum and non-fuel primary commodities, which are the main exports of LDCs, are predicted to decline by 46.4 per cent and 27.9 per cent in 2009 as compared with 2008, in the second half of which the prices had already fallen from their peak (IMF, 2009.b). In fact, according to OECD, during the first quarter of 2009 the volume of imports of G7 countries (industrialized countries), which are the main market for LDCs, dropped by 16.8 per cent on a yearly basis (OECD, 2009).

While all countries, whether developed or developing, have been affected by the crisis, least developed countries have been hit hardest as they are the weakest among the community of nations because of their low capacity to bear the related external shocks. They have been vulnerable and fragile due to their weak economic structure, high integration into the world economy, dependence on primary commodities and foreign financial flows, and, in most cases, high indebtedness. Further, they had to bear the external shock resulting from global depression at the time most of them were suffering from the food and fuel crisis.

Their manufacturing sector in particular is fragile because of its infancy, de-industrialization resulting from the liberalization of recent decades, and the sector's lack of supply capacity and competitiveness in internal and international markets, where the rules of the game on competition have changed. Changes in the global economy—including rapid technological change, globalization, new methods of production, trade liberalization, and the emergence of China as a massive exporter of labour intensive products—have increased the competitive pressure on the manufacturing sector of least developed countries. In particular, the clothing industry which account for over two-thirds of exports of manufactured goods of LDCs has been hit hard by the competitive pressure from Chinese exports.

The commodity boom of 2003-08 provided LDCs with an opportunity to boost investment and enhance economic growth after decades of slow growth, marginalization from the world economy (in terms of their share in world trade) and, in some cases, de-industrialization. The economic crisis, however, halted their acceleration of growth and industrialization. The crisis not only has a detrimental impact on the current economic performance of LDCs, but it will also influence the prospects for their industrialization to the extent that it affects their investment negatively. The crisis, however, provides a wake-up call for LDCs to rethink about their future development, diversification and thus trade and industrialization strategies. They should be prepared for the management of "boom and bust", particularly the use of resources during the boom, in case the commodity boom re-emerges in the future.

To proceed, we will discuss, in the following section, the structural weakness of LDCs and their vulnerability to external shocks. The third section is devoted to explanation of the implications of changes in the global economy and new forms of competition for the industrialization of LDCs. Subsequently, in the fourth section the mechanism of transmission of the global financial and economic crisis to LDCs will be taken up, and assessment will be made of its possible impact on development and industrialization of these countries. The fifth section is allocated to the analysis of short- and long-term strategies and policies required for the acceleration of industrialization of LDCs and related constraints. The final section will conclude the study.

II: Structural features of LDCs: their fragility and vulnerability to external shocks

1. Main features

Least developed countries are marginalized in international trade (in terms of their share in world trade), particularly trade in manufactured goods. Their low weight in international trade, their structural weaknesses and heavy dependence on foreign trade and finance make them extremely vulnerable to external shocks. Their manufacturing sector is in particular vulnerable not only because of its infancy, but also because of its reliance on the primary sector for the provision of foreign exchange and sources of income. Through its supply effects, the primary sector contributes to the supply of imported capital goods and intermediate products required for capacity expansion and

utilization. Through its income effect, exports of primary commodities contribute to generation of domestic demand for industrial products.

Least developed countries accommodated over 800 million people, i.e. over 12 per cent of world population in 2007. Yet, they account for less than one per cent of total world trade, about 0.1 per cent and 0.3 per cent of international trade and output of manufactured goods in 2007 respectively.[1] They are not homogeneous in terms of the size of population, structure of production and exports, the degree of integration into the world economy, the degree of indebtedness etc (Tables 1 below, and A.1 and A.2 in the Annexe). Nevertheless, they are all common in their vulnerability to external shocks and their low capacity to take related risks. Such vulnerability is related mainly to their structure of production and income, which causes a low level of development and industrialization, as well its related fiscal and balance of payments constraints.

Table 1: Main characteristics of various groups of LDCs (2006)**

Exporting groups	No. of coun-tries	Popu-lation (m)	MVA/ GDP (%)	Exports (US$ millions)	Manu-factured exports/ Total exports (%)	Exports/ GDP (per cent)	Imports/ GDP (per cent)	(Export - Imports)/ GDP (per cent)	Accu-mulated debts/ GDP*	Debt service/ exports*
Petroleum & natural gas	8	197.1	5.94	58,894.3	5.55	41.64	32.86	8.78	43.83	5.75
Other Minerals	9	88.8	8.49	10,699.7	6.48	25.21	36.59	-11.38	66.57	9.09
Agriculture	10	107	8.48	4,408.9	10.11	25.81	44.90	-19.09	100.76	12.38
Manufactures	7	209.8	11.60	18,259	68.09	30.64	64.34	-33.69	44.05	5.95
Services	12	139.4	6.43	3,297	6.66	30.15	57.61	-27.45	85.82	8.97
Diversified	4	43.5	14.45	3,736	31.50	31.25	42.29	-11.04	54.20	8.23
All LDCs	50	785.6	9.23	99,294.9	21.40	30.78	46.43	-15.65	65.87	8.40

Notes: * 2005
** Figures are simple averages, so they do not correspond to those of Table 17.
Source: Table A.1 given in the Annexe.

The majority of LDCs show a low share of manufactured goods in their structure of production and exports; for 33 LDCs, the share of MVA in GDP is well below 10 per cent and for 30 countries the share of manufactured goods in total exports is also less than 10 per cent (Tables 2 and 3). In other words, they, particularly African LDCs, are highly dependent on production and exports of primary commodities (see Table 18). Even in the case of the handful of countries which are referred to as "manufactures exporters", the structure of production and exports is concentrated in one or two labour intensive, low technology intensive items. For example, according to the latest available data, in the case of Bangladesh, which is the largest exporter of manufactured goods among LDCs, textiles and clothing accounted for 44 per cent of MVA in 1995 (Word Bank, WDI, 2009, Table 4.3); and for nearly 95 per cent of its exports of manufactured goods in 2006 (Based on UNCTAD, 2008, Tables 3.1 and 3.2.D).[2] Similarly, the readily available data for 2003 indicate that exports of textiles and clothing constitute over 85 per cent, 84 per cent, 70.3 per cent, 51 per cent, 41 per cent, 32 per cent and 32 per cent of total exports of Cambodia, Haiti, Lesotho, Nepal, Laos, Madagascar and the Maldives respectively (UNCTAD, 2005, Table 5). Generally speaking, textiles and clothing accounts for over 70 per cent of exports of manufactures from LDCs (UN, COMTRADE database).

2. Fiscal and balance of payments constraints

The combination of a low level of development and rigid production structure imposes both fiscal and balance of payments constraints on most LDCs; in other words, (non-oil) primary commodities provide low and unstable sources of the income and foreign exchange necessary for investment and industrialization. The average *per capita* income of LDCs in 2006 was US$462. But when oil-exporting countries and Island countries are excluded, the average reduces to $398 for African LDCs and $339 for Asian ones. Furthermore, in the same year 23 countries (22 African and one Asian), out of 35 (excluding oil-exporting countries and Islands), show *per capita* income of less than $266 a year or $1 a day in the same year.[3] At such a low level of income, when the household consumption (which is in any case below subsistence level for many citizens) is deducted from *per capita* income, little is left for financing government expenditure for public administration, social services and investment as well as repayments of debts. For

example, for 28 countries (18 of which are in Africa), the resulting figure is less than $100 *per capita* per year, and for 15 countries it is less than $50 a year.

Table 2: Percentage Share of MVA in GDP of LDCs (2005-06)

MVA/GDP (per cent)	Asia		Africa		All LDCs	
	No	per cent	No	per cent	No	per cent
Less than 5	5	38.5	8	23.5	13	27.7
5-10	5	38.5	15	44.1	20	42.6
10-15	-	-	7	20.6	7	14.9
15-20	2	15.4	4	11.8	6	12.8
20-21	1	7.6	-		1	2.1
Total	13	100	34	100	47	100

Source: Calculated by the author, based on UNCTAD (2008.b), Table 3.

Table 3: Share of manufactured goods in exports of merchandise goods and services of LDCs (2003-05)

Range (per cent)	Number of countries	Cumulative
Less than 3	12	12
3-5	5	17
5-10	12	29
10-15	5	34
15-20	4	38
Greater than 20	9	47
Countries with their share greater than 20 per cent	Senegal (26.6), Samoa (36.9), Laos (32.4), Nepal (47.85), Bhutan (47.6), Lesotho (69.3), Cambodia (73), Haiti (70), Bangladesh (80.6)	

Note: Tuvalu and Togo are not included.
Source: Calculated by the author, based on UNCTAD (2008.b), Table B.

Of course, such a low level of sources of finance available for public administration, investment and debt repayments is due to the low level of *per capita* income which is, in turn, a reflection of the low productive capacity of LDCs. The low and inflexible productive capacity also causes the balance of payments constraint, with high current account deficits in relation to GDP (Table 1) because of the need for imports of investment goods, intermediate goods, fuels and such consumer items as foods. As is shown in Table 1, with the exception of oil-exporting countries, all groups of LDCs, particularly manufacture exporting countries, show considerable balance of payments deficits in 2006, i.e. before the emergence of the financial crisis. Furthermore, the more integrated a production group is in the international economy, in terms of the exports/GDP and imports/GDP ratios, particularly the latter, the higher are its current account deficits. In other words, there is a direct relation between the degree of LDCs'

integration into the world economy, influenced by premature trade liberalization (see below), and balance of payments constraints.

3. The food and fuel crisis preceding the global economic crisis

The food and fuel crisis has contributed to the balance of payments constraints of many LDCs before the outbreak of the economic crisis. The available data on imports of food and fuels indicates that already in 2002, for 21 LDCs (out of 32 countries for which data were available with the World Bank) the share of food and fuel imports was over 50 per cent of their total merchandise exports. In fact, 11 of them spent the equivalent of 100 per cent of their exports on imports of food and fuel (Karshenas, 2009, Figure 10). Since then, the food and fuel crisis has absorbed increasing amounts of foreign exchange. For instance, on the basis of UNCTA sources in 2006, 36, out of 50 LDCs, were net food importers. The explosion of food prices (see below) increased the import food bill of these countries by 2.4 times between 2000 and 2006 (based on UNCTAD, 2008.b, Tables 10 and 30). In 2006, imports of food products were, on average, equal to 72 per cent of exports in 19 net food importing LDCs (of which 13 were African). These countries were also net importers of agricultural raw materials. In 10 cases[4] food imports exceeded 100 per cent and in another six countries it was between 50 per cent and 100 per cent of total merchandise exports.

4. Dependence on external sources of finance

As a result of fiscal and balance of payments constraints, most LDCs, particularly non-oil exporting countries, have to rely heavily on external sources of finance for government expenditure, capital accumulation and imports (Table 4). As LDCs have little creditworthiness in the international capital market, they have to finance the current account deficits of their balance of payments by official flows, mainly foreign aid. For example during 2004-06, official flows (excluding debt relief and grants), FDI, and private borrowing respectively accounted for 61.8 per cent 35.3 per cent and 2.2 per cent of long-term capital flows to LDCs (Based on UNCTAD; LDC Report, 2008.b). The African LDCs, in particular, were dependent on foreign aid for financing investment. In 2006, foreign aid accounted for over 17 per cent and 10 per cent of GDP of African non-

oil exporting LDCs and Asian LDCs, respectively. It was equivalent of about 90 per cent and 20 per cent of their investment outlays, respectively (Kaeshena, 2008; Figures 20 and 21 based on World Bank, WDI).

Table 4: External resource gap as a percentage of gross domestic investment and government consumption expenditure in non-oil exporting LDCs

	Per cent of Govt. expenditure		Per cent of total investment	
	2000-04	2004-07	2000-04	2004-07
African LDCs	94.1	80.8	94.2	81
Asian LDCs[a]	32.1	39.8	29.3	35.5
Island LDCs	109.1	98	108.9	97.4

Note: a: includes Yemen which is an oil-exporting country.

Source: Karshenas (2009: Table 4), based on World Bank, WDI.

Table 5: Distribution of LDCs according to their degree of indebtedness and access to oceans

	Highly indebted		Others (not highly indebted)		**Total LDCs**	Memo: Total landlocked
	Total	Landlocked	Landlocked	Not landlocked		
Africa	**27**	10	**1**	**5**	**33**	11
Asia	**2**	2	**2**	**4**	**8**	4
Islands	2	-	-	**6**	8	-
Total	**31**	12	**3**	**15**	**49**	15

Note: Total LDCs is the sum of columns 1, 3 and 4.
Source: Calculated by the author based on (UNCTAD, 2008.a).

The inability to pay back debts easily causes more vulnerability as obtaining further loans becomes increasingly difficult; accumulated debts accounted, on average, for nearly 66 per cent of GDP of LDCs in 2005. Thus, the low level of development and shortage of financial resources are aggravated by obligation for payments of debt services limiting the availability of funds for investment and contributing to the high cost of investment, production and exports. As shown in Table 5**,** 31 countries (mostly African) out of 49 LDCs are among highly indebted countries, out of which 12 are also landlocked.

High interest rates reflect shortage of funds. They contribute to high costs of production, particularly in the manufacturing sector which usually depends on fixed capital formation and variable capital more than other sectors. Out of the 42 non-oil exporting LDCs, 27 are regarded as high interest rate countries by the World Bank (Table 6). High interest rate countries are those with real interest rates higher than 6 per cent. Accordingly, various groups of countries (Island, land-locked and highly-indebted countries) figure among high interest countries. Nevertheless, the majority (16 out of 27) are among highly indebted countries and/or landlocked ones (10 landlocked, out of which seven are also highly indebted).

Table 6: Interest rates in different LDCs (2004-06)

Interest rates (per cent)	No. of countries	Countries in order of interest rate level
Higher than 20	2	Gambia (I, H), Haiti (I, H)
15-20 per cent	5	Laos (L), Sao Tome & Principe (I), Angola, Malawi (L, H), Central Af. Rep. (L, H)
10-15	5	Maldives (I), Mozambique (H), Uganda (L, H), Cambodia, Madagascar (H)
8-10	6	Bhutan (L), Burundi (L, H), Zambia (L, H), Comoros (I, H), Bangladesh (H), Sierra Leone (H)
6-8	9	Lesotho (L), Djibouti, Liberia (H), Tanzania (H), Solomon Island (I), Mauritania (H), Rwanda (L, H), Vanuatu (I), Samoa (I)
Total	27	

Source: Based on UNCTAD (2009.b), Table 8; World Bank source.

The landlocked countries suffer in addition from the higher cost of transportation for their exports and imports, including imported inputs for manufacturing sector, more than other countries. In addition, imported and exported goods must pass through other countries, which themselves are mostly among least developed ones, particularly in Africa. Such a transport route involves other disadvantages for production and exports of landlocked countries. These disadvantages include administrative burden of transit across countries, lack of control over the quality of infrastructure and passage of cargos and unreliability of transit transport (Serieux, 2009: 5)**.** In fact, these constraints are, in turn, contributory factors to the lower *per capita* income of landlocked countries than their non-landlocked neighbouring countries (Ibid.: 5-6). Even though they may show higher trade/GDP ratios, they suffer from greater volatility in their output and exports (Ibid.: 6) thus facing higher risks of production and investment.

Low supply capacity is the main reason for low capacity for exports of manufactured goods. The commodity boom of 2003-08 provided an opportunity for the expansion of the supply capacity, but it was interrupted by the global economic crisis which led to a "bust" as discussed in the fourth section.

III. Changes in the global economy and new forms of competition: implications for industrialization of LDCs

The development of new methods of production and other changes in the global economy during recent decades have increased the competitive pressure on manufactured exports of least developed countries. As a result, while the incentive for investment has been reduced, its risks have increased. Hence, the need for the provision of government support for industrialization in LDCs, particularly through trade and industrial policies, has increased. Yet, the means to do so have been constrained. The policy space of developing countries has shrunk due to the rapid trade liberalization and other conditions imposed on them by IFIs, through Structural Adjustment Programmes (SAPs) and Stabilization Programmes (SPs), bilateral trade agreements and WTO rules. If the proposals made by the European Union (EU) to impose further liberalization measures through EPAs on African, Caribbean and Pacific (ACP) countries, most of which are

least developed, are agreed upon, the industrialization and development of these countries will be further sacrificed.

1. New methods of production and competition

The possibility for entry of new firms of newcomer developing countries into the world market has become more complicated in recent years. On the one hand, trade liberalization through the Uruguay Round, the EU's Everything But Arms (EBA) arrangement and the African Growth and Opportunity Act (AGOA) in the USA have provided new opportunities for exports of LDCs by improving market access to developed countries. On the other hand, changes in the rules of the game for competition in international markets together with prevailing constraints on the expansion and upgrading of supply capacity put competitive pressure on LDCs. In particular, a few main developments have taken place making entry of newcomer firms into international markets more difficult. These developments are: rapid technological change, increase in market concentration and dominance of transnational corporations (TNCs) in production and international trade, increases in the scale of production, distribution and research and development (R&D) in most industries, globalization, production sharing and development of other new methods of production and competition. Furthermore, the emergence of China as a massive exporter of labour-intensive products puts intense competitive pressure on LDCs in the international market for manufactured products of interest to least developed counties.

The increase in technology intensity of production and distribution and the rapid pace of technological change itself contributes to knowledge intensity and the need for a larger scale of production in most export activities in the manufacturing sector (Arthur, 1996). As a result, the process of learning and experience and the need for R&D are increased.

In fact, to reap economies of scale at the firm level, there has been a significant and unprecedented acceleration of mergers and acquisition during recent decades, particularly since early this century, as is shown in Table 7. Furthermore, TNCs have been more and more concentrating on specialization in core products in order to benefit from scale economies both at the plant and firm levels. Instead of vertical integration

within a country they have organized production sharing with other countries through their own subsidiaries or in cooperation with other firms. To provide some ideas about the scale of firms at the global level, in 2006, the total value of assets of the individual companies, among the biggest 100 TNCs ranged from US$50 billion to nearly $700 billion, as is shown in Table 8. Moreover, their foreign affiliates account for the bulk of assets and sales of many TNCs.

Table 7: Annual average cross-border mergers and acquisitions with value of more than $1 billion (1987-2007)

Period	No. of deals	Value ($ billion)
1987-96	29.3	60.7
1997-99	107	377.8
2000-04	127.6	438.2
2005	182	564.4
2006	215	711.2
2007	300	1,161

Source: Based on UNCTAD (2008.c), Table 1.2.

Table 8: Assets and sales of non-financial TNCs in 2006

Rank[a]	Firm	Industry	Assets ($b.)		Sales ($b.)	
			Foreign	Total	Foreign	Total
1	General Electric	Electronic	442	697	74	163
10	Wal-Mart	Retail	110	151	77	344
25	Procter & Gamble	Diversified	64	138	44	76
50	Unilver	Diversified	34	48	45	49
75	Metro	Retail	23	42	41	75
100	Statoil ASA	Petroleum	18	50	16	66

Note: [a] : By foreign assets in 2006.
Source: UNCTAD (2008.c), Table A.l.15.

The presence of TNCs "creative destruction" is a source of competitive process, competitive advantage and cumulative change. Competition does not take place on the cost of production alone and products are not homogeneous. The competitive advantage of TNCs also depends on their strategic behaviour in gaining and maintaining, or improving, their strategic position over time (Porter, 1990; Best, 1990). Globalization and the development of new ways of organization of firms have led to new forms of competition, putting least developed countries at a disadvantage. Globalization, here, refers to the development of global networking in the form of production sharing, international consortia, cross-licensing agreements and joint ventures (Best, 1990: 260). A global firm produces and sells in many nations in order to benefit from economies of scale. Moreover, it collaborates with other firms to share activities such as production facilities, marketing, distribution, input procurement, product development and design at the global level without necessarily investing abroad directly (Ibid.: 256-262). Despite their strategic alliances, however, collaborating firms also compete in the final market. In a world of increasing returns, the current behaviour of established firms affects not only the current, but also future, situation of newcomer firms in the same industry (Young, 1928).

In such a Schumpeterian world, the established large firms pursue an innovative strategy which relies on large fixed investment, knowledge, new technology, skilled labour and organizational capabilities and experience (Lazonic, 1991). Firms of least developed countries do not have such privileges and capabilities; thus they need to follow "an adaptive strategy" by relying on low costs of production emanating from factor cost advantages (cheap labour). As they are factor driven, the firms of least developed countries, particularly the newcomers, face less "productive uncertainty" (related to the internal operation of a firm). Nevertheless, they face more "competitive uncertainty"—thus risks—than the established firms of developed and developing countries which are their actual or potential rivals in the international market.

Flexible specialization is another form of new organization of firms for competition. In globalization, firms compete mainly on strategic behaviour and cost of production through production sharing and networking, economies of scale and mass production. In flexible specialization the emphasis is placed on innovation and rapid

adaptation to changes in the market. Here, firms compete mainly on differentiated products, speedy production and delivery time and cost reduction through capacity utilization by employing multi-use equipments and skilled manpower. In flexible specialization, firms may also collaborate with each other through clustering (UNIDO, 2008), regional conglomeration, federated enterprises and technological alliance. While there are some differences between the two methods, there are also some similarities. Integration through globalization requires, *inter alia*, large amounts of capital, sophisticated technology and strategic planning. Flexible specialization requires sophisticated technology, highly-skilled labour and strategic thinking. In both cases, knowledge and experience are important due to the need for sophisticated technology, strategic action/thinking and/or high skills.

Hence, the process of learning can be prolonged and become more costly due to these new forms of competition in addition to other reasons mentioned above. Moreover, in both cases, attempts for networking and collaboration usually take place among established firms. As a result of the combination of rapid technological change, increased scale of production, globalization, and the resultant rapid changes in the conditions of competition, the late-comer firms and countries are at a disadvantageous position for penetrating the international market in terms of cost, learning period, skill and organizational capabilities, the period of infancy, and the risk of success in the expansion of supply capacities. The contribution of FDI to capacity building is also limited by domestic capabilities. Even when a newcomer enters the international market for some labour-intensive products, with or without the assistance of TNCs, it will have serious constraints for upgrading its industrial structure, as indicated by the case of Bangladesh and other “manufacture exporting” LDCs.

The greater risks involved imply that newcomer firms should be provided with greater rewards than what would be provided by the market. Such rewards can be provided by the government by taking measures which contribute to increasing the profit margin of infant firms through reduction in their costs or through increases in their revenue per unit of output. These measures may include a combination of investment in activities which provide external economies to the manufacturing firms and policies, particularly trade and industrial, which provide them with incentives.

In practice, there are constraints on both. Investment in infrastructure, education and training, back-up services, R&D and technological development and provision of information on external markets, marketing channels etc., are examples of activities which provide externalities to the firms. Such investment, however, requires significant financial resources which are lacking in LDCs. More importantly, conditionalities imposed on LDCs through SAPs and SPs reduce government revenue from trade taxes and limit their public expenditures because of the pressure to limit budget deficits. The global economic crisis is also an additional detrimental factor for government budgets. Similarly, the incentive to invest has decreased during recent decades since the early 1980s due to the premature, universal and across-the-board trade liberalization imposed on LDCs through those programmes, or through the WTO or bilateral trade agreements. And WTO rules have also imposed costs of compliance, putting further financial pressure on LDCs.

2. Costs of compliance with WTO rules

Least developed countries also suffer from high costs of compliance with WTO rules, some of which also contribute to increasing the costs of production and upgrading their production structures. Such costs are related to their obligations under TRIPs (Agreement on Trade-Related Intellectual Property Rights) and other international agreements on intellectual property rights (e.g. the World Intellectual Property Organization), which are sometimes aggravated by bilateral free trade agreements (Smith, 2008). TRIPs restricts the application and transfer of technology to developing countries as it renders patents protected for 20 years. The use of technology through licensing, even when awarded, involves high costs in the form of royalty payments. Technology for production of most light manufactured goods is embodied in capital equipment and is available through purchase of machinery. Nevertheless, the application of technology and penetration into international markets need knowledge and experience which are lacking in least developed countries. Moreover, the technology for the upgrading of the industrial structure is not freely available due to restrictions imposed by intellectual property rights. The implementation of a number of WTO agreements is highly costly and requires both physical and skills development. According to one estimate, the costs of implementation

of "just three WTO Agreements [Customs Valuation, Sanitary & Phytosanitary Regulations and TRIPs] of the six Uruguay Round Agreements that involve restructuring of domestic regulations, come to about $150 million [in 2000 prices] … [which] is more than the annual development budget for eight of twelve least developed countries for which we could find a figure for that part of the budget".[5]

Of course, meanwhile a newcomer firm, in theory, enjoys a lower cost of obtaining the necessary inputs and intermediate goods from the international market due to trade liberalization. In practice, however, this would depend on the availability of the foreign exchange which in turn would depend, *inter alia*, on the supply capabilities of the country for the expansion of exportables, which is affected by premature liberalization negatively as will be shortly explained. But the risk of investment in the supply expansion for exports and upgrading has also increased because of the fierce competition from China in the international market.

3. The emergence of China

The emergence of China has intensified competition in the international market for manufactured goods including labour-intensive products, which are of interest to LDCs for a number of reasons. First, the relative magnitude of exports of manufactured goods of China in relation to exports of other developing countries is significant, particularly when Hong Kong China is included (Table 9). In 2006, exports of manufactured goods of China alone were over 50 times greater than exports of these goods from LDCs as a whole. Secondly, such a magnitude was achieved as China accelerated its exports of manufactured goods to an annual average growth rate of over 26 per cent during 2000-06 (Table 10). In 2006, manufactured goods accounted for over 92 per cent of the total exports of China.

Thirdly, light manufactured goods, which are mainly labour intensive, account for a significant part (nearly 44 per cent) of exports of manufactured goods of China, the pace of which also accelerated sharply during 2000-06 (Table 10). China's exports of textiles and clothing, which are the LDCs' main manufacturing exports, as mentioned before, have particularly accelerated during recent years due to the removal of quota restrictions through the Multi-Fibre Arrangement (MFA) (Table 11).

Table 9: Export of manufactured goods of China and Hong Kong China as a percentage of exports of manufactured goods of various groups (2006)

	China	China plus Hong Kong
World	10.8	14.4
Developing countries	31.7	42.4
Developing countries excluding China	42.3	56.4
Developing countries excluding China & Hong Kong China	49.2	65.7

Source: based on UNCTAD (2008.a, Table 3.1).

Table 10: Importance of manufactured goods in total exports of China (2006)

	Exports (2006)		Average annual growth rate of exports (per cent)	
Products:	Value ($ bn)	Share (%)	1995-2000	2000-06
Light manufactured[a]	392.4	40.5	8.2	21.1
Total manufactured	893.4	92.2	12	26.3
Total exports	969	100	10.8	25.4

Note: [a]: SITC 6+8-(667+168).

Sources: Same as Table 9.

Finally, while assembly operations still constitute the bulk of industrial plants of China, the country has also developed the capabilities of domestic firms in production of a number of technology-intensive products (Gallagher and Shafaeddin, 2009). In other words, the country is pioneering in upgrading its industrial structure by rapid increases in the value added in production and exports of technology-intensive goods. Therefore, LDCs are not only facing severe competition from China in international markets for clothing and other light manufactured goods, but also will be subject to fierce competition in case they attempt

to upgrade their structure of exports. As a result, their risks of investment in these activities have increased for this as well as the other reasons mentioned earlier. Yet their policy space to cover their risks has decreased due to the premature trade liberalization imposed on them.

Table 11: China's trade in textiles and clothing (1992-2008)

Product	Value ($ bn)			Average annual growth rate	
	1992	2000	2008	1992-2000	2000-08
Exports					
Textiles	9.4	17.2	67.3	6.2	20.4
Clothing	16.8	36.1	120	9.2	18.7
Imports					
Textiles	9.7	14.4	20.1	4.9	6.1
Clothing	0.4	1.2	2	12.8	6.3
Net trade (exports minus imports)					
Textiles	-0.3	2.8	42.1	-	40.3
Clothing	16.4	34.9	118	9.9	16.5

Source: Calculated by the author based on UN Comtrade database.

4. Trade liberalization and de-industrialization

i. De-industrialization

Since the early 1980s, the dominant economic philosophy and strategy of international financial institutions vis-à-vis developing countries has changed in favour of market-oriented development, trade liberalization and export-oriented industrialization. Since then many LDCs have been de-industrialized.

LDCs are at the early stages of industrialization. One would expect, based on the experience of other countries (Chenery and Syrqin, 1985), that the share of MVA in their GDP should have increased during the last couple of decades. In previous studies we

have shown that premature trade liberalization during the 1980s and early 1990s was accompanied with the de-industrialization of most LDCs (Shafaeddin, 1995 and 1996). For the following period during which trade liberalization has been intensified, de-industrialization has been also intensified. Taking the MVA/GDP ratio as an indicator of the degree of industrialization, Table 12 indicates that, on average, the ratio has declined between 1990 and 2006, influenced mainly by the performance of African LDCs. Nevertheless, the average figures provided in Table 12 for Asia are misleading as they are heavily influenced by the performance of Bangladesh, Cambodia and Laos. When these countries are excluded, the share of Asian LDCs declines from 12.9 per cent in 1990 to 10 per cent in 2006. Furthermore, de-industrialization seems more pronounced in countries which are, relatively speaking, at earlier stages of industrialization. Thus 36 per cent of countries which show decrease in MVA/GDP ratios, over the same period, figure among those with MVA/GDP ratios of less than 10 per cent in 2005-6 (based on Tables 12 and 13). According to the same tables, the corresponding figure for countries which show an increase in the ratio is 29 per cent. Yet more, out of 24 countries which do not show a decline two countries, show no change (Eritrea, Sao Tome and Principe), and 14 countries depict marginal changes of 0.1 per cent (Djibouti, Ethiopia, Gambia, Haiti and Madagascar), 0.2 per cent (Guinea and Togo), 0.3 per cent (Somalia and Sudan) and 0.6 per cent to 0.9 per cent (Uganda, Tanzania and Yemen). Such small changes during more than a decade cannot be regarded as progress in industrialization.

The increases in the MVA/GDP ratio cannot be necessarily attributed to trade liberalization either. Countries with noticeable increases in MVA/GDP include, in order of increase in the ratios, Cambodia (10.6 per cent), Equatorial Guinea (9.3 per cent) Mozambique (8.5 per cent), Liberia (8.1 per cent), Laos (5.4 per cent), Afghanistan (4.7 per cent), Myanmar (1.8 per cent), and Bangladesh (1.5 per cent). Nevertheless, with the exceptions of Equatorial Guinea and the last two countries, all the others are special cases, having suffered from low capacity utilization at the initial period either due to war or internal conflict rather than the expansion of production capacity. Equatorial Guinea enjoyed expansion of oil revenues and the increases in the ratios for Bangladesh and Myanmar are small. In fact, if the ratios for 2006 are compared with those of 1980, it

declined slightly in the case of Myanmar and remained the same for Bangladesh (UNCTAD, LDCs, 2008, b, Annex table 5).

Table 12: Changes in the share of MVA in GDP of LDCs[a] (1990-2006)

Year	LDCs				Other developing[b]	
	All	Asia	Africa & Haiti	Islands	All	Major exporters of manufactured goods
1990	10.5	12.1	9.7	6.1	22.5	25.6
2000	10.2	13.2	7.7	6.4	23.2	27.1
2006	9.8	13.8	7.5	6.4	24	28.5

Notes: [a]: all variables are in current terms.
[b]: 10.7 for 1980.
[c]. Excludes LDCs.
Source: Based on UNCTAD (2008.a, Table 8.3.2).

Table 13: Changes in the share of MVA in GDP of LDCs (2005-06)

MVA/GDP: per cent	Asia		Africa		All LDCs	
	Increased	Decreased	Increased	Decreased	Increased	Decreased
Less than 5	-	5	5	3	5	8
5-10	3	2	7	8	10	10
10-15	-	-	4	3	4	3
15-20	2	-	2	2	4	2
20-21	1	-	-	-	1	-
Total	6	7	18	16	24	23
Per cent in total No. for each region	46	54	53	47	51	49

Source: Calculated by the author, based on UNCTAD (2008.b, Table 3).

Generally speaking, the degree of de-industrialization will be revealed further if one compare the MVA/GDP ratios for 2006 with 1980; 25 out of 40 countries, for which data are readily available, show declines in the ratios, and two cases show no change (op. cit.). Again, the exceptional cases mentioned above figure in the list of countries where the ratio has gone up. The results of comparison with the 1970s will be even more dramatic.[6]

The decline in the MVA/GDP ratios in more recent years is partly statistical because of the increases in price of fuel and other primary commodities. Nevertheless, the increase in the price of primary commodities cannot explain the decline in the ratios entirely. Even during 1990s, when the prices of petroleum and other commodities showed a declining trend, the MVA/GDP ratios of LDCs declined.

ii. Trade liberalization

While a number of factors, including structural weaknesses, may have contributed to de-industrialization, the influence of premature liberalization cannot be denied (Shafaeddin, 2006.c). During the last two decades, quantitative trade restrictions have been eliminated almost entirely or converted to tariffs, and tariff levels have been reduced drastically. Table 14 provides data on simple average tariff rates for a number of LDCs for which comparative data are readily available for 1987 and 2006. Accordingly, in all cases tariffs on imports of manufactures have been reduced drastically, ranging from 33.5 per cent to 83.2 per cent. Furthermore, in the majority of cases the reduction has been more pronounced for manufactures than for all imported products. More importantly, all the countries shown in the table, with the exceptions of Bangladesh, Burkina Faso and Sudan are among those whose MVA/GDP ratios declined in 2006 as compared with 1980. In the case of Bangladesh it has not changed and in the other two cases it dropped during 1990-2006 (Based on table 11, and UNCTAD (2008.b, Annex table 5)).

Table14: Changes in simple average applied tariff rates of LDCs 1987-2006

	Total			Manufactures		
Countries	1987	2006	per cent reduction	1987[b]	2006	per cent reduction
Bangladesh	81.8	14.9	81.7	91.3	15.3	83.2
Burkina Faso	60.8	12.2	79.9	57.9	12	79.2
Sudan	56.6	17.4	69.2	56.4	18.4	67.3
Benin	37.4	13.4	64.1	38.3	12	68.7
Central African Republic	32	18.7	41.6	33	17.7[a]	46.3
Burundi	37	14.65	60.4	32.6	3.3	89.9
Tanzania	32.1	12.52	61	31.1	11.9	61.7
Zambia	29.9	14.59	51.2	29.1	13.2[a]	54.6
Sierra Leon	25.8	13.6	47.3	28[c]	13.1	53.2
Nepal	22.6	13.1	42	26.7[c]	12.5	53.1
Mozambique	15.6	12.69	18.7	15.3	11.7	23.5
Malawi	16.7	12.88	22.9	19.2	13.4	30.2
Dem. Rep. of Congo	22.4	12	46.4	22.3	11.9	45.4
Yemen	16.2	7.1	56.1	15.6	6.1	60.8
Uganda	19.9	12	39.6	17.9	11.9	33.5

Notes: [a:] 2005.
[b]: or the nearest year.
[c]: 1984-87.
Sources: Calculated by the author based on UNCTAD (1989), various country tables, UNCTAD (2008.a, Table 4.3), UNCTAD (2008.b), and WTO, ITC, UNCTAD (2007).

iii. Changes in investment

De-industrialization during the last couple of decades has taken place despite the acceleration of the rate of growth of MVA and investment in more recent years, which was prompted mainly by the commodity boom. Trade liberalization and structural adjustment in LDCs during 1980s was accompanied by negative growth in investment and a sharp fall in investment/GDP ratios. In 2006, the average I/GDP ratio for LDCs as a whole exceeded that of 1980, including particularly in the case of African LDCs (Table 15)**.** Nevertheless, for individual countries the ratios for 2006 were lower than those for 1980 in 15 out of 33 countries (or 30 countries), when three oil exporters are excluded in the case of African LDCs and 4 out of 13 cases in Asian LDCs (Table 16). Furthermore, in all cases, the expansion of MVA and investment was interrupted by the global economic crisis.

Table 15: Indicators of investment 1980-2006

	Share in GDP (per cent)					Annual average growth rates			
	1980	1990	2000	2006	2007	1980s	1990s	2000-05	2006
Africa	19.3	15.3	18.6	21.2	20.3	-0.8	6.1	9.6	13.9
Asia	22.4	15.7	21.7	23.7	23.1	0.3	9.7	10.6	11.9
Island	30.3	33	22.8	32.5	30.67	3.8	3	9.9	13.1
Total	20.5	15.6	20	22.2	21.19	-0.4	7.5	10	13.0

Sources: UNCTAD (2008.a: Table 8.3.2); UNCTAD (2008.b: Table 6); UNCTAD database.

In short, trade liberalization has not been accompanied by growth of the industrial sector in most LDCs. In fact, de-industrialization has occurred in many of these countries and the recovery in MVA was interrupted by the outbreak of global economic crisis.

Table 16: Changes in investment/GDP ratios over 1980-2006

	increased	decreased	total
Africa	18 (15)	15	33 (30)
Asia	9	4	13
Total	27	19	46 (43)
As per cent	58.7	41.3	100

Source: Based on UNCTAD (2008b, Annex Table 6).

IV. Transmission of the global economic crisis: impact assessment

1. The mechanism of transmission

The main characteristics of LDCs explained in the second section provide some clues to the mechanism of transmission of the global economic crisis to their economies. The direct transmission of the global financial crisis to LDCs has been limited as they are not particularly integrated into the world financial market.[7] The main financial effects are through the reduced availability and increased cost of trade financing, and reduced financial flows to LDCs and difficulties in debt services. However, as the financial crisis, which started in 2007, led to the global economic crisis, LDCs, like other developing countries, were affected with a lag. Transmission of the financial crisis to the economies of LDCs in general and their manufacturing sector in particular, has taken place basically through real effects of the global economic crisis.

The recent global economic crisis, when envisaged in conjunction with the other aforementioned factors, has serious implications for the industrialization of LDCs beyond temporary losses because of its negative influence on investment—and, thus, productive capacity—particularly in the manufacturing sector. The impact of the global economic crisis is not exactly the same on all LDCs as they have different characteristics, as outlined above. For example, on the basis of information provided by the IMF,

landlocked countries are on average more vulnerable than other comparable low-income countries to external factors such as trade, FDI, aid and remittances. Nevertheless, generally speaking, there are both direct and indirect impacts on the industrial development of these countries. They constrain the industrialization and development of LDCs mainly through the balance of payments and fiscal impacts. The loss of exports is an obvious direct impact on the manufacturing sector. One indirect effect is due to the loss of domestic demand as a result of the loss in GDP. Another is the impact on the supply of manufactured goods, and particularly on investment for development of future supply capacities

The fall in commodity prices and export volumes, workers' remittances and financial flows lead on the one hand to a fall, *inter alia*, in the government revenue and expenditure, employment and GNI, and thus domestic demand. On the other hand, they reduce the availability of the financial resources and foreign exchange necessary for investment in productive capacity and for imports of intermediate products required for the utilization of existing capacity. In some cases FDI has been important; thus, the decline in FDI is another factor limiting investment.

The impact on the supply of industrial goods and investment does not stop there. The rise in domestic interest rates due to the lack of financial resources, the rise in the price of imported inputs, in some cases the fall in exports and financial flows has necessitated devaluation of the exchange rate, which will increase the costs of production and the cost of capital goods necessary for investment. The increase in the cost of servicing foreign debts (in terms of local currency) due to devaluation is another constraining factor which limits resources available for investment in physical production capacity, education and human capital formation. Even the available resources may not be allocated to productive investment by the private sector due to the increased risks and uncertainty created by the external shock. Decision making for investment by the private investors will be also affected negatively by uncertainties related to the impact of further trade liberalization through EPA. The reduction in foreign aid and the increased cost of borrowing will be two other detrimental factors.

2. Evidence

It is too early to be able to provide comprehensive data necessary for factual analysis of the transmission of the crisis to LDCs. Nevertheless, there are some indications of its severe influence on the economic development and industrialization of these countries. A few lines on the direct impact of the financial crisis itself before turning to its impact through global economic crisis will be in order.

i. Trade financing

The reduced availability and increased cost of trade financing affect production and trade negatively through their impact on foreign trade, particularly imports of intermediate goods. Opening letters of credit by African banks has been affected negatively by problems of matching lines of credit in larger international banks, which restricted their credit facilities. Although there is no readily available information on the extent of the credit squeeze, there are indications that obtaining trade financing facilities has become difficult for LDCs. For example, a survey of 26 financial institutions involved in trade financing in Africa indicated that "the global crisis was hindering activity in their local markets" (AfDB, 2009.b). The manufacturing sector must have suffered from problems of trade financing more than the primary sector for three main reasons. First, the manufacturing sector depends on imported inputs more than the primary sector, and most of the requirements for trade financing originate from importers. Second, the international banks have reduced the size and the amount of credit lines for trade financing, particularly for exports to LDCs where greater risk is involved (AfDB, 2009.c). Thirdly, the international trade in primary commodities is usually more dominated by TNCs than manufacturing products. TNCs rely more on their own financial resources than other trading firms. In fact, the increase in the risk premium increased the cost of trade financing in Africa (AfDB, 2009.a: 5). The spread of the JP Morgan Emerging Countries Equity Index reached its highest level since 2002, increasing by 800 basis points in October 2008 (Ibid: 5).

ii. Impact through foreign trade

As LDCs are highly integrated into the world economy, particularly through imports as indicated by the exports/GDP and imports/GDP ratios (Table 17), the impact of the crisis on their economies will be significant as the crisis will worsen their current account deficits. A reduction in exports not only directly influences the GDP through its income effects, but also indirectly through its supply effect as export revenue provides means of importing products from abroad which cannot be produced domestically. Such products consist not only of consumer items, but also intermediate goods and capital equipment necessary for the operation and expansion of production capacities, including production capacity in the industrial sector.

Table 17: Trade/GDP and balance of payments/GDP ratios of LDCs and other developing countries (2006) in percentages

Group	Exports/ GDP	Imports/ GDP	Exports + imports)/ GDP	Exports - imports/ GDP
Non-oil exporting LDCs:				
Landlocked	21.2	43.7	64.9	-22.5
All	8.1	49.4	77.5	-21.3
Oil exporting LDCs	41.6	42.6	84.2	-1
All LDCs	30.8	46.4	77.2	-15.6
Developing countries exc. LDCs	44.3	38.6	82.9	+6.3
Oil exporting developing countries	56.1	32.6	88.7	+23.5

Note: Figures are simple averages.
Source: Based on Table A.1 given in Annexe.

Table 17.a: Trade /GDP ratios for various groups of LDCs (2006) in per cent

Regions	Exports	Imports	Total	Change in total (1990-2006)
Africa	38.2	36.2	74	23.7
Asia	27.4	37	64.7	42.6
Islands	45.5	68.4	110.3	0.6
All LDCs	34.7	36.8	71.5	29
Dev. Countries exc. LDCs	44.4	38.6	83	29.1

Note: The data do not correspond with Table 17, which is based on simple averages.
Source: Based on UNCTAD (2008.a).

iii. Commodity prices

As mentioned earlier, most LDCs depend heavily on the production and export of primary commodities (see also Table 18). Thus a fall in international commodity prices is an important channel of transmission of the shock created by the global economic crisis. International commodity prices are demand-determined; changes in demand for commodities are reflected mainly in price rather than volume. The recent boom in commodity prices of 2003-08 "has been the most marked of the past century in its magnitude, duration, and the number of commodity groups whose prices have increased" (World Bank (2009: 3) and Chart 1.a). The boom in commodities was, however, followed by a "bust" which has been also the most serious during the last four decades (IMF, 2009.b: 46, Table 1.2).

Table 18: Structure of merchandized exports of LDCs (2005-06) in per cent

Group	Fuel	Other Primary	Total Primary	Manufactured	
				Total	of which light
Africa	63.7	27.9	91.6	8	7.3
Asia	28.4	15.7	44.1	55.3	53
All LDCs	52.7	24.3	77.0	22.4	20

Sources: Based on UNDCTAD, *LDC Report 2008*, Tables 8and 9.

The boom

The commodity boom of 2003-08 (Table 19, and Charts 1and 2) facilitated the acceleration of growth of GDP and the supply capacity for production of manufactured goods of LDCs by providing foreign exchange and sources of finance for investment. As is shown in Table 20, during 2000-06, LDCs could in fact catch up with other developing countries in their rate of growth of MVA. During this period, they managed to utilize their commodity windfall better than on previous occasions. Their performance in investment in 2006—for which data are available—was impressive in 2006, as compared to 2000-02; the boom provided an impetus for the acceleration of investment by increasing savings and reducing the resource gap (Table 21).

Table 19: Percentage changes in commodity price indices (2000=100)

Commodities	1990-2000	2002 to the monthly peak in 2008*	Monthly peak to monthly trough*
Mineral ores and metals	-21.2	351.4	-50.7
Veg. oils and oil seeds	-6.5	217.4	-53.1
Agricultural raw materials	-23.2	144.1	-41.4
Food	-20.2	157.3	-27.7
Tropical beverages	-7.1	117.5	-20.7
Total non-oil	-19.5	148.9	-36.3
Petroleum	-28	287	-68.7

Note: * For the commodities as a whole and for minerals the peak was April 2008 and for the rest it was June 2008. The monthly trough was February 2009 for the whole basket and for minerals, March 2009; for agricultural raw materials; and December 2008 for the rest. The related figures for 2002 are yearly averages.
Sources: UNCTAD (2008.a, Table 6.1); Commodity Price Bulletin online.

Table 20: Annual average growth rates of GDP and MVA of LDCs (1980-2007)

Country Groups	1980-90	1990-2000	2000-2006	2007
Africa & Haiti	1.9	3.4	6.4	8.6
Asia	2.9	5.1	6.8	6.2
Islands	4.4	4.3	4.0	5.0
Total LDCs	2.2	4.0	6.5	7.6
MVA				
Africa& Haiti	1.9	2.4	6.8	7.8
Asia	2.9	6.6	8.0	4.1
Islands	5.7	4.0	2.1	5.7
Total LDCs	4.2	4.2	7.4	5.9
Other developing	5.2	6.8	7.4	8.3

Source: UNCTAD, *Handbook of Statistics*, various issues; UNCTAD (2008.b); and IMF, WEO, 2009.

Table 21: Savings and investment - GDP ratios and resource gaps of LDCs (2000-06)

	2000-02	2006
Gross Domestic Savings (S)	12.8	20.7
Gross capital formation (I)	19.8	22.2
Resource gap (S-I)	-7	-1.6

Source: Based on UNCTAD (2008.b), Table 3.

The bust

As is shown in Table 19 and Charts 2 and 3, the commodity boom of 2003-08 ended in the second quarter of 2008 after a lag following the financial crisis which had started in December 2007. From the peak (April 2008) to the trough (February 2009), non-oil commodity prices, in terms of the US dollar, fell on average by 36 per cent. The peak to the trough drop in petroleum prices was even more significant. As expected, non-oil primary products which have industrial uses (minerals and agricultural raw materials)

were hit harder than other products; vegetable oils and oilseeds are exceptions. The demand for vegetable oils has increased during recent years as it has become a source of manufacturing biofuel in addition to their use in the chemical industry.

Changes in the prices of food products are of special interest to LDCs, the majority of which (36 out of 50) are net food importers, as mentioned earlier. While food prices increased by over 157 per cent in June 2008 as compared with the average in 2002, they show the second smallest drop in prices between that date and the trough in December 2008. After that, the relevant index increased by 14 per cent to the end of June 2009, as against 10 per cent on average for all commodities.

The falls in price of various groups of commodities affect the economic performance of exporting countries, particularly their manufacturing sectors, in different ways. In the case of minerals, particularly petroleum, the bulk of export revenues accrue to the government. The reduction in government revenues and expenditure affects the rest of the economy directly and through multiplier effects. Usually, what is axed as a result of the reduction in government revenue is investment in infrastructure and productive sectors, which has long-term implications for industrialization and development. The reduction in the price of agricultural raw materials and food (where a country is a food exporter) changes the income of the producers and traders directly, affecting the pattern of consumption of households against manufactured goods under the influence of "Engel's Law". Accordingly, expenditures on foods and other necessities would benefit from a sort of "ratchet effect". The fall in workers' remittances will also have direct detrimental effects on domestic demand for manufactures.

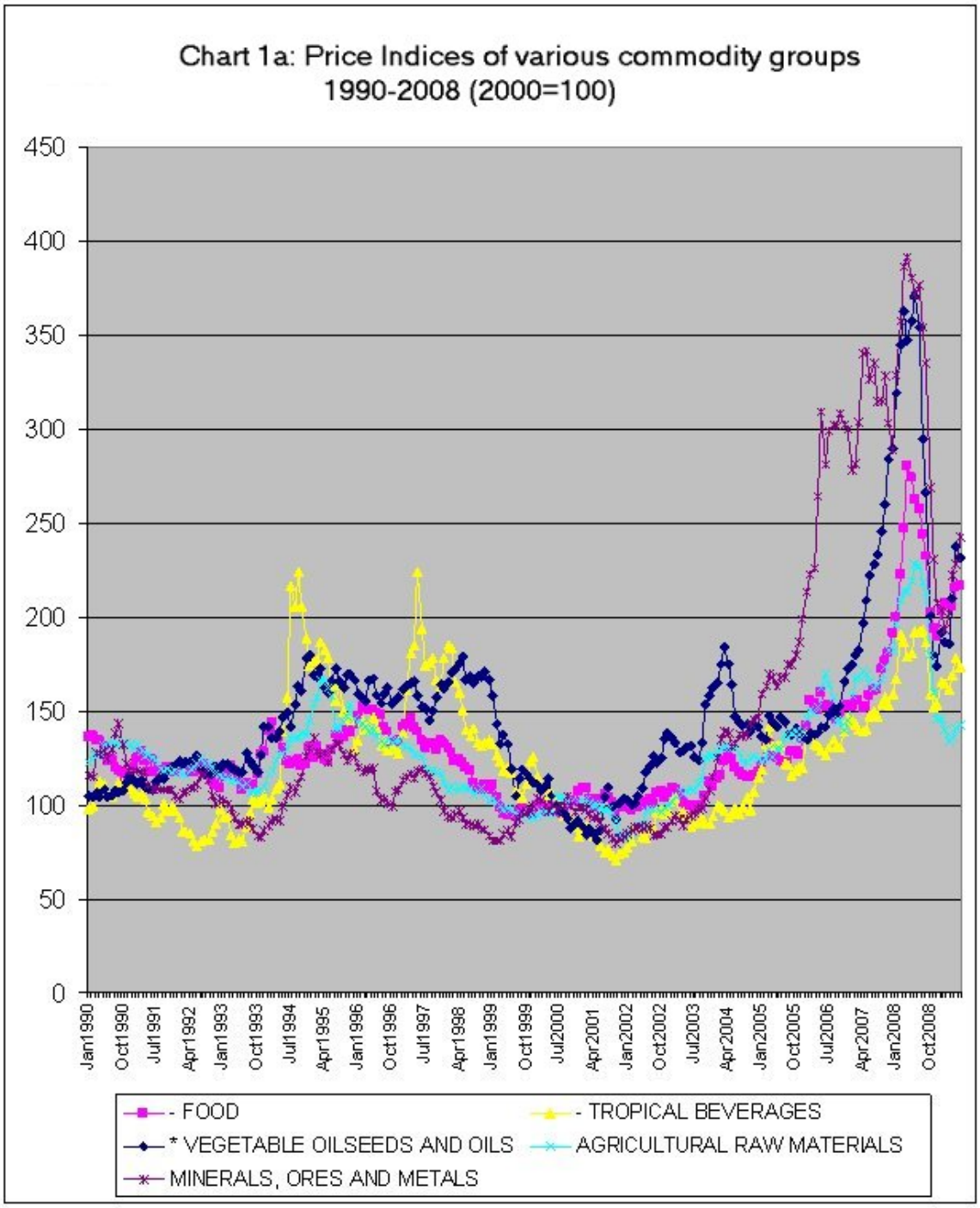
Chart 1a: Price Indices of various commodity groups
1990-2008 (2000=100)
450
400
350
300
250
200
150
100
50
0
Jan1990
Oct1990
Jul1991
Apr1992
Jan1993
Oct1993
Jul1994
Apr1995
Jan1996
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Apr1998
Jan1999
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Jan2002
Oct2002
Jul2003
Apr2004
Jan2005
Oct2005
Jul2006
Apr2007
Jan2008
Oct2008
- FOOD
- TROPICAL BEVERAGES
* VEGETABLE OILSEEDS AND OILS
AGRICULTURAL RAW MATERIALS
MINERALS, ORES AND METALS

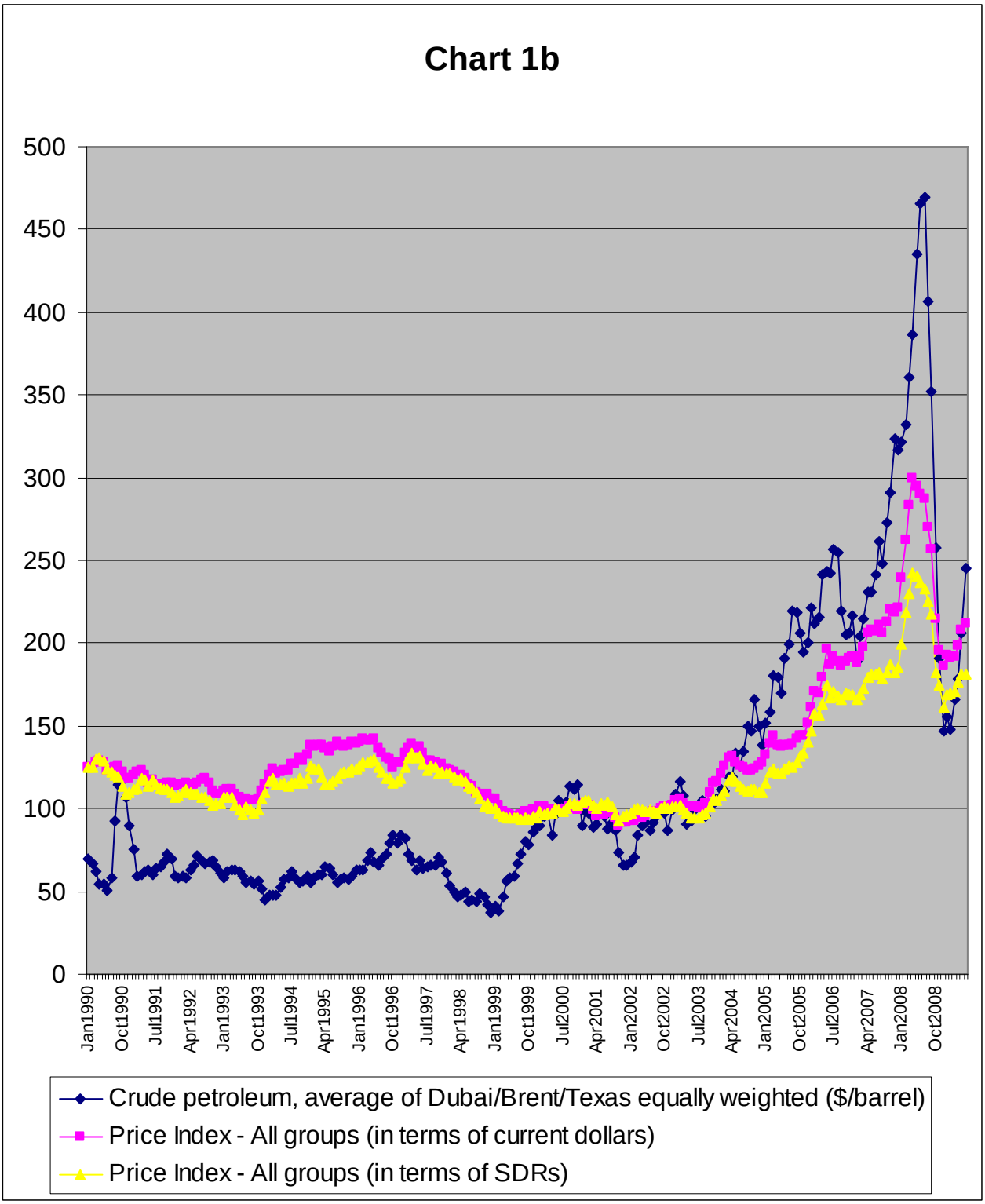
Chart 1b
500
450
400
350
300
250
200
150
100
50
0
Jan1990
Oct1990
Jul1991
Apr1992
Jan1993
Oct1993
Jul1994
Apr1995
Jan1996
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Jan1999
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Jan2002
Oct2002
Jul2003
Apr2004
Jan2005
Oct2005
Jul2006
Apr2007
Jan2008
Oct2008
Crude petroleum, average of Dubai/Brent/Texas equally weighted ($/barrel)
Price Index - All groups (in terms of current dollars)
Price Index - All groups (in terms of SDRs)

iv. Workers' remittances, tourism and domestic demand for manufactures

While a decline in commodity prices has indirect effects on domestic demand for manufactured goods, a fall in workers' remittances influences it directly as mentioned above. A number of "manufacturer exporters" are significant recipients of workers' remittances. Hence, the detrimental impact of a reduction in remittances on domestic demand for manufactured goods adds to the fall in their external demands leading to low capacity utilization, unemployment and a negative influence on investment in productive capacity.

Workers' remittances accruing to LDCs have been growing fast during recent years (Table 22)**;** they have become nearly as important as exports of manufactured goods for the LDCs as a whole. For some countries, they were, in fact, equivalent to, or greater than, their total exports in 2007 (Table 23). As the economic situation in the host countries deteriorates, and expatriate workers become unemployed, remittances to their home countries drop. According to an estimate by the World Bank, the remittances will decline by over 4 per cent in Sub-Saharan Africa, South Asia and East Asia and Pacific.[8]

In LDCs the average income of the families whose source of income is remittances is often higher than the average family income of workers who are engaged in the domestic sector or are unemployed. Therefore, they usually spend a higher proportion of their income on manufactured goods and the purchase of residential units than others (e.g. Sri Lanka). Hence, the reduction in remittances directly affects not only domestic demand for manufactured products, but also construction activities with a negative impact on employment, and thus further reduction in demand.

Table 22: Changes in workers' remittances received by LDCs (2000-07)

	African	Asian	Island	Total
Value (US$ bn):				
2000	2.9	3.6	0.2	6.7
2007	6.4	10.1	0.2	16.7
Average annual growth rate, (2000-07)	11.9	15.8	0	13.93

Source: Based on World Bank, *World Development Indicators online*.

Table 23: Workers remittance as a percentage of exports (2007)

Per cent of exports	Countries: No.	Countries: Names
100 or more	6	Gambia, Liberia, Haiti, Nepal, Comoros, Kiribati
50-70	4	Sao Tome, Uganda, Bangladesh, Senegal
30-50	7	Djibouti, Lesotho, Guinea Bissau, Rwanda, Vanuatu, Benin, Togo
10-20	9	Yemen, Sierra Leone, the Sudan, Ethiopia, Mali, Solomon Islands, Niger, Cambodia
Less than 10	5	Burkina Faso, Samoa, Guinea, Mozambique, Myanmar

Source: Based on World Bank, *World Development Indicators online*.

It is predicted that a number of manufacturer exporters would be hit severely by the decline in remittances. In 2007, workers' remittances were equivalent to over 100 per cent of total exports in the cases of Nepal and Haiti (and 200 per cent and 143 per cent of their manufactured exports, respectively), 50 per cent in the case of Bangladesh (62 per cent of its manufactured exports), 52 per cent in the case of Senegal (about 200 per cent of its manufactured exports), and over 45 per cent in the case of Lesotho (65 per cent of its manufactured exports).[9] To emphasize the importance of the figures, note that for example, in 2008, workers' remittances as a percentage of GDP reached over 27 per cent in the case of Lesotho, and 18 per cent, 17.8 per cent and 11 per cent in the cases of Haiti, Nepal and Bangladesh respectively. According to the IMF, in all these cases, except for Lesotho for which data are not available, the projected fall in the remittances in 2009 is significant. Based on IMF (2009.a), for example, the difference between the projections undertaken in 2009 and 2008 reaches 3 per cent of GDP in the case of Haiti (IMF; 2009.a, Appendix Table V).

Before ending this section, let us also note that tourism is the main source of exports of services on which a number of LDCs depends, particularly Island countries. Tourism is highly income elastic; thus it is usually sharply affected by global economic downturns. A fall in revenues from tourism affects, in particular, demand for food

processing industries directly. Further, it affects demand for manufactured goods indirectly through its impact on the income of employees of the sector, which is labour intensive. Unfortunately, no data is available on the projection of the demand on tourism of LDCs, but one would expect it would be significant.

v. Impact on the current account

The combination of the decline in exports of goods and services and in remittances will have a significant detrimental effect on the current account of LDCs, both in relation to their imports as well as GDP as is shown in Table 24**.** According to the same Table, African LDCs and the Island countries are much more affected than Asian LDCs.

The main reason for such a differential impact is the reliance of Africa and Island countries on exports of primary commodities and services (tourism) respectively. Table 25 provides data on projections of the current account of the balance of payments for individual LDCs. Accordingly, the mineral and service (mainly tourism) exporters (mainly Island countries) are worst hit by the external shock as judged by the projected deficits in their current accounts. Ten of the 16 countries with current account deficits/GDP ratios of greater than 10 per cent are petroleum, mineral or service exporters. These products not only have shown greater price declines in international markets, but they will be also worse hit as far as their volume of exports is concerned. Minerals, as well as agricultural raw materials, are inputs to industrial activities which have been more severely affected by the crisis than food products, which are subject to Engel's Law[10], and are also used in the production of biofuels as mentioned earlier. Manufactures exporters seem to have fared, on balance, slightly better. Nevertheless, even in their case, over-reliance on a single, or a couple of light manufactured goods increases vulnerability to external shocks as indicated by the cases of Lesotho and Cambodia as compared with Nepal. Nepal has not only more diverse foreign exchange earnings, as workers' remittances are equivalent to its total merchandise export earnings (Table 23), but its structure of exports and MVA is also diverse despite its smaller size of population than Cambodia (Table 26[11]). Nepal is an interesting case which benefited from industrial collaboration with India for export diversification (Shafaeddin, 2008).

Table 24: Current account of balance of payments of LDCs and their projections for 2008-09*

Groups	2000	2007	2008 projections	2009 projections
Value in million dollars				
Africa and Haiti	-9,103.6	-6,996.2	-4,885.1	-31,842.2
Asia	508.8	-433.6	-735.4	-1,875.1
Islands	-115.3	607.0	1,112.3	-91.3
Total LDCs	-8,710.1	-6,822.8	-4,508.2	-33,808.6
As a percentage of imports of goods and services				
Africa and Haiti	-28.8	-6.5	-3.6	-28.2
Asia	2.3	-0.8	-1.4	-3.4
Islands	-7.7	20.6	29.1	-2.6
Total LDCs	-15.9	-4.1	-2.4	-19.7
As a percentage of GDP				
Africa and Haiti	-9.4	-2.5	-1.4	-9.6
Asia	0.7	-0.3	-0.4	-1.0
Islands	-5.7	17.0	26.6	-2.1
Total LDCs	-5.0	-1.5	-0.8	-6.4

Notes: Asia 7 countries; Islands 7 countries; Africa 31 countries.
*For a list of the countries see Appendix 4.
Source: IMF (2009.b); World Economic Outlook database.

Table 25: Projected current account deficits of individual LDCs as a percentage of GDP (2009)

Exporting Groups	Deficits (per cent)					Surplus
	> 20	15-20	10-15	5-10	1-5	
Petroleum	Dem. Rep. of Congo (26.1)	-------	Chad, Sudan	Angola, Equ. Guinea	Yemen	East Timor Myanmar
Other minerals	Niger (22.1)	-------	Mozambique, Zambia, Burundi	Mauritania, Mali, Cen. Af. Rep. Sierra Leone	Guinea	-------
Agricultural	Liberia (43.2)	-------	Burkina Faso	Solomon Is., Benin Uganda, Malawi G. Bissau, Kiribati	Afghanistan	-------
Manufactures	-------	-------	Lesotho	Cambodia	Haiti	Bangladesh, Nepal, Bhutan
Services	Sao Tome (44.3)	Gambia, Maldives, Djibouti	-------	Samoa, Comoros Tanzania, Rwanda Ethiopia, Vanuatu	-------	Eritrea (1.03)
Diversified	-------	Madagascar,	Senegal, Laos	Togo	-------	
No. of countries	4	4	8	21	3	6

Source: Based on IMF (2009.b).

Table 26: Percentage Share of various product groups in manufacturing production of Nepal (1995-2005)

Product group	1995	2005
Food and Beverages	35	45
Textiles and clothing	34	19
Machinery and equipment	2	7
Chemicals	6	10
Other manufactures	23	23

Source: World Bank, *World Development Indicators*.

The countries which are worse hit in their current accounts are also mostly the highly indebted ones. Thus, their debt sustainability will be undermined as well. According to an IMF simulation, assuming that low-income countries were able to replace the reduction in aid and FDI from external borrowings, their debt burden (total stock of debt/GDP) would increase further by about 4 per cent over a year (IMF, 2009.a: 25). Such an assumption is, however, unrealistic because the economic crisis reduces their creditworthiness in the international market making it difficult to borrow from private banking, and borrowing from international financial institutions is limited. It is most likely that the constraints in financing the current account deficits will lead to a reduction in GDP, government expenditure, and private consumption with a negative impact on the manufacturing sector.

vi. Balance of payments constraints and problems of external financing

Official flows account for the bulk of capital flows to poor countries as mentioned in the second section. Their importance in financing the current account deficits of these countries increases further during the crisis because they should also compensate for the decline in private flows. Private flows, mainly FDI, accounted, on average, for over 10 per cent of long-term capital flows to LDCs during 2005-06. According to the IMF projection, net FDI and portfolio investment will decrease by about 10 per cent in 2009 as

compared to 2008. As private flows to LDCs are very likely to decline, their current account deficits have to be financed by borrowing from international and regional financial institutions and grants. IMF assumes that LDCs' net borrowing will decline in 2009 as compared to 2008 (Table 27), thus increasing the need for official inflows in the form of grants. While some pledges are made by G20, IMF, the World Bank and regional development banks, as of April 2009, the IMF projection indicates a substantial decline in GDP of LDCs as a result of the crisis and insufficient financial flows to LDCs.

vii. Impact through GDP

Judged by the projected rate of growth of GDP for 2009, as compared with the actual rate in 2007, Table (28) also indicates that the African and Island LDCs will be, on average, the most affected by the global economic crisis. According to the IMF projection, a few oil and mineral exporting countries, as well as Lesotho and Cambodia, the Maldives and the Comoros Islands will be among the countries with the lowest projected GDP growth rates in 2009.

The decline in exports of petroleum and mineral exporters has a negative impact on GDP directly, as well as indirectly through government revenues, as mentioned earlier. Commodity revenues as a percentage of GDP are projected to decline significantly in 2009, as compared with 2008, ranging from 20 percentage points in the case of Chad to 3 percentage points in the case of Mauritania (IMF, 2009.a: 22).

The main victims of the crisis which have important impacts on capacity utilization and capacity expansion are private consumption and private and public investment. This has important implications for the utilization and expansion of capacity.

Table 27:Financial Net borrowing and FDI to LDCs, 2000-09

Groups	2000	2007	2008	Change in 2008 millions US$	2009
				Projections	
Net Borrowing ($m.)					
Africa and Haiti (29 countries)	-23.55	-8,460.71	2,800.80	11,261.50	2,175.71
Asia (6 countries)	-65.64	79.18	-358.51	-437.69	26.06
Islands (8 countries)	91.63	-2,212.35	-3,001.61	-789.26	-3,338.96
Total LDCs (43 countries)	2.44	-10,593.88	-559.33	10,034.55	-1,137.20
Net FDI and portfolio investment					
Africa and Haiti (29 countries)	2,405	12,954	12374	-580.67	11,848
Asia (7 countries)	526	3864	3182	-681.43	2922
Islands (6 countries)	59	211	216	5.49	186
Total LDCs (42 countries)	2,990	17,029	15,772	-1,256.60	14,956
Sum of the above					
Africa and Haiti (29 countries)	2,382	4,494	15,174	10,680.83	14.024
Asia (7 countries)	460	3,943	2,824	-1,119.12	2,948
Islands (6 countries)	151	-2,002	-2,785	-783.76	-3,153
Total LDCs (42 countries)	2,993	6,435	15,213	8,777.95	13,819

Note: for a list of the countries included see Appendix 4.
Source: Based on IMF (2009.b).

Private consumption is severely affected by job losses and the reduction in income of households. Investment would be regarded as a residual by both the public and private sectors. Unfortunately, there is no publicly available data on projections of investment and private consumption for LDCs. Nevertheless, some inferences can be made with the help of World Bank projections for low-income countries, as shown in Table 29. The data include some countries other than LDCs. Nevertheless, it provides some useful information. Accordingly, as expected, the negative impact of the crisis on both private consumption and investment, particularly the latter, is more severe in the case of Sub-Saharan Africa. Assuming that the impact on growth of investment and private consumption is proportional to the growth in GDP, the impact on these variables seems to

be milder in the case of Sub-Saharan Africa when South Africa is excluded. In the case of South Asia, the exclusion of India does not make any difference to changes in GDP growth, or therefore of private investment and private consumption. But with the exclusion of Pakistan the impact on the remaining countries would be milder. As expected, Bangladesh seems to be in a better situation than the others countries as a whole.

Table 28: GDP growth rates of LDCs, 2007-09 (per cent)

Groups	2007	2008	2009 (projected)
Africa	8.6	5.8	2.96
Asia	6.2	5.24	4.99
Island	5.0	5.89	2.97
Total	7.6	5.72	3.3

Source: Based on Tables 20 and A.3.

A number of public and private projects has been cancelled or postponed in African LDCs. For example, in Ethiopia a hydropower project of EUR 1.5 billion was cancelled. Burkina Faso has problems financing three mine projects, so do Tanzania and Guinea. In Senegal two infrastructure projects (a toll road and an airport) are delayed (AfDB, 2009.a, Table 3).

In short, investment in productive capacity seems to be the main victim of the global crisis on LDCs, particularly in Africa, but private consumption, and thus domestic demand for manufactures, is also severely affected. To what extent the manufacturing sector is affected by the negative impact of the global crisis through investment and domestic demand is not easily quantifiable. But there is already some evidence that the sector is severely under stress because of the combination of domestic demand and particularly exports. For example, in the case of Cambodia, in the first two months of 2009, garment exports dropped by nearly 20 per cent compared with the same period of the previous year. It is estimated that between 40,000 to 60,000, out of over 300,000, garment workers have become unemployed in Cambodia **(Salze-Lozac'h, 2009).** In Madagascar and Lesotho several textile factories were closed. Madagascar "shows an 8 per cent to 15 per cent decline in economic activity in various sectors" (Ibid.: 16). In Uganda 15 factories closed in 2008 due to falling demand and increasing costs of

production caused by devaluation (Ibid) and 15 more were expected to close in the first quarter of 2009 (AfDB, 2009.b, Table 3) The garment industry of Nepal has also suffered from the closure of some factories and unemployment of its workers,[12] although the data on the number of people who have lost their jobs is not available.

Table 29: Average annual rates of growth of GDP, fixed investment and private consumption in Sub-Saharan Africa and South Asia (2006-09), in percentages

	2006-07[a]	2008[b]	2009[c]	Change, 2006/07 to 2009
Sub-Saharan Africa:				
GDP at market prices[d]	6.1	5.4	4.6	-1.6
Private consumption	6.5	3.4	3.5	-3
Investment	19.9	12.7	7.7	-12.2
GDP excluding South Africa	6.6	6.6	5.7	-0.9
GDP of oil exporters	7.6	7.8	6.6	-0.9
South Asia:				
GDP at market prices	8.7	6.3	5.4	-3.3
Private consumption	6.8	5.7	4.7	-2.1
Investment	15	7.1	4.8	-10.2
GDP excluding India	6.3	6.1	4	-2.3
Pakistan	6.1	6	3	-3.1
Bangladesh	6.5	6.2	5.7	-0.8

Notes: [a]. Average
[b]: Estimate
[c]: Forecast
[d]: In US dollars of 2000.
Source: World Bank (2009, Tables A9 and A11).

V. Short- and long-term policies and strategies

In this section we will refer to the possibilities for and constraints on short-term policies LDCs may wish to pursue in reaction to the global economic crisis. Subsequently, we will outline longer-term strategies for utilization of resources in case of the emergence of another commodity boom. The required trade and industrial policies, regional cooperation for industrial collaboration and a brief discussion of the role of EPZs are among other topics to be covered.

1. Short-term policies and their constraints

There is a limit to which LDCs can undertake counter-cyclical macroeconomic policies without extensive external financial support. Usually, IFIs recommend a combination of expenditure cutting and expenditure switching (devaluation) when a developing country faces a severe balance of payments problem. Such policies are not effective to stimulate growth.

The origin of the current economic shock is external to the economy of LDCs; it is reflected mainly in commodity prices and the volume of exports of manufactured goods. Any contractionary monetary and fiscal policy would be pro-cyclical and will worsen the recession as it will contribute to further reduction in domestic demand (see Box 1 on Malawi).

i. Devaluation

Often during a recession, in response to external shocks, devaluation of the exchange rate is imposed on LDCs by IFIs as a part of conditionalities in their lending, even though the fall in exports is not necessarily due to the loss of competitiveness. Devaluation in such a situation cannot lead to export expansion because the prices of both primary commodities as well as low-skilled manufactured goods are determined in the international market, on which small countries have no influence.[13]

The drop in exports is due to the income effect of the change in global economic activities. The price of primary commodities is demand determined in the international market; and thus devaluation, particularly by a small exporter of a primary commodity,

has no impact on its international prices and demand. Further, through its direct and indirect (inflationary) effects, devaluation increases the costs of production in the manufacturing sector which has become increasingly dependent on imported inputs following trade liberalization of recent decades. The increase in the cost of production aggravates the fall in external and internal demand for manufactured goods leading to lower capacity utilization, loss in productivity and even closure of the producing firms.

Box 1: Malawi's exposure to external shock: imposition of pro-cyclical monetary and fiscal policies by the IMF[14]

Malawi is a landlocked and highly indebted country with heavy dependence on the production and exports of primary commodities (see Table A.1) and aid flows to cover its imports and debt servicing; the country receives little FDI. About half of the foreign aid received in 2007 had to be allocated to service its debts. Food and fuel accounted for over 26 per cent of its imports and 48 per cent of its exports in 2006 (UNCTAD, 2008.a, Table 3.1.) Mainly because of high oil prices, the country suffered a loss from the terms of trade and inflation. When the commodity shock of 2008-09 took place, the country had foreign reserve coverage of 1.1 month. The country approached the IMF in November 2008 within the framework of the Exogenous Shock Facility. Providing some financial help, the IMF imposed conditionalities in the form of fiscal and monetary restrictions in order to control inflation—even though the inflation was basically imported and despite the fact that the Fund has, in principle, accepted the use of counter-cyclical policies. The pro-cyclical economic policies no doubt will harm the growth of the country as the world economic recession bites.

Moreover, to the extent that devaluation in the nominal exchange rate leads to devaluation of the real exchange rate, it will turn the internal terms of trade against manufactures and in favour of primary commodities. Thus it will have a long-term detrimental influence on growth of the manufacturing sector because it shifts the incentive for investment against the sector. Devaluation also increases the local cost of debt servicing, putting pressure on the government budget and reducing the prospect for financing investment. Thus while devaluation will not lead to export expansion, particularly by small exporters, it will have detrimental effects on the production of manufactured goods because of the consequential increase in the cost of imported inputs.

Yet devaluation has been a policy measure taken by many LDCs in reaction to the external shock. The crisis led to a drastic fall in foreign exchange reserves of a number of LDCs, particularly commodity dependent countries, which most of them are, and also among highly indebted countries. The inflationary pressure caused by shortages of foreign exchange was aggravated by devaluation. In the case of African LDCs, in particular, devaluation has been significant. For example, nearly a 66 per cent decline in copper prices between July and December 2008 was the main cause of devaluation of 33.5 per cent in the Zambian currency between end-July 2008 and mid-February 2009 (AfDB,2009.a, Table 3). Copper accounted, on average, for nearly 65 per cent by value of Zambian merchandise exports during 2005-06 (UNCTAD, 2008.a, Table 3.2.D). Zambia figured among highly indebted countries with a debt stock/GDP ratio of over 23 per cent in 2006 (Table A.1).[15] In the Democratic Republic of Congo, which depends on petroleum and other minerals for over 90 per cent of its exports, devaluation of about 40 per cent took place over the same period. While these two countries are extreme cases in Africa, they are not the only ones. Over the same period Lesotho devalued its currency by 25.6 per cent; Madagascar by 20.1 per cent; the Comoros, Benin, Cape Verde, the Gambia and Uganda between 15 and 20 per cent; Ethiopia, Mauritania and Tanzania, 10-15 per cent; and Mozambique and the Sudan by 5-10 per cent.[16] With the exception of Lesotho all the devaluing countries were highly indebted ones (AfDB, 2009.a, Table 3).

Devaluation increases production costs in the manufacturing sector directly more than the other sectors because of its greater dependence on imported inputs. Furthermore, where the imported food bill is high, devaluation adds to the inflationary pressure as it may initiate a price-wage spiral because food is a wage good. In fact, in 2008, for which data is readily available for most LDCs, the rate of inflation has exceeded 10 per cent in the majority of Asian LDCs (mostly smaller countries) and in more than half of African ones. Furthermore, inflation accelerated in most cases. As there is a lag between devaluation and its inflationary impact, inflation must have accelerated in 2009.

ii. Macroeconomic stimulus

In LDCs a fiscal and monetary stimulus will have little effect on the economy, including the manufacturing sector, unless sufficient external finance for the current account deficit

is provided to the country. There is an important difference between a developed country and an LDC as far as the effectiveness of a macroeconomic stimulus is concerned. In the case of a developed country (e.g. the USA) which is in possession of an international currency, the country has in a sense no foreign exchange constraint; it pays for its imports with its national currency. Furthermore, the fall in exports can be, to a large extent, compensated by stimulating domestic demand as the economy is relatively flexible. In the case of LDCs, the supply of foreign exchange is the main constraint. Most LDCs already have significant deficits in the current account of their balance of payments. Any fiscal and monetary stimulus would put further pressure on their current account at least proportional to the imports/GDP ratio for every unit increase in domestic demand. Furthermore, the loss in external demand for primary commodities cannot be compensated for by increases in effective demand for other domestically produced goods. When exports of manufactured goods are concentrated in one or two products, e.g. clothing, no amount of stimulus can switch demand from exports to the domestic market sufficiently.

Thus any macroeconomic stimulus has to be complemented by extra sources of external finance and debt forgiveness by the international community. According to the IMF, the extra external financial resources needed for low-income countries, the majority of which are LDCs, is between US$25 billion and US$138 billions (IMF, 2009.a: 35).

iii. Import restrictions under the "balance of payments" clause

There are two tools available to LDCs which can be, in fact should be, utilized, even if extra financial resources are provided to them. These are the use of "balance of payments clauses" of the WTO rules for targeted import restrictions and control of capital outflows (Akyüz, 2009). Management of foreign exchange reserves also could be a possibility in a limited number of cases.

WTO rules allow temporary import restrictions when there is a severe balance of payment deficits. To have a positive impact on domestic output and productive capacity, the import restriction should be targeted at items which do not contribute to the supply of domestically produced goods, directly or indirectly (e.g. imported inputs necessary for production of manufactures), and the supply of basic needs.

vi. Capital account control

The neo-liberals and neo-liberal institutions often put pressure on developing countries, including LDCs, to liberalize the capital account of the balance of payments. While such a policy may contribute, in theory, to the attraction of FDI and portfolio investment when the world economy is doing well, it can result in the accelerated exodus of capital, by nationals or foreign firms, when a country faces recession and current account problems as was the case during the Asian financial crisis of 1997-98. Capital flows should be controlled and managed. The successful experience of Malaysia during the Asian financial crisis, as well as Chile, reveals the importance of controlling capital flight[17] during an economic crisis**.** In the case of LDCs, in fact, it should be a long-term policy of the government due to the severe scarcity of foreign exchange. Otherwise, erratic movements of capital flows will result in erratic movements in the flow of imports, exchange rate, interest rate, production costs and the price structure, exacerbating instability in output and the uncertainty and risks of investment. There is evidence that instability in the flow of imports, in particular, affects the growth of MVA and GDP (Helleiner, 1986). Furthermore, the available data on 42 low-income countries indicates that during 1970-2004, their accumulated capital flight was nearly three times higher than their accumulated debt stock! (UNCTAD, 2009.a: Table 10).

v. Management of reserves

A few LDCs have a better chance of managing their foreign exchange reserves to reduce instability in imports or to remedy the impact of external shocks. They include oil-exporting countries and some Island countries which have shown surpluses in their current accounts during the recent boom and are likely to develop surpluses in the event of another boom. These countries have some room to manoeuvre by cushioning the allocation of their foreign exchange. Angola has done so to some extent by accumulating reserves during the boom. East Asian countries managed to increase their reserve holdings after their experience of the Asian financial crisis (Park and Estrada, 2009).

All in all, short-term counter-cyclical measures available to LDCs are limited; they need to diversify their economies, and this requires long-term development and industrial strategies.

2. Long-term strategies and policies

i. Diversity of LDCs

The diversity of LDCs, despite the fact that they show some common features, would imply that one cannot recommend a unique set of policies which would "fit all". In particular, the difference in the size of their populations, ranging from 10,000 in the case of Tuvalu to nearly 160 million in the case of Bangladesh, in their geographical locations and access to the sea and their capacity in production and exports of manufactured goods, or their dependence on primary commodities—all are of significant concern. For example, for primary commodity-exporting countries, the main issue is diversification of their production and export structure out of the primary sector. By diversification, here we do not mean restricting production of primary commodities to reduce their importance in production and exports in absolute terms. We use diversification in a wider sense of the term. What is required is to use the commodity sector itself as a means of expanding activities outside the primary sector; thus, eventually the share of the primary sector in GDP and exports will be reduced. In this sense the use of windfall gains for investment in diversification activities is important. For this purpose, there is a need for a development and industrial strategy for which the government has an important role to play.

For "manufacture exporters" the key issue is upgrading of the structure of production and exports of manufactures as they often depend heavily on a single product, e.g. clothing. Manufactured goods are cost-determined in industrialized countries. Nevertheless, in the case of developing countries where a large number of small countries export the same labour-intensive products, such as clothing, the price determination of the products is similar to primary commodities. Its international price is demand-determined and thus subject to severe changes during the global economic crisis.

For small countries their size is a major constraint on the development of a competitive manufacturing sector for producing goods for the domestic market and/or exports,

particularly for remote Island countries in the Asia-Pacific area. For landlocked countries transport infrastructure is an additional concern which limits their prospects for integration into the world economy. While large countries, particularly those with access to the sea, have, *ceteris paribus*, more room to manoeuvre in undertaking trade and industrial policies, landlocked countries and, in particular, small countries which are in proximity with other countries need regional cooperation with their neighbouring countries for the division of labour and specialization in production and international trade. Nevertheless, a few issues require general discussion in the consideration of development strategies of LDCs. These issues include the role of the government, the market and enterprises, trade and industrial policies and foreign direct investment. The role of regional integration and industrial collaboration, and export processing zones will also be discussed. Bearing in mind the importance of the commodity sector, let us first mention a few words about the prospects for commodity prices and management of commodity booms before proceeding further.

ii. Prospects for commodity prices

The prospects for commodity prices have important implications for development and industrial policies of most LDCs. Generally speaking, a commodity price boom eases the balance of payments and fiscal constraints of the exporting countries; but in the case of net food importers it has a negative influence on their balance of payments and investment. By contrast, a decline in prices eases the pressure on the import bill of food importers, but adds to their fiscal and balance of payments constraints as a result of the drop in prices of other commodities. Furthermore, the very nature of price instability creates uncertainty and risk of investment not only in the primary sector, but also in the manufacturing sector.

Different international organizations have come up with different forecasts for various commodity prices in the medium to long run. Nevertheless, they more or less show similar results as far as the future prices of the main food items (wheat, maize, rice, sugar and vegetable oil) are concerned. For example, a forecast by OECD-FAO (2008) indicates that these prices will recover in late 2009 and will remain above their 2006 levels,[18] in the current and following decades, particularly in the case of vegetable oils.

One reason given for the high price prediction for these products is their use for the production of biofuels.

The World Bank (2009), by extrapolating from past decades (beginning in 1970) into the future, making some assumptions about the fall in GDP intensity of primary commodities and taking into account the working of Engel's law, concludes that in the long run, the prices of primary commodities will not be particularly high. This is because, it is argued, the growth in demand for commodities will ease (Ibid.: 59); "supplies of extracted commodities are likely to remain ample" (Ibid.: 6); and new reserves of petroleum would be found (Ibid.: 7). However, it does not rule out price increases in the medium terms for minerals and food products (Ibid.: 6). A forecast by the IMF (IMF, 2009.b: 44-51) indicates that the prospect for high prices is uncertain. Its medium forecast would show that with unchanged prices, demand for aluminium, copper and petroleum will recover significantly during 2009-13, reaching the 2006-07 average in the high growth scenario of the world economy and slightly below that average in a low growth scenario. Thus, in the low growth scenario, it concludes, "capacity constraints are unlikely to put upward pressure on prices before 2012-13 (Ibid.: 50).

There are so many assumptions in such forecasts, including assumptions on the timing and extent of the recovery in the global economy, that one cannot predict the exact price of primary commodities. Nevertheless, a couple of points are worth emphasizing. First, certainly the future is uncertain. Secondly, it is very likely that commodity prices will be more unstable in the future than in the past. This is because the instability in the business cycle in the world economy has increased during the last decade and is very likely to be intensified further (Akyuz, 2008) unless the markets and, particularly, financial markets are regulated. One reason for such a likely intensification is the growing importance of financial sector in economic activities in advanced countries and increases in speculative activities in this sector.

Thirdly, in view of the growing weight of China and other East Asian developing countries and India in the world economy and their relatively high predicted rate of growth of GDP, it is very likely that there will be again a boom in commodity prices sooner or later. For example, according to a forecast by JP Morgan, in 2010, China will

resume its 2008 rate of growth of GDP of 9 per cent and India will exceed its 2008 rate of growth of 6.1 per cent by 1.1 percentage points (GP Morgan online, August 7 2009).

Finally, the very increase in the instability in the world economy is likely to have a negative impact on investment in primary commodities, and therefore on their supply and price stability.

Table 30: The rate of inflation in LDCs in 2008

Range of inflation rates	Africa and Haiti		Asia	
	No. of countries	Countries	No. of countries	Countries
4-5	3	Comoros*, Equatorial Guinea, Gambia,	1	Vanuatu
5-10	13	Madagascar, Benin*, Uganda*, Cape Verde*, Cent.Af.Rep.*, Eritrea*, Mali*, Mauritania*, Sierra Leone*, Malawi*, Senegal, Togo*, Chad*	4	Laos*, Bangladesh, Bhutan*, Samoa*, East Timor*, Nepal*
10-15	12	Angola*, Sudan*, Burkina Faso*, Rwanda*, Haiti*, Tanzania*, Lesotho*, Niger*, Mozambique*, Djibouti*, Guinea-Bissao*, Zambia	3	Kiribati*, Maldives*, Papua New Guinea*
15-20	2	Dem. Rep. of Congo*, Liberia,	4	Solomon Islands*, Cambodia*, Yemen*
20-25	2	Burundi*, Guinea		
25-3	2	Ethiopia*, Sao Thome*,	2	Afghanistan*, Myanmar*
Total	34		14	

Note: * means that inflation accelerated in 2008.

Source: IMF (2009 Table A.7).

Therefore, considering that there is a limit to the availability of short-term policy tools to LDCs to counter external shocks and instability, the formulation and implementation of long-term strategies will become more important in the future.

iii. Markets and Government

The financial crisis and the resulting global economic crisis is a wake-up call for LDCs as well as other developing countries to reconsider the "market-oriented" approach to industrial and development strategies. Such strategies have been advocated by the IFIs and the so-called "Washington Consensus"; they have already been imposed on developing countries not only through IFIs, but also through the WTO and bilateral donors. The LDCs are also under pressure from the EU to liberalize their foreign trade and internal markets further through EPAs. Yet, the recent global financial crisis has revealed that market forces have deficiencies also in industrialized countries, not just in developing countries and LDCs.

The market is only one element in the coordination of economic activities. The "coordination system" consists of the market, firms and government, complemented and supported by "non-price factors" (institutions, infrastructure, information and back-up services (Shafaeddin 2005.b, Chapter 4). Without the development of non-price factors the market cannot operate efficiently. The price mechanism is slow to create markets and develop non-price factors. The market mechanism can deal with gradual and marginal changes. But it is inadequate to accelerate growth of supply capacity and promote dynamic comparative advantage; to make inefficient industries efficient and competitive, when it uses particularly shock therapy; to promote technological learning and achieve technological upgrading automatically. Hence, some government intervention is required to complement market forces at all levels of development. But the government actions and policies should complement the market, not replace it. Meanwhile, in contrast to the neo-liberals' presumption, firms are not passive: the firm, in our view, is the central driving force in the coordinating system since productive capacity is built up at the firm level.

The relative roles of each element of the coordination system, i.e. the market, enterprises and government, and their interactions, vary from one country to another and

in each specific country over time in the process of development. LDCs face a dilemma as they are at early stages of development and industrialization; there is a great risk of market failure, entrepreneurship failure as well as government failure. There is a vicious circle: the coordination mechanism fails because of the low level of development, and there is a low level of development because of the weak coordination system. In breaking this vicious circle, however, the government must play a key role to create or improve the market, to increase the organizational capacity of the entrepreneurs, to develop complementary non-price factors and last, but not least, to enhance the capacity of the state machinery. In fact, the key to industrialization at early stages of development is to improve the learning capacity and efficiency of the government machinery in formulating, implementing, monitoring and correcting policies (Shafaeddin, op. cit.). At early stages of industrialization, the government may have to invest directly in areas where the private sector, including TNCs, is not prepared to take risks. As markets and enterprises develop, the role of the government in industrialization should decrease. In short, the question is not market or government. It is to what extent and in what form the government should intervene to minimize government failure and market failure and inadequacies. But it is also important to avoid unnecessary, rigid and prolonged intervention as markets and enterprises are developed. Both functional and selective government intervention are required for capacity building as well as upgrading of the industrial structure.

iv. Trade and industrial policies for large countries and countries involved in industrial collaboration

While both large and small countries, irrespective of their production capabilities, need dynamic trade and industrial policies there is a crucial difference between the two, irrespective of their production capabilities. Countries with large populations have the added advantage of large potential domestic markets—although their industrial collaboration with others should not be ruled out. Small countries, particularly those which are in proximity with other countries, need to enter into collaboration with other countries, large or small, through production sharing if they opt for developing a competitive manufacturing sector. Thus, one can outline trade and industrial policies

which can be applied to individual countries with large populations as well as a community of countries which enter into industrial collaboration.

a. A framework for trade and industrial strategy

Assuming a country or group of LDCs wish to develop their industrial sector, we will first refer to a framework for an effective long-run industrial strategy. Subsequently, the constraints in its implementation will be outlined.

As mentioned in the third section, premature and across-the-board trade liberalization will lead to de-industrialization or at best production and exports of low-skill intensive products and assembly operations (Shafaeddin, 2006.a). The process of industrialization entails creating capacity, operating it efficiently and upgrading the industrial structure. Such a process requires the country to develop its industries in accordance with the principal of "dynamic comparative advantage". We have shown elsewhere that the experience of all successful early and late industrializers indicates that industrial policy should be selective, mixed, dynamic, predictable, and performance linked (Shafaeddin, 2005.a and 2006.b). There are a few main reasons for the need for selectivity in the incentive structure in developing countries, particularly LDCs which are in the early stages of development: stronger supply response to prices when prices changes for a few goods than when outputs of a sector are equally affected; scarcity of resources; the presence of different pecuniary and technological externalities, learning effects and linkages, in different industries; dynamic economies of time and scale, in industries where scale is important; and strategic trade i.e. when trade in a product is manipulated, managed or targeted for support by foreign competitors (Shafaeddin, 2009: 4-15).

Policy dynamism implies that trade and industrial policies should be adaptable and flexible during the process of industrialization. Initially, some consumer goods, particularly those which involve externalities, are to be chosen for capacity building with some support from the government, leaving their imported inputs free of duty. As these industries are developed, measures should be taken to make them efficient. While the production of these goods should be gradually liberalized, support is required for their entry into the international market. As these industries go through the second phase, the

industrial policy should aim at the expansion of supply capacity for some other consumer goods and/or for intermediate products needed for the first group of industries. When these industries mature and enter the international market, they should be liberalized gradually. Subsequently, some inputs to the second group, such as sophisticated and durable consumer goods and machinery used in the production of the first group, can be chosen for support. Such a rolling system of mixed process of protection and liberalization should continue until a competitive industrial structure is built up, export capabilities are developed and capacities for the efficient production of some machinery are acquired.

In such a dynamic process, the trade policy would consist of a mixture of protection and liberalization at each phase of industrialization. A necessary hypothetical tariff structure for such an industrial strategy is shown in Table 31, in which industries are grouped according to their factor intensity. Accordingly, at each phase of industrialization some industries enjoy relatively high tariff rates. Nevertheless, the average tariff rate at each phase is always lower than the industry specific (individual) tariff rates. The average tariff rate initially increases gradually as more technology intensive products are chosen for development, but it begins to fall subsequently until it approaches zero eventually.

It is important that the incentives provided by the government should be linked to the performance of the firms in cost reduction and quality improvement. Furthermore, the industrial strategy should involve both rewards and pressure. For example, competitive pressure should first be introduced in the domestic market and subsequently through gradual trade liberalization as mentioned above. In industries in which economies of scale are important, however, the competitive pressure should not be at the cost of production on an efficient scale until a minimum efficient scale of production is reached.

Table 31: Hypothetical evolution of average percentage tariffs for various groups of industries at different phases of industrialization

Phase	Factor intensity of industry				Manufactures (average)
	Resource-based, labour-intensive	Low technology	Medium technology	High technology	
I	20	0	0	0	5
II	10	40	0	0	12.5
III	0	30	50	0	20
IV	0	20	40	40	25
V	0	10	30	40	20
VI	0	0	15	25	10
VII	0	0	5	15	5
VIII	0	0	0	0	0

Source: Akyüz (2005: 27).

b. Constraints and possibilities for implementing trade and industrial policies

While the need for selectivity in promotion of industries in developing countries has increased for the reasons mentioned in the third section, the necessary policy instruments for industrial support in general, and for targeting in particular, have become less and less available. Nevertheless, there is still some room for manoeuvring, particularly in the case of LDCs.

As far as trade policy is concerned, the liberalization of trade under the Uruguay Round reduces the possibility of infant industry protection and targeting. The articles of the Uruguay Round Agreements prohibit various kinds of subsidies, including income and price supports, for export and production which are "specific to an enterprise or industry" (Shafaeddin, 2005.a, Chapter 8). Nevertheless, LDCs still have some room to manoeuvre, in applying selective support for infant industries (Rodrik, 2004). For example, the bound tariffs for individual products are higher than applied tariffs, and subsidization of exports by countries with *per capita* incomes of less than US$1,000 are allowed by WTO rules. Most LDCs are in this category.

Yet there is continuous pressure on LDCs through bilateral trade agreements and conditionalities of IFIs for the reduction of tariff levels and their dispersion. Many LDCs may have to resort to the World Bank and IMF for financial help during the global economic crisis. Added to these is the pressure through negotiation on the Non-Agricultural Market Access negotiations at the WTO, and particularly those for the EPAs. If agreed upon, EPAs, in particular, will lead to further de-industrialization of those developing countries which are at the early stages of industrialization and development; and they will create constraints for upgrading of the industrial structure of those that have some industrial and export capacity (Shafaeddin, 2009).

Therefore, LDCs should refrain from signing the EPAs proposed by the EU, and resist further pressure through bilateral agreements and IFIs. Nevertheless, this is more easily said than done as LDCs are in a weak bargaining position. There is an urgent need for the revision of the policies of the Bretton Woods institutions, the WTO and bilateral donors.

v. Other factors

Installation of new capacity is necessary, but not sufficient. The installed capacity should be utilized efficiently. In technical terms, a firm should be producing on a production possibility curve, and not inside it, which implies full utilization of installed capacity. If it does so, the firm will be "X-efficient". While competitive pressures and performance requirements, as mentioned earlier, contribute to X-efficiency, there are also other contributory factors inside and outside the firm. To explain further, achieving X-efficiency, i.e. efficient utilization of existing installed capacity, is important because it creates external economies for other firms while it also benefits from external economies created by the government as well as other firms. This is because organizational factors within the firm as well as institutional and infrastructural factors outside the firm contribute to achieving X-efficiency. When efficiency is achieved, it will spill over to other firms which may use the outputs of a firm as their inputs.

The upgrading of the production structure requires the development of technological and organizational capabilities and other skills at the firm level. The experience of China as well as other late industrializers, however, indicates that organizational, institutional and infrastructural factors and back-up services are also crucial (Gallagher and Shafaeddin, 2009).

Generally speaking, trade and industrial policies alone cannot succeed in the expansion of supply capacity, in the efficient use of the installed capacity and in upgrading of the production structure. In addition to COU (Creation, efficient Operation and Upgrading) of the supply capacity there is a need for several INs (Investment, Input, Infrastructure, Institutions, Innovation and Information) (Streeten, 1987) and Ps (Political stability, Predictability of Policies, Pressure for Performance, Participatory Politics, Public-Private relations and respect for Property rights). There are also two INs to be avoided: Instability in exchange rates and Inflation, which are related not only to macroeconomic policies, but also to control of capital flows and the development of agriculture.[19]

vi. The importance of agricultural development in industrialization

In the traditional literature on economic development, agriculture is supposed to contribute to industrialization by providing surplus for investing in industrial capacity building, and supplying agricultural raw materials as inputs to the production process. However, in our view, in the process of development, particularly at earlier stages of industrialization, the agricultural sector also makes another significant contribution to industrialization by providing an ample supply of foods. Food products are wage goods. Their availability contributes to the growth of GDP and MVA by easing inflation. It does so by easing the pressure on the balance of payments and supply of capital goods and imported intermediate goods which are necessary for industrialization and production. More importantly, as food constitutes the major item in the consumption basket of wage earners, its availability at low prices contributes to low wages, and therefore the competitiveness of the country in international markets. The experience of all industrial countries as well as East Asian Newly Industrializing Economies (NIEs) indicates that attention to agricultural development has been an ingredient in their development and industrialization policies.

As far as LDCs are concerned, likely prospects for high food prices make the development of food products an urgent need. In the majority of LDCs, food accounts for a significant proportion of their imports. According to UNCTAD, in 2006 the value of food imports was equivalent to nearly a quarter of the foreign exchange earnings from merchandise exports of LDCs and 2.75 per cent of their GDP, and it reached about 4.25 per cent of their GDP in 2008 (UNCTAD, 2009.a, Charts 17 and 18). Manufacture exporting LDCs, in fact, spent about 30 per cent of their export earnings on import of foods in 2006; yet, nearly 30 per cent of their population are undernourished (Ibid., Box Chart 4).

Of course, one may argue that if a country has a comparative advantage in the production and export of manufactured goods and can afford to import foods, there should not be a cause for concern. Nevertheless, in a country where foreign exchange is scarce, sufficient foreign exchange is not available, resources are unemployed and the country has the capacity to increase yields in food production—thus domestically produce food at low prices—development of the agricultural sector should be given special attention in its development and industrialization strategy. The increase in the

supply of food could contribute to better nourishment of the work force. Improvement in the nutrition of the workforce and low prices of food in turn contribute to improvement in the workforce's health and productivity and low wages—and thereby enhance competitiveness in the international market. Furthermore, the expansion of domestic supply of food items involves external economies. Every dollar saved as a result of domestic production of foods provides extra resources for importing capital goods necessary for capacity building in the industrial sector. In 2006, in many LDCs the value of imports of food items was equivalent to about a quarter of fixed capital formation.

Agricultural development requires ample overhead investment in such areas as transport and irrigation infrastructure, seed improvement, storage, agricultural extension facilities and back-up services in the upstream and downstream activities of the value chain of agricultural production (ECA, 2009).

The competitive pressure from cheap imports had been an important obstacle to the development of food production in developing countries until very recently. The combination of their liberalization of agricultural trade and low international prices due to agricultural subsidies provided by developed countries led to low prices of imported foods before the recent food crisis. Each year these countries provide nearly US$400 billion worth of subsidies to production and exports of their agricultural sector. This amount is equivalent to four times the total exports and about 90 times exports of agricultural exporting LDCs in 2006. LDCs should resist further liberalization of their agriculture either through EPAs or the WTO.

vii. Industrial collaboration through regional cooperation

The experience of regional trade agreements among developing countries during the last half century indicates that low-income countries benefit little from such agreements when all, or most, of the members are among least developed countries. The main reason for the relatively small expansion of regional trade among low-income countries lies in similarities in the production and export structures of the countries concerned, as we have shown elsewhere (Shafaeddin, 2008). Even the manufactured exports of LDCs are concentrated in one, or a few, labour-intensive products, such as textiles and clothing.

Such products are among the first group of items of production on which low-income countries usually embark on.

Table 32: Development of trade of within regional groups in Africa

Regional groups	Value (US$ millions)			Share in exports (per cent)			Average annual growth rate by value	
	1980	2000	2006	1980	2000	2006	1980-2000	2000-06
CEMAC	75	96	245	1.6	1	**0.9**	2.4	**16.9**
COMESA	569	1,443	3,489	1.8	4.6	**4.2**	9.7	**15.8**
CEPGL	2	10	24	0.1	0.8	1.3	17.4	15.7
UMA	109	1,094	2,400	0.3	2.3	**2.0**	25.9	14
ECOWAS	661	2,715	5,957	9.6	7.6	8.3	15.1	13.9
UEMEOA	460	741	1,545	9.6	**13.1**	**13.1**	4.8	**13**
SADC	106	4,383	8,571	0.4	9.4	**9.1**	45.1	11.8
ECCAS	89	191	334	1.4	1.1	**0.6**	7.9	**9.7**
MRU	7	5	8	0.8	0.4	**0.3**	-3	**8.1**

Abbreviations: CEMAC - Economic and Monetary Community of Central Africa; COMESA - Common Market for Eastern and Southern Africa; UMA - Arab Maghreb Union; ECOWAS - Economic Community of West African States; UEMOA - West African Economic and Monetary Union; SADC - Southern African Development Community; ECCAS - Economic Community of Central African States; MRU - Mano River Union.

Source: UNCTAD (2008.a, Table 1.4).

For example, despite the fact that East Asia has been a dynamic region during the last couple of decades, the low-income countries of this region and South-East Asia, most of which are members of one or more regional groups, have benefited little from regional trade agreements. Even Cambodia and Bangladesh, which are the most industrialized Asian LDCs (Table A.1) showed a negative growth rate of exports to the region. Yet Bangladesh is a member of two regional groups and both Bangladesh and Cambodia are members of a number of bilateral regional trade agreements as well.

Regional trade in Africa faces the same type of problem as in Asia. As is shown in Table 32, regional trade expanded to some extent during 1980-2000, following the establishment of trade agreements, particularly in the case of the Southern African Development Community (SADC). Nevertheless, the share of regional trade in the total trade of the region fell during the latter period, 2000-06. The noticeable expansion of regional trade in the case of SADC is mainly due to the involvement of South Africa, which has a more advanced industrial base than other member countries. Member countries of the regional groups trade with each other in accordance with their static comparative advantages, i.e. they export what they already produce. Free trade agreements, or preferential tariffs, may facilitate regional trade in products that are already produced in the member countries, provided the necessary back-up services and infrastructure are available. By themselves, however, they are insufficient to encourage production and trade in new products or to facilitate upgrading of the structure of production and exports. This is also clearly indicated by the pattern of trade of countries involved in bilateral trade agreements in Africa. Raw materials, particularly petroleum, are dominant items of trade among countries involved in 24 bilateral trade agreements in Africa. Again the only noticeable exception is South Africa. Of course, in addition to similarities in their production and export structures, landlocked countries also suffer from the added problem of high cost of transportation.

How can regional integration contribute to industrialization? The answer is that instead of trade leading to a division of labour and specialization, specialization and the division of labour in production should lead to trade expansion. This can be arranged through industrial collaboration, in accordance with the principle of dynamic, rather than static, comparative advantage, along with the provision of back-up services. For this

purpose, concerted policy measures and efforts by the countries concerned are required for cooperation for building supply capacity. Market forces alone will not lead to such a division of labour.

LDCs have unemployed human resources which can be potentially used for the expansion of production and trade in addition to what they already export to the North or other developing countries. Nevertheless, they suffer from the scarcity of skilled labour and other complementary factors of production necessary for such an expansion, as well as low effective demand:

> "Individual countries do not have sufficient resources to produce a large number of products. They can enter into an agreement for industrial collaboration [and production sharing] whereby each of the countries allocates scarce resources in a way that enables each of them to specialize in the production of a limited number of finished goods and/or P&C [parts and components] and exchange them with each other. Initially, trade among the countries involved could take place through the exchange of the new products produced even though they entail high production costs. Yet the exporting countries could gain increased employment, income and experience. Experience is gained more easily through specialization. An additional advantage of such industrial collaboration is the benefits arising from economies of scale. The combination of specialization, a larger market, economies of scale and experience contribute to a reduction of production costs over time. Therefore, they also can eventually export the products concerned to the third markets" (Shafaeddin, 2008: 42).

Industrial collaboration can contribute to the creation of effective demand and at the same time remedy the scarcity problem of complementary factors of production. Industrial collaboration can be arranged by neighbouring, particularly landlocked countries, around their border areas or between small and Island countries which are in proximity with other countries, including non-LDCs.

To emphasize the development of the industrial capacity of individual countries, specialization and division of labour are crucial. Division of labour here means not only sharing the market, but also specializing in production of different products. Each country will specialize in production of one or a few parts and components of a product for

assembly operation. Production of parts and components as well as assembly operation for different products will be shared through production sharing among the countries involved. Of course, in arranging industrial collaboration the characteristics, economic structure and capabilities of specific countries need to be taken into account. It also requires the development of technological capabilities and other skills and the harmonization of trade and industrial policies among the countries involved. There is also a need for appropriate rules of origin. Furthermore, the product to be chosen for industrial collaboration should be identified; the processing of raw materials before exporting to other countries of the region could be one possibility, but it is not the only one. UNIDO can assist the countries concerned in the above issues, including studying the feasibility, modalities and choice of products for industrial collaboration, providing technical and technological training etc.

For the purpose of industrial collocation, the countries concerned may also use FDI and create EPZs. Nevertheless EPZs here should contribute to the industrial collaboration programmes. Furthermore, both FDI and EPZs should be conducive to the industrial strategy of the countries concerned.

viii. The role of FDI

FDI may provide certain skills and an important marketing channel for the exports of LDCs. Furthermore, it is maintained that when an economy opens up to trade and FDI, an initial period of imitation will lead to a large catch-up opportunity followed by a shift towards innovation "as the knowledge gap is reduced and the economy's technical maturity rises" (Elkan, 1996)**.** However, least developed countries attract little FDI, particularly to their manufacturing sector, despite their liberalization of foreign investment regimes and the provision of incentives for their attraction. Table 33 provides data on the inflow of FDI to LDCs in 2007 in absolute terms, when it was at its highest level. First of all, FDI accounts for less than 15 per cent of their gross fixed capital formation (GFCF) (UNCTAD, 2008.c, Table B.3**).** Secondly, while LDCs account for over 14 per cent of the population of developing countries, in 2007 they attracted only 2.3 per cent of the inflow of FDI to developing countries as a whole, and their *per capita* FDI inflow is only about 15 per cent of that of other developing countries. Thirdly, FDI in

LDCs is concentrated in primary commodities. The manufacturing exporters show the smallest FDI per capita among various groups shown in the table.[20] By contrast, petroleum and other minerals received nearly half of the inflow of FDI to LDCs and is the highest in terms of FDI inflow per capita.

Table 33: Population and FDI inflow to various groups of LDCs in 2007

Main exporting Groups		Population		Value		
	No. of countries	Millions	%	US$ millions	%	*$per capita*
Petroleum & gas[a]	6	142.6	18.1	3,486	29.9	24.4
Other mineral	9	88.8	11.3	1,728	18.1	19.4
Agriculture	10	107	13.6	1,613	14.3	15.1
Manufactures	7	209	26.6	1,802	15.4	8.6
Services	12	139.4	17.7	1,468	12	10.5
Diversified	4	43.5	5.5	1,144	9.8	26.2
Total above	48	731.3	92.8	11,678		15.9
Sudan and Angola	2	54.3	7.1	n.a.		n.a.
Total LDCs	50	758.6	100	11,678[b]		15.9
Other developing countries		**4,600.3**[c]		**488,069**		
106.9 Total developing countries:			5,358.9[c]		499,747	
93.2						
excl. China and HK		4,046		259,520		64.1
excl. China, HK and India:		2,877		236,570		82.2
excl. LDCs		2,128.4		224,882		105.6
Share of LDCs in developing countries			14.1		2.3	

a: 2006; excludes the Sudan and Angola.
b: UNCTAD's estimate for total LDCs is $13,375m; the above figures exclude Sudan and Angola.
c. Includes China, excludes LDCs.

Source: Calculated by the author, based on UNCTAD (2008.c) .

In recent years, China has been active in investing in the mineral sector in Africa, including African LDCs, in order to secure the supply of primary commodities for its industrialization. For example, it has invested in petroleum in Angola and Sudan, in copper in Zambia and in nickel and cobalt in Congo. More recently, some intra-African FDI in the textiles and clothing sector of African LDCs has taken place. For example, Mauritian, South African and Libyan firms invested small amounts in Madagascar, Lesotho and Uganda respectively. Some investment by foreign firms has also taken place in the financial sector and telecommunications through the purchase of local firms (UNCTAD, 2008.c: 42-3). Investment in the public utilities and infrastructure of LDCs is, however, not significant either; its share in total inward FDI was nearly 26 per cent in 2006 (Ibid., Table A.III.1). A few factors are responsible for the lack of attraction of FDI and the lack of its contribution to the development of local firms and local economies in low-income countries, particularly in their manufacturing sectors. These factors include the weak capabilities of domestic firms, low skills and productivity, and the lack of infrastructure and back-up services.

The question is whether "FDI contribute to bridging the knowledge gap and raising technical maturity?" as claimed by Elkan (1996) and others. In fact, a test of the impact of FDI on the industrialization of a developing country is its impact on the development of local capabilities through spill-over channels of demonstration effects, learning effects and linkage effects (Paus, 2005). Such capabilities can be influenced, *inter alia*, by experience, skill development and the accumulation of knowledge by the labour force of the host country. Generally speaking, the findings of the literature on the spill-over effects of FDI on the host country are mixed (Gorg and Greenaway, 2004). In countries where the government has developed the capabilities of national firms, managed and targeted FDI, supported R&D and technological development and training etc, the country has benefited from FDI in its industrialization. On the other hand, where the government has followed hands-off policies, domestic capabilities have not developed much. The contrasting experience of Ireland with Costa Rica (Ibid.) and China with Mexico (Gallagher and Shafaeddin, 2009; Gallagher and Zarsky, 2007; Shafaeddin and Pizarro, 2009) provide good indications in this respect. The experience of both Mexico and Costa Rica reveals that liberalizing FDI and leaving the activities of TNCs to the

operation of market forces will not raise the domestic capabilities for enhancing industrialization and development. By contrast, China and Ireland have succeeded in considerable development of technological capabilities of their own local firms because of the active role of their governments. In other words, to benefit from FDI, there is a need for the development of the capabilities of the national firms. Such development requires nurturing (Lall, 2005).

ix. EPZs and industrialization

The potential contribution of FDI in export processing zones (EPZs) to industrialization also depends on an active role of the government. EPZs can contribute to industrialization if they are arranged within the context of the industrial strategy of the country, or countries which get involved in industrial collaboration. According to the latest data available with the ILO, there are 3,500 EPZs and similar types of zones in 130 countries, out of which 155 operate in Africa (90 in Sub-Saharan Africa and 65 in North Africa) and 50 in the Middle East. The successful ones are, however, a handful. For example in Africa and the Middle East, only two countries are regarded as successful: the United Arab Emirates and Mauritius. The UAE's is basically a free trade zone rather than an EPZ, as little processing takes place in the country.

While Mauritius achieved export expansion for a while with the support of the government, there has so far been limited success in upgrading of its industrial structure despite over three decades of involvement in an EPZ. The country first started its EPZ in 1971. At the time, it was a tiny country of less than a million people with heavy dependence on the production and export of sugar. In 2006, manufactured goods constituted nearly 67 per cent of its exports.

Initially, Mauritius managed to increase its exports fast by concentrating on the production of textiles and clothing. Exports increased at an average annual rate of 14.4 per cent during the 1980s, but the corresponding rate declined to 4.3 per cent in the 1990s and 1.82 per cent during 2000-07. In 2007, when the exports of developing countries expanded by nearly 15 per cent, the figure for Mauritius was in fact negative (-11.9 per cent) (UNCTAD, 2008.a, Tables1.1.1 and1.2.1). The termination of the MFA was an important factor.

Mauritius began to update its export structure by diversifying into the production of telecommunications equipment in the early years of this century in anticipation of the termination of MFA. However, the country needs to make further efforts to diversify and upgrade its production and export structure as it has lost its privileged position in the EU market for its exports of sugar. As is shown in Table 34, the latest available data indicate that the country's achievement in upgrading its production structure is not impressive.

Table 34: The structure of manufacturing output of Mauritius (1995-2004)

Product Groups	1995	2004
Food, beverages and tobacco	25	24
Textiles and clothing	52	51
Machinery and transport equipment	2	2
Other manufacturing and unallocated data	21	24

Source: World Bank, *World Development Indicators, 2008,* Table 4.3.

Despite such a shortcoming, Mauritius has been more successful in its EPZ operation than other African countries. The neo-liberals attribute the success of the country in its growth of exports and GDP to its implementation of structural adjustment and open door policies (Sachs and Warner, 1995 and 1997). Nevertheless, this is a simplistic and distorted view. Mauritius pursued a complex strategy somewhat like the East Asian NIEs. First, the country remained a highly protected economy during the 1970s and 1980s, when the effective rate of protection exceeded 100 per cent before reducing to 65 per cent in the late 1980s (Subramanian, 2009: 9). Even until the late 1990s, the nominal tariff rate on manufactured goods exceeded on average 31 per cent; for light manufactured goods it was even higher, at 34 per cent (UNCTAD, 2008.a, Table 4.3).

Secondly, the export sector in the EPZ enjoyed a number of privileges, including free access to imported inputs, tax holidays (which is a sort of subsidy) and the low

wages of women, who were the main employees in the EPZ. In other words, the trade policy incentive was neutral for exports and imports, but at a high level of government intervention.

Thirdly, the government intervention did not stop at trade policy and fiscal measures, and the provision of incentives to domestic firms was not the only factor. The government took other measures including institutional arrangements and provision of incentives to domestic firms to operate in the EPZ alongside TNCs. While foreign firms were active in EPZ, only 12 per cent of the total employment and 50 per cent of the total equity of firms were accounted for by foreign firms. A number of other measures and institutional arrangements were also made to enhance the capabilities of domestic firms to promote exports. Further institutional and organizational arrangements were made by the government to enhance its own capabilities in promoting investment, developing and operating industrial sites and estates, and planning and reviewing export-oriented arrangements.[21]

Finally, the country enjoyed preferential market access to Europe and the USA through the MFA and followed a competitive exchange rate policy (Subramanian, 2009). Participatory politics was another factor in the management of conflict of interests among the diverse ethnic groups in the country.

Some of the policy instruments which were available to Mauritius are no longer available to LDCs because of the changes in international trade rules, but they still have some room to manoeuvre for the expansion of supply capabilities as mentioned before. Furthermore, they benefit from privileged access to markets in developed countries, i.e. in the EU through EBA (Everything But Arms) and in the USA through the African Growth and Opportunity Act (AGOA). Moreover, through regional agreements they can benefit from preferential arrangements for production sharing through industrial collaboration as explained above.

In short, policies for increasing the contribution of FDI to industrialization and development, whether or not through EPZs, should address two issues: the management of FDI and its direction to specific sectors and industries which can provide linkages and spill-over to other sectors; enhancing the capabilities of domestic firms, *inter alia*, by

functional and selective intervention. The question again boils down to the industrial strategy of the country.

Remote Island countries have transport problems, despite their access to the sea, because of the small scale of their volume of trade in relation to the capacity of cargo ships. Most of these Island countries depend on tourism. They may consider following a policy consisting of foreign reserve management and specialization in various types of tourism. For example, some may specialize in sports tourism, others in health tourism, luxury tourism, academic tourism etc. Furthermore, they may invest in areas which provide backward linkages to the tourism sector such as food processing. Those which are in proximity with each other may also arrange some production sharing.

The role of UNIDO

UNIDO can contribute little to short-term counter-cyclical policies to remedy the economic crisis facing LDCs. However, it has tools with which it can assist both industrial supply expansion for the diversification of LDCs which depend on primary commodities, and the upgrading of the industrial structure of "manufactures exporter" LDCs. Generally speaking, UNIDO can assist them mainly in the areas of technology, training, industrial collaboration and feasibility studies.

1. Technology acquisition and development

UNIDO can assist LDCs in the acquisition of technology by providing them with information on sources of technology, particularly from other developing countries and China, and their suitability. It also can provide assistance in arranging cooperation on R&D, particularly among countries which are—or will be—involved in industrial collaboration and production sharing.

2. Training

UNIDO can play an important role in technical training for operating machines, for technology modification and development as well as R&D.

3. Industrial collaboration

UNIDO may assist countries in feasibility studies for arranging industrial collaboration, particularly in identifying products and parts and components for production sharing for industrial supply expansion and upgrading.

4. Provision of advice and training for the formulation and implementation of industrial policies

UNIDO may provide assistance in the development of a competitive industrial structure and its upgrading, based on the principle of dynamic comparative advantage. In this respect, issues such as the identification of areas for supply expansion, the clustering of small and medium-sized enterprise (SMEs) and EPZs, including the necessary technical advice, feasibility studies and training, may also be considered.

5. Cooperation with other UN organizations

i. In cooperation with ITC and UNCTAD, UNIDO can provide market information and identify marketing channels for new manufacturing products.

ii. In cooperation with UNDP, UNIDO may provide assistance in the development of back-up services necessary for industrial cooperation and regional trade expansion in manufactured products.

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Annexe

Table A.1: Main characteristics of Least Developed Countries (2006)

Export group & countries	Charact-eristics	Population (millions)	Manu-facturing/ GDP (per cent)	Exports (US$ millions)	Manu-factured Exports/ Total Exports (per cent)	Exports/ GDP (per cent)	Imports/ GDP (per cent)	Export-Import/ GDP (per cent)	Accumu-lated Debts/GDP (per cent) (2005)	Debt Service/ Exports (2005)
Petroleum & Natural Gas		**197.1**	**5.94**	**58,894.3**	**5.55**	**41.64**	**32.86**	**8.78**	**43.83**	**5.75**
D. Rep. of Congo	8, H	60.6	5.4	2,300.2	2.3	31.38	42.63	-11.25	131.1	8.3
Myanmar	7	48.4	9.3	4,863.3	18.8	0.12	0.07	0.04	..	..
Sudan	6, H	37.7	8.3	5,478.7	2.9	27.10	23.55	3.55	51.2	5.9
Yemen	5,	21.7	6.4	6264	2.8	47.23	44.93	2.31	29.2	..
Angola	4	16.6	3.8	33,795	0.3	74.21	46.83	27.38	21.2	7.6
Chad	4, L, H	10.5	6.7	2,274.7	2.5	55.74	27.45	28.29	27.1	1.2
East Timor	2, I	1.1	2.6	114.1	10.7	2.22	39.72	-37.50	..	..
Equ.Guinea	1, L	0.5	5	3,804.3	4.1	95.13	37.70	57.43	3.2	..
Other Minerals		**88.8**	**8.49**	**10,699.7**	**6.48**	**25.21**	**36.59**	**-11.38**	**66.57**	**9.09**
Mozambique	5, H	21	13	2,381.1	5.6	42.28	37.49	4.80	47.8	2.3
Niger	4, H	13.7	6.5	355.7	7.1	18.94	31.57	-12.64	22	..
Mali	4, L, H	12	9	1,476.6	5.2	28.62	34.64	-6.01	24.5	3.7
Zambia	4, L, H	11.7	11.2	3,770.4	16	18.77	26.71	-7.94	21.7	4.7
Guinea	3, H	9.2	4.1	976.2	10.8	26.12	36.15	-10.02	98.9	12.2
Burundi	3, L, H	8.2	13.2	120.1	2.4	9.25	39.34	-30.09	156.2	39.6
Sierra Leone	3, H	5.7	2.5	216.6	8.2	16.50	40.01	-23.51	98.5	6.2
C.A. Republic	2, L, H	4.3	11.2	144.3	1.5	11.51	22.60	-11.09	68.3	0.3
Mauritania	2, H	3	5.7	1,258.7	1.5	54.91	60.81	-5.90	61.2	3.7
Agriculture		**107**	**8.48**	**4,408.9**	**10.11**	**25.81**	**44.90**	**-19.09**	**100.76**	**12.38**
Uganda	5, L, H	29.9	9	962.2	9.1	14.41	32.16	-17.74	13.4	9.4
Afghanistan	5, L, H	26.1	14.7	179.6	17.4	32.88	80.94	-48.06	21.1	..

Table A.1 continued

Export group & countries	Characte r-istics	Population (millions)	Manu-facturing/ GDP (per cent)	Exports (US$ millions)	Manu-factured Exports/ Total Exports (per cent)	Exports/ GDP (per cent)	Imports/ GDP (per cent)	Exports-Imports/ GDP (per cent)	Accumu-lated Debts/GDP (per cent) (2005)	Debt Service/ Exports (2005)
Burkina Faso	4, L, H	14.4	13.3	482.9	8.3	9.11	23.96	-14.84	18.5	6.2
Malawi	4, L, H	13.6	11.6	668.4	13.2	24.30	55.32	-31.02	26.9	11.1
Benin	3, H	8.8	8.3	283.1	6.5	18.52	27.81	-9.29	17.3	..
Somali	3, H	8.4	2.5	160.8	6.4	0.31	1.69	-1.38	..	..
Liberia	2, H	3.6	10.2	1,490.2	8.3	33.88	46.62	-12.75	423.8	..
G-Bissau	2, H	1.6	..	83.9	14.2	35.36	49.53	-14.17	233.6	22.8
Kiribati	1, I	0.1	0.8	6.3	16.3	30.24	71.89	-41.65	..	..
Solomon Is	1, I	0.5	5.9	91.5	1.4	59.08	59.12	-0.04	51.5	..
Manufactured		**209.8**	**11.60**	**18,259**	**68.09**	**30.64**	**64.34**	**-33.69**	**44.05**	**5.95**
Bangladesh	9, H	156	16.6	11,962.6	80.8	17.98	25.54	-7.55	33.2	6.5
Nepal	5, L, H	27.6	7.5	759.7	48.5	18.55	37.72	-19.17	38.1	9.6
Cambodia	4	14.2	20.9	3,990.5	73	68.97	78.61	-9.64	48.6	0.4
Haiti	3, H	9.4	7.8	522.6	70.2	14.25	43.12	-28.87	23.9	6.4
Lesotho	2, L	2	17.4	671.9	69.3	41.83	86.70	-44.86	44.8	10.6
Bhutan	1, L	0.6	7.6	348.2	47.6	40.36	64.66	-24.30	75.7	2.2
Tuvalu	1, I	0 [10,000]	3.4	3.5	87.2	12.56	114.00	-101.44	..	..
Services		**139.4**	**6.43**	**3,297**	**6.66**	**30.15**	**57.61**	**-27.45**	**85.82**	**8.97**
Ethiopia	8, L, H	81	4.6	1,043	2.6	15.10	32.62	-17.52	17.5	3.8
Tanzania	6, H	39.5	6.9	1,689.9	3.5	23.51	32.86	-9.35	33.2	2.4
Rwanda	3, L, H	9.5	9.2	135.4	4.4	9.59	34.52	-24.93	16.8	6.7
Eritrea	3, L, H	4.7	10.4	11.2	2	5.15	42.27	-37.12	73.7	23.2
Gambia	2, H	1.7	5.3	11.5	3.7	51.49	69.92	-18.43	142	..
Comoros	1, I, H	0.8	4.2	7.5	3.7	12.06	30.78	-18.72	69.9	8.1
Djibouti	1	0.8	2.8	18.9	1.2	42.19	54.88	-12.68	60.3	4.4
Cape Verde	1, I	0.5	4.6	110.3	7.1	16.34	51.82	-35.49	52.5	14.2
Maldives	1, I	0.3	6.6	135.6	5.4	82.60	105.91	-23.31	49.5	..
Samoa	1, I	0.2	15.2	84.9	36.9	30.19	53.91	-23.71	202.5	..
Sao T.&Principe	1, I	0.2	3.9	3.9	1.1	30.74	123.08	-92.33	289.7	..
Vanuatu	1,I	0.2	3.5	44.9	8.3	42.88	58.69	-15.82	22.2	..

Table A.1 continued

Export group & countries	Characte r-istics	Population (millions)	Manu-facturing/ GDP (per cent)	Exports (US$ millions)	Manu-factured Exports/ Total Exports (per cent)	Exports/ GDP (per cent)	Imports/ GDP (per cent)	Exports-Imports/ GDP (per cent)	Accumu-lated Debts/GDP (per cent) (2005)	Debt Service/ Exports (2005)
Diversified		**43.5**	**14.45**	**3,736**	**31.50**	**31.25**	**42.29**	**-11.04**	**54.20**	**8.23**
Madagascar	7, H	19.2	15.4	1,008.2	29.1	27.39	40.40	-13.02	26.4	4.1
Senegal	4	12.1	16.2	1,491.6	26.6	26.56	43.53	-16.97	21.6	7.2
Togo	3, H	6.4	6.1	359.7	37.9	39.08	56.21	-17.14	81.9	..
Laos	3, L	5.8	20.1	876.5	32.4	31.98	29.02	2.96	86.9	13.4

Notes: H - highly indebted; L - landlocked; numbers refer to population groups: 1 = less than 1 million; 2 = 1m-5m; 3 = 5m-10m; 4 = 10m-20m; 5 = 20m-30m; 6 = 30m-40m; 7 = 40m-50m; 8 = 50m-100m; 9 = more than 150m.
Source: Based on UNCTAD (2008.b, various tables, and 2008.a, Table 8.3.1).

Table A.2: Population of Various LDCs in 2006

Population (millions)	No. of countries	Countries: Africa & Haiti	Countries: Asia
Less than one	13	Cape Verde, Comoros, Djibouti, Equ. Guinea, Sao Tome & Principe,	Bhutan, Maldives, Vanuatu, Tuvalu, Solomon Islands, Kiribati, Samoa
1-5	7	Central African Rep., Eritrea, Gambia, Lesotho, Liberia, Mauritania	East Timor
5-10	10	Benin, Burundi, Guinea, Haiti, Mali, Rwanda, S. Leone, Somalia, Togo	Laos
10-20	9	Angola, B. Faso, Chad, Madagascar, Malawi, Niger, Senegal, Zambia	Cambodia
20-30	5	Mozambique, Uganda	Afghanistan, Nepal, Yemen
30-40	2	Sudan, Tanzania	
40-50	1		Myanmar
50-10	2	Congo, Ethiopia	
>150	1		Bangladesh

Source: Based on UNCTAD (2008.b).

Table A.3: Projected Annual Average Growth Rate of GDP for Individual LDCs (2008-09)

Countries	Year		Countries	Year	
Africa	**2008**	**2009**	**Island**	**2008**	**2009**
Equatorial Guinea	11.3	-5.4	Maldives	5.7	-1.3
Angola	14.8	-3.6	Comoros	1	0.8
Madagascar	5	-0.2	Kiribati	3.4	1.5
Lesotho	3.5	0.6	Cape Verde	5.9	2.5
Haiti	1.3	1	Vanuatu	6.6	3
Eritrea	1	1.1	Samoa	4.5	4
Togo	1.1	1.7	Solomon Islands	7.3	4
Guinea-Bissau	3.3	1.9	Sao Tome and Principe	5.8	5
Mauritania	2.2	2.3	East Timor	12.8	7.2
Central African Republic	2.2	2.4	Tuvalu	..	..
Guinea	4	2.6	**Average Island**	**5.89**	**2.97**
Dem. Rep. of the Congo	6.2	2.7			
Chad	-0.4	2.8	**Asia**		
Niger	9.5	3	Cambodia	6	-0.5
Senegal	2.5	3.1	Nepal	4.7	3.6
Burkina Faso	5	3.5	Laos People's Dem. Republic	7.2	4.4
Burundi	4.5	3.5	Myanmar	4.5	5
Benin	5	3.8	Bangladesh	5.6	5
Mali	5	3.9	Bhutan	6.6	5.7
Gambia	5.9	4	Yemen	3.9	7.7
Sudan	6.8	4	Afghanistan	3.4	9
Zambia	6	4	**Average Asia**	**5.24**	**4.99**
Mozambique	6.2	4.3			
Sierra Leone	5.5	4.5	**All LDCs**	**5.72**	**3.3**
Liberia	7.1	4.9			
United Rep. of Tanzania	7.5	5			
Djibouti	5.8	5.1			
Rwanda	11.2	5.6			
Uganda	9.5	6.2			
Ethiopia	11.6	6.5			
Malawi	9.7	6.9			
Somalia	..	..			
Average Africa	**5.8**	**2.96**			

Source: Based on IMF 2009.b (April).

Appendix 4
List of countries included in IMF, WEO

Africa and Haiti	Asia	Islands
Angola	Bangladesh	Comoros
Benin	Bhutan	Kiribati
Burkina Faso	Cambodia	Maldives
Burundi	Lao People's Democratic Republic	Samoa
Central African Republic	Myanmar	Sao Tome and Principe
Chad	Nepal	Solomon Islands
Democratic Republic of the Congo	Yemen	Vanuatu
Djibouti		
Equatorial Guinea		
Eritrea		
Ethiopia		
Gambia		
Guinea		
Guinea-Bissau		
Haiti		
Lesotho		
Madagascar		
Malawi		
Mali		
Mauritania		
Mozambique		
Niger		
Rwanda		
Senegal		
Sierra Leone		
Sudan		
United Republic of Tanzania		
Togo		
Uganda		
Zambia		

Footnotes

[1] Based on UNCTAD (2008.a) and UNIDO (2009, Tables 9.1 and 10.4).
[2] Based on UNCTAD (2008,a, Tables 3.2.D and 3.1).
[3] Calculated by the author based on UNCTAD (2009.a, Table 5).
[4] These are: Cape Verde, Comoros, Djibouti, Eritrea, the Gambia, Kiribati, the Maldives, Nepal, Somalia and Afghanistan. Note that Cape Verde is not included as an LDC as of January 2009.
[5] Finger and Schuler (2000: 525). According to the ACP Secretariat, the operational costs of SPS alone "represent overheads of between 2 per cent and 10 per cent of the value of produce exported by the vast majority of ACP countries" (CTA, 2003: 3).
[6] See Sundaram and Arvin (2008: table 7) and Shafaeddin (1995) for comparison with 1970s.
[7] The share of banking assets held by foreign banks (owned mainly by developed countries) is very high in some countries ranging, for example, from 53 per cent in the case of Angola to 100 per cent in the cases of Madagascar, Mozambique and Swaziland. Nevertheless, the financial meltdown suffered by the parent banks was not transmitted to their subsidiaries in these countries (AfDB, 2009 .a: 2-4).
[8] See, (htt://blogs.worldbank.org/files/peoplemove/files/table 1-remit-flow).
[9] Based on World Bank, *World Development Indicators* (the same source as Table 22).
[10] According to the Engel's Law as the income of the household increases, the percentage of family budget spent on food declines, but when income declines, the households cut more on their luxury goods than food items as there is a minimum of consumption needed for survival. In other words, there is a "ratchet effect" in favour of food consumption.
[11] For the structure of Nepal's exports see Shafaeddin (2008).
[12] LDC Watch, available at http//www.ldcwatch.org/wcm/index.php, June 2009.
[13] Note that the price of manufactured goods exported by industrialized countries is cost-determined, but the prices of massive exports of low-skilled manufactured goods of primary commodities are demand-determined.
[14] Based on Serieux (2009: 23-24).
[15] Note that Zambia still figures in the list of heavily indebted countries even though its debt/GDP ratio has decreased in more recent years.
[16] Only Somalia, Malawi and Angola did not devalue over the period concerned. A number of other countries devalued less than five per cent.
[17] The World Bank argues in favour of an arrangement for repatriation of capital flight to Sub-Saharan countries (Fofack and Ndikumana, 2009). But such an arrangement seems unrealistic technically, legally and politically. It is not clear why the easier option of capital controls is not proposed.
[18] In 2006 the price index of food items was already over 48 per cent higher than that in 2003.
[19] For more details see Shafaeddin (2005.a: 26-27).
[20] For the earlier periods see also UNCTAD (2005.b).
[21] See, http://fdimagazine.com/news, 20 October 2004.