ATRACTING CAPITAL AND INVESTMENT TO LEAST DEVELOPED COUNTRIES PARTL M., KABÁT L.

Abstract

Private finance and investment are necessary for achieving sustained economic growth in less developed countries and consequently for reaching the internationally recognized Millennium Development Goals (MDGs). One of the most important tasks for developing countries representatives is to create climate that stimulates private finance and investment as well as public-private partnerships. Unfortunately, only a few developing countries are able to reach sufficient amount of domestic and foreign capital themselves. Capital, after being accumulated, can be effectively used as a main tool in fight against poverty, hunger, better access to education, diseases and other related issues.

Key words: Millennium Development Goals, private finance, developing countries, Official Development Assistance, Foreign Direct Investment, least developed countries

INTRODUCTION

The Least Developed Countries represent a serious longlasting and world-wide economic and social pro-blem. The are more than 785 millions of people living in these countries, with some 122 millions of children below five years of age and 376 millions of youngsters below 18 years. Their living standard is deeply below any acceptable standards – literacy rate is frequently below 50%, GNI per capita not exceeding 2–3 USD per capita per day, the under 5 mortality jumping over 200 per 1000 inhabitants (United Nations, 2007). Additional relevant information could be found at (World Population Prospects, 2006). Further data and arguments for deeper analysis into this problem offers (Measuring Progress in Least Developed Countries, 2007).

To find a solution to these problems it is an enormous economic, social and political problem not only for these poor, heavily indebted countries but also for entire world community, including highly developed coun-tries. Seriousness of the problem activated the worldwide discussions and studies in substance of the problem with long-lasting effort to combat it. The millennium development meetings organized under auspices of the various United Nations programs presented the more or less specifically defined commitments of the industrial countries to assist with the core economic and social problem of the developing countries. Millennium development goals (United Nations, 2007) reflect the following key problematic areas requiring an urgent attention and solution:

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria and other diseases
- Ensure environmental sustainability
- Develop a Global Partnership for Development.

The world development commitments (Sachs, 2004) is reflected in strategic goal to assign 0.7% of the developed countries GNI to the official development assistance toward the poor and heavily indebted countries. However, the results achieved under this program after several years in operation are not satisfying. Only few countries adopted this target as a serious national strategy and commitment. According the official ODA report (ODA Prospect After Monterey) only five countries achieved this target (Luxembourg, Norway, Sweden, Denmark and Netherlands) with ODA/GNI ration between 0.74% and 0.96%. Also, only four countries confirmed their decision to cope with the ODA target (Belgium, Finland, France and Ireland). The Czech and Slovak Republics contributed to overall ODA programme in 2006-2007 with some 340 respectively 123 million USD. Details of the last status in Net Official Development Assistance are shown in OECD Table 1 with graphical presentation on Figure 1.

An important part of the ODA volume is represented by debt relief programme. In 2006 it was more than 18 billion USD out of total 104 billions in ODA. In 2007 this debt relief value decreased significantly to 8.7 billion USD only.

Traditionally the largest contributions are generated by USA and Germany with some 22 and 12 billions of USD. The highest share in ODA values reached Norway with 0.95%, Sweden with 0.93% and Luxembourg with 0.90% of GNI.

Some countries reduced their ODA contribution significantly during 2006–2007 periods. In case of Canada and France this reduction was between 10–15%, while in case of Japan and UK this reduction reached more than 30%. On the other side, Spain and Korea are reporting 33% and 42% increase in ODA financing.

Sharp changes in ODA inflows are negatively commented by recipient countries, as their development projects and other related activities are heavily depending exclusively on these financial sources. Aid

	200'	7	2006		2007	
	ODA	ODA/GNI	ODA (DDA/GNI	ODA	Percent change
	USD million	%	USD million	%	USD million (1)	2006 to 2007 (1)
	current		current		At 2006 prices an	id exchange rates
Australia	2 471	0.30	2 1 2 3	0.30	2 145	1.0
Austria	1 798	0.49	1 498	0.47	1 613	7.6
Belgium	1 953	0.43	1 978	0.50	1 756	-11.2
Canada	3 922	0.28	3 684	0.29	3 585	-2.7
Denmark	2 563	0.81	2 236	0.80	2 302	2.9
Finland	973	0.40	834	0.40	880	5.5
France	9 940	0.39	10 601	0.47	8 918	-15.9
Germany	12 267	0.37	10 435	0.36	11 048	5.9
Greece	501	0.16	424	0.17	446	5.3
Ireland	1 190	0.54	1 022	0.54	1 068	4.6
Italy	3 929	0.19	3 641	0.20	3 509	-3.6
Japan	7 691	0.17	11 187	0.25	7 824	-30.1
Luxembourg	365	0.90	291	0.84	325	11.7
Netherlands	6 215	0.81	5 452	0.81	5 621	3.1
New Zealand	315 3 727	0.27	259	0.27	268	3.7 13.4
Norway	403	0.95 0.19	2 954 396	0.89	3 349 359	-9.4
Portugal Spain	405 5 744	0.19	3 814	0.21 0.32	5 103	-9.4 33.8
Sweden	4 334	0.41	3 955	1.02	3 853	-2.6
Switzerland	1 680	0.37	1 646	0.39	1 596	-3.0
United Kingdom	9 921	0.36	12 459	0.59	8 839	-29.1
United States	21 753	0.16	23 532	0.18	21 197	-25.1
onned States	21 /00	0.10	25 552	0.10	21 177	-7.7
TOTAL DAC	103 655	0.28	104 421	0.31	95 605	-8.4
Average Country Effort		0.45		0.46		
Memo Items:						
EC	11 771		10 245		10 556	3.0
DAC-EU countries	62 095	0.40	59 035	0.43	55 639	-5.8
G7 countries	69 422	0.23	75 539	0.27	64 919	-14.1
Non-G7 countries	34 232	0.52	28 882	0.51	30 685	6.2
Non-DAC economies:						
Chinese Taipei	514	0.13	513	0.14	474	
Czech Republic	179	0.11	161	0.12	155	-3.6
Hungary	91	0.07	149	0.13	75	-49.9
Iceland 	45	0.25	41	0.27	39	-6.5
Korea	672	0.07	455	0.05	650	42.8
Latvia	16	0.06	12	0.06	15	23.4
Lithuania	47	0.11	25	0.08	44	74.8
Poland Showh Republic	356	0.09	297	0.09	306	3.2
Slovak Republic	68	0.09	55	0.10	55	0.6

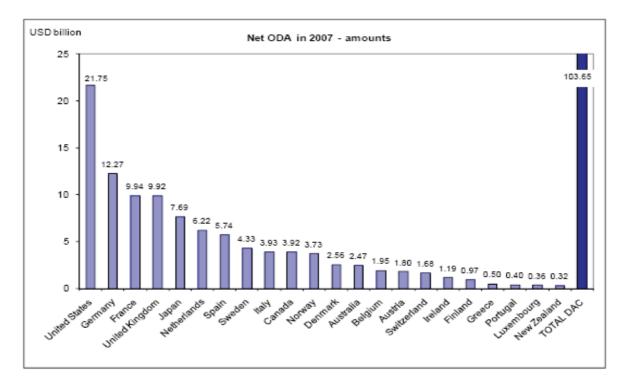
TABLE 1: NET OFFICIAL DEVELOPMENT ASSISTANCE IN 2007 Preliminary data for 2007

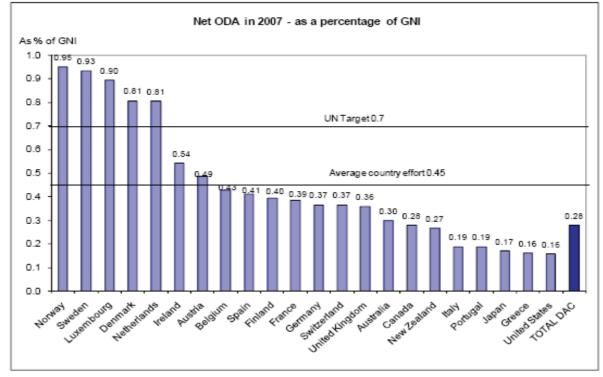
(1) Taking account of both inflation and exchange rate movements.

Note: The data for 2007 are preliminary pending detailed final data to be published in December 2008. The data are standardised on a calendar year basis for all donors, and so may differ from fiscal year data available in countries' budget documents.

Source: OECD, 4 April 2008.







Source: OECD, 2008

commitments declared by donors are not being fulfilled. The overall contribution by the Development Assistance Countries reached just 0.28% of their GNI. The donor countries are arguing with relatively low effectiveness in using this money and require better project management and higher transparency in use of these means.

There are various explanations and arguments for these unsatisfying results. The Development assistance committee presented serious in-depth analysis (Deutcher, 2008) into this problem and pointed out some substantial problems. Among them it named the steps necessary to undertake in order to improve the ODA financing effectiveness and goal orientation. The Development Assistance Committee (DAC) underlined particularly the following expectation on developing countries side:

Better Governance – both public and private sectors need to be well governed. Desired is to create a positive environment that will encourage domestic and international resources inflow for further development. The internationally agreed codes and standards, which proved to be helpful for economic growth in other countries, should serve as a guideline to policymakers in developing countries. The successful implementation requires strong country ownership and transparent settings. Democratically elected government in fair elections, other reliably working public institutions such as courts, police departments, schools and media are the necessity for the good public governance. Environmentally friendly activities, respect to human rights, the rights of women and children and transparent management of public resources should also be the key issues to deal with. Independent justice system settling down disputes involving foreign investors also enhances potential investor confidence.

Private Sector Development – domestic investment and entrepreneurship (especially SMEs) is crucial for sustained economic growth. The lack of access to innovations, educated human resources, financial and consultancy services is an inhibitor that can be found in most of developing economies. Crucial for economic development is also market stability (supply and demand fluctuation). Regional Banks and Trust Funds should deal with direct assistance (project finance, venture capital, export finance) and indirect assistance (promotional and development support services) to promote SME development.

Regional Integration – can strengthen countries' competitiveness in terms of better regional cooperation in growing international trade which globalization offers. Example of NEPAD (New Partnership for Africa's) provides opportunity for strengthening economic integration in Africa.

Role of Donors in Mobilizing Private Capital – Enhancing aid effectiveness and efficiency requires improving country ownership, aid harmonization, and donor co-ordination in delivering assistance. Aid needs to be allocated more effectively, by providing aid to countries showing commitment to reforms and tailoring assistance to the needs and capacity of a given country. Improving synergies between ODA and private finance can also help to mobilize private capital, especially in the countries that have limited or no foreign investment. In this case, ODA should help to build institutional and human capacity and accelerate regional integration and liberalization. Other instruments such us credit guarantee schemes, investment incentives, co-financing, joint venture funds and risk guarantees can be also used to eliminate investments risks. Good examples are the Small Enterprise Assistance Funds (SEAF) that provide risk capital and technical assistance to local SMEs in order to develop basic infrastructure and human capital developments. In most of developing countries it is difficult to produce any significant tax revenue that will provide the capital needed for economic development. An evaluation methodology is described in the following table (Table 2) and reflects 12 progress indicators. Some

LEAST DEVELOPED COUNTRIES (LDCS)

of them have been already discussed above.

Fifty countries are currently designated by the United Nations as "least developed countries". The list of LDCs is reviewed every three years by the Economic and Social Council of the United Nations, in the light of recommendations by the Committee for Development Policy.

The criteria (www.unctad.org) used by the UN to underlay the list of LDCs as well as the threshold for graduation of these countries are:

A low-income criterion, as measured by the Gross National Income (GNI). Currently the threshold 750 USD of annual GNI per capita is considered with 900 USD as a promotion threshold;

A weak human assets criterion as measured by a composite Human Assets Index (HAI) based on partial indicators of (i) nutrition (per capita calorie intake as a percentage of the basic physiological requirement); (ii) health (measured by under-five child mortality rate); (iii) school enrolment (secondary school level ratio); and (iv) literacy (adult literacy rate); Countries with HAI below 51 are considered.

An economic vulnerability criterion, as measured by a composite Economic Vulnerability Index (EVI) based on indicators of (i) instability in agricultural production; (ii) instability in exports of goods and services; (iii) share of manufacturing to modern services in GDP; (iv) merchandise export concentration index; and (v) country population size. Countries with EVI below 34 are included into the LDC list.

List of the least developed countries with based statistics is shown in Table 3.

Tab 2: Structure of Indicators of Progress in ODA programs (Measured nationally and monitored internationally)

OWNERSHIP			TARGET FOR 2010		
Partners have operational development strategies		At least 75% of partner countries have operational development strategies.			
	ALIGNMENT	TARGETS FOR 2010			
 Reliable country systems — Number of partner countries that have procurement and public financial management systems that either (a) adhere to broadly accepted good practices or (b) have a reform programme in place to 		 (a) Public financial management – Half of partner countries move up at least one measure (i.e., 0.5 points) on the PFM/ CPIA (Country Policy and Institutional Assessment) scale of performance. (b) Procurement – One-third of partner countries move up 			
	achieve these.	at least one measure (i.e., from D to C, C to B or B to A) on the four-point scale used to assess performance for this indicator.			
3	Aid flows are aligned on national priorities — Percent of aid flows to the government sector that is reported on partners' national budgets.	Halve the gap — halve the proportion of aid flows to governme sector not reported on government's budget(s) (with at least 85 reported on budget).			
4	Strengthen capacity by co-ordinated support — Percent of donor capacity-development support provided through co- ordinated programmes consistent with partners' national development strategies.	50% of technical co-operation flows are implemented through co-ordinated programmes consistent with national development strategies.			
			PERCENT OF DONORS		
		Score*	Target		
	Use of country public financial management systems — Percent of donors and of aid flows that use public financial management systems in partner countries, which either (a) adhere to broadly accepted good practices or (b) have a reform programme in place to achieve these.	5+	All donors use partner countries' PFM systems.		
		3.5 to 4.5	90% of donors use partner countries' PFM systems.		
5a		PERCENT OF AID FLOWS			
		Score*	Target		
		5+	A two-thirds reduction in the % of aid to the public sector not using partner countries' PFM systems.		
		3.5 to 4.5	A one-third reduction in the % of aid to the public sector not using partner countries' PFM systems.		
		PERCENT OF DONORS			
		Score*	Target		
		А	All donors use partner countries' procurement systems.		
	Use of country procurement systems - Percent of donors	в	90% of donors use partner countries' procurement		
5b	and of aid flows that use partner country procurement		systems.		
	and of aid flows that use partner country procurement systems which either (a) adhere to broadly accepted good				
		Score*	systems.		
	systems which either (a) adhere to broadly accepted good practices or (b) have a reform programme in place to	Score*	Systems. Percent of aid flows		
	systems which either (a) adhere to broadly accepted good practices or (b) have a reform programme in place to		systems. PERCENT OF AID FLOWS Target A two-thirds reduction in the % of aid to the public sector not using partner countries' procurement		
6	systems which either (a) adhere to broadly accepted good practices or (b) have a reform programme in place to	A B Reduce	systems. PERCENT OF AID FLOWS Target A two-thirds reduction in the % of aid to the public sector not using partner countries' procurement systems. A one-third reduction in the % of aid to the public sector not using partner countries' procurement systems.		
6 7	systems which either (a) adhere to broadly accepted good practices or (b) have a reform programme in place to achieve these. Strengthen capacity by avoiding parallel implementation structures — Number of parallel project implementation	A B Reduce implement	systems. PERCENT OF AID FLOWS Target A two-thirds reduction in the % of aid to the public sector not using partner countries' procurement systems. A one-third reduction in the % of aid to the public sector not using partner countries' procurement systems. by two-thirds the stock of parallel project		

HARMONISATION		TARGETS FOR 2010		
9	Use of common arrangements or procedures — Percent of aid provided as programme-based approaches.	66% of aid flows are provided in the context of programme- based approaches.		
10 Encourage shared analysis – Percent of (a) field missions and/or (b) country analytic work, including diagnostic				
10	reviews that are joint.	(b) 66% of country analytic work is joint.		
MANAGING FOR RESULTS		TARGET FOR 2010		
11 Results-oriented frameworks — Number of countries with transparent and monitorable performance assessment frameworks to assess progress against (a) the national development strategies and (b) sector programmes.		Reduce the gap by one-third — Reduce the proportion of countries without transparent and monitorable performance assessment frameworks by one-third.		
MUTUAL ACCOUNTABILITY		TARGET FOR 2010		
12 <i>Mutual accountability</i> — Number of partner countries that undertake mutual assessments of progress in implementing agreed commitments on aid effectiveness including those in this Declaration.		All partner countries have mutual assessment reviews in place.		

Source: OECD, Paris Declaration, 2005

Economic treatment of the LDCs mainly falls under three areas of international cooperation (UNCTAD, 2008):

- in the multilateral trading system, special concessions, such as non-reciprocal market access preferences (e.g. the European Union's "Everything But Arms" initiative), are granted to LDCs;

- in the field of development financing, bilateral, regional and multilateral donors and financial institutions are expected to give LDCs specially favorable consideration in their decisions on concessionary financing;

- in the area of technical assistance, priority is given to LDCs under all cooperation programs of the UN, and bilateral and regional development partners are encouraged to follow the same preferential policy.

Concerning the concrete steps in implementing various forms of international assistance to LDCs the ODA approach is frequently critically evaluated with following arguments:

- large difference between donor countries commitments and their real financial assistance

- measurement and reporting of the official development assistance is not exactly defined

- effectiveness of the ODA projects and program is quite low, uncertain and not always contributing to positive outcomes in country's development(¹).

In line with these findings some new approaches to implement ODA financial means and programs are needed. As a new and more efficient approach could be considered some combination of the ODA and Foreign Direct Investment programs (FDI). The last one is considered as a better and faster channel for technology transfer, strengthening competition and enhancing human resources development.

Considering the total value of the FDI as well as the ODA sources it is quite clear that these two sources could be efficiently combined if the political and economic environment of recipient countries would allow it.

FDI INFLOWS INTO LDCS

Foreign direct investment (FDI) in least developed countries has increased during the past few years (Figure 2), but it is focused on a few countries and is largely aimed at exploiting natural resources. As pointed out by Deutcher (2008) this form of investment generally does not bring desired sustainable economic growth in the poorest nations of the world. Foreign direct investment in LDCs reached USD 11 billion in 2004, and increased from the previous year in 35 out of 50 LDCs. FDI to leastdeveloped countries continues to be low by global standards. It accounted for less than 2% of overall FDI in 2004 and less than 5% of total FDI inflows to all developing countries. In Africa, extraction activities are main recipient industries, while in Asia, the services sector (telecommunications and electrical services) has attracted foreign investors. Most LDCs have been making efforts to improve their investment environments. In recent years they have taken such steps as reducing taxes, establishing investment promotion agencies and abolishing restrictions on FDL

Trends in FDI and official development assistance flows and their relative importance vary among countries. During 1991–2000, average annual flows of bilateral

^aThe former Tanzanian president J. Nyerere (1922–1999) proclaimed during his time that "the whole concept of ODA was wrong and it had the fundamental fault of reducing the poor to the status of beggar".

ODA exceeded FDI inflows in almost all LDCs (45 out of 49 countries classified as LDCs at that time).

Although ODA remained the largest component of external resources flows to Figure 3.

Countries	Economic Vulnerability Index EVI	Human Assets Index HAI	GNI per capita (\$)
Afghanistan	60.3	11.5	122.00
Angola	43.4	28.81	823.33
Bangladesh	25.8	50.11	403.33
Benin	51.9	39.93	450.00
Bhutan	46.6	44.37	690.00
Burkina Faso	46.6	24.56	303.33
Burundi	59.8	20.1	90.00
Cambodia	52.3	46.03	303.33
Central African Republic	50.7	27.33	276.66
Chad	62.8	22.23	236.66
Comoros	63.5	37.75	450.00
Democratic Rep of the Congo	42.6	21.16	103.33
Djibouti	60.1	44.73	943.33
Equatorial Guinea	70.7	55.6	3 393.27
Eritrea	63.9	34.06	163.33
Ethiopia	39.3	26.62	100.00
Gambia	55.6	41.5	276.66
Guinea	34.5	36.2	433.33
Guinea-Bissau	66.1	25.63	143.33
Haiti	56.8	38.45	410.00
Kiribati	84.2	90.46	916.66
Lao People's Dem Republic	57.8	53.98	350.00
Lesotho	50.5	61.24	623.33
Liberia	67.9	28.92	116.66
Madagascar	41.5	41.6	273.33
Malawi	48.8	40.54	163.33
Maldives	50.5	81.94	2 320.00
Mali	42.6	21.51	300.00
Mauritania	40.5	46.35	403.33
Mozambique	43.5	25.56	220.00
Myanmar	42.2	68.37	167.00
Nepal	37.4	56.03	243.33
Niger	49.9	12.7	203.33
Rwanda	59.3	33.81	220.00
Samoa	64.6	90.41	1 596.66
Sao Tome and Principe	58.1	63.61	333.33
Senegal	41.7	38.75	556.66
Sierra Leone	63.7	15.67	190.00
Solomon Islands	56.8	70.63	556.66
Somalia	68.4	193.0	193.00
Sudan	49.8	49.03	463.33
Timor-Leste	65.2	55.32	466.66
Togo	45.8	46.0	323.33
Tuvalu	91.8	89.68	1 267.00
Uganda	47.4	49.04	253.33
United Republic of Tanzania	34.1	32.82	313.33
Vanuatu	64.2	66.01	1 186.66
Yemen	42.1	48.31	523.33
Zambia	46.1	35.18	390.00

Tab 3: Basic economic indicators of the Least Developed Countries

Source: http://webapps01.un.org/cdp/dataquery/displayResults.action

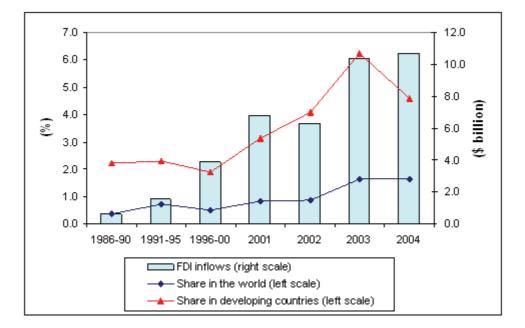


Figure 2: FDI inflows into LDCs and their share in world inflows and developing. Country inflows, 1986–2004

Source: UNCTAD, FDI in Least Developed Countries at a Glance 2005/2006

LDCs, it declined in absolute and relative terms between 1995 and 2000 (UNCTAD, 2002). It started to rise again in 2001, the year following the adoption of the United Nations' Millennium Development Goals (MDGs). Indeed, there is a sign that the importance of FDI has been more prominent over the years. Nearly half (24) of the LDCs registered a positive growth rate in FDI flows, and a negative one in ODA flows over the years 1990-2003 (Figure 3). Furthermore, there seems to be a positive relationship between ODA and FDI: part of ODA (particularly that for social and economic sectors) could leverage infrastructural activities that eventually attract more FDI (OECD, 2005).

MULTILATERAL TRADING SYSTEM

The participation of LDCs in the multilateral trading system has been increasingly encouraged by ongoing negotiations involving investment. Regional and interregional trade agreements can also create and improve FDI opportunities in LDCs. Examples include free trade agreements between the Southern African Customs Union (SACU) and the European Free Trade Association (EFTA), and the same kind of agreements between SACU and the United States. The ongoing FTA negotiations between SACU and EFTA include investment, services, intellectual property rights and public procurement. Similarly, negotiations with the United States cover a broad agenda, and a wide range of issues including services, investment, intellectual property, competition, government procurement and environment. Thus many LDCs have established bilateral

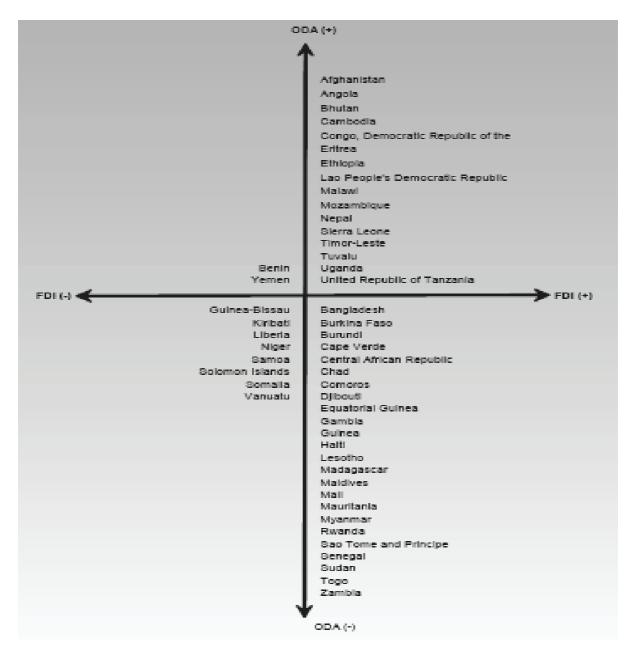
and/or regional trade agreements with other developing countries as well as with developed countries. The growth of such agreements, and of interregional initiatives, has been one of the major developments in international economic integration. These agreements can attract TNCs that undertake FDI in order to secure preferential treatment and privileged access to markets. A large share of FDI to LDCs originates in developed countries, mainly large economies, in particular France, the United Kingdom and the United States. The lion's share of the largest foreign affiliates in LDCs is investing in natural resources extraction and resource-based manufacturing industries. By October 2005, as a means of promoting FDI, 40 LDCs had established national investment promotion agencies (IPAs), of which 28 joined the World Association of Investment Promotion Agencies (WAIPA), a forum for investment promotion agencies to provide networking and training opportunities and facilitate the exchange of best practices in investment promotion.

CONCLUSIONS

The objective, to fill the gap between developing and developed countries, requires not only the resources anticipated for the short term (reduction of the public debt and functional restructuring of ODA), but also and most importantly to develop long term private capital flows that support SME activities. One of the most important factors to deal with is foreign investors' perception of developing countries as a high-risk destination for their investment especially with regard to insecurity, inadequate property right protection, insufficient regulatory frameworks and the lack of transparency in selecting contract procedures. While FDI in LDCs is expected to increase in the future, particularly in natural resources, there is a need to ensure that its development impact is enhanced through appropriate policies and institutions. The willingness of developed countries to facilitate access to technologies for LDCs, and transfer of technologies to those countries is important as well. The investment climate in LDCs has improved over the years. Most policy measures have focused on liberalizing national legal frameworks and establishing more transparent FDI regimes.

Despite the evident progress in investment flows from developed to developing, particularly LDCs, there still many barriers which should be eliminated. The above shown data and findings are underlining at least the most serious ones. The further deeper analysis on individual countries and regional groupings level are needed.

Figure 3: Growth trend in FDI and bilateral ODA flows to LDCs, 1990–2003



Source: UNCTAD, FDI in Least Developed Countries at a Glance 2005/2006

REFERENCES

- DEUTCHER E. (2008): OECD Development Assistance Committee Figures on 2007 ODA.OECD, Paris.
- Measuring Progress in Least Developed Countries (2007). Joint publication of the World Bank and UN.
- ODA Prospect After Monterey (2008) Canada Council of the Arts Annual Report 2008.
- OECD (2002). Official Development Assistance and Private Finance: attracting finance and investment to developing countries, Development Assistance Committee; ISBN 92-64-19889-X.
- OECD (2006). Harmonizing Donor Practices for Effective Aid Delivery DAC Guidelines and Reference Series, Volume 2, Paris; ISBN 92-64-03583-4.
- SACHS J. (2004): Millennium Development Goals Reality and Myth. The Earth Institute at Columbia University.

- UNCTAD (2001). UN recognition of the Least Developed Countries. Available at www.unctad.org (Quoted on 21-11-2008).
- UNCTAD (2006). FDI in Least Developed Countries at a Glance 2005/2006. United Nations Publications; ISSN 1819-8937
- UNCTAD (2008). The Least Developed Countries Report, 2008 – Growth, Poverty and the Terms of Development Partnership. Washington; ISBN 978-92-1-112751-5.
- United Nations (2007): Population and Vital Statistics Report, Series: A, No.244–245.
- United Nations (2008). Millennium Development Goals Report.
- World Population Prospects The 2006 Revision (2006). Sales No. E.07.XIII.7, United Nations, New York. Highlights and selected output are available at www.unpopulation.org

Received for publication on November 25, 2008 Accepted for publication on Fabruary 12,2009

Corresponding author:

Ing. Martin Partl Czech University of Life Sciences Prague Institute of Tropics and Subtropics Kamýcká 129 165 21 Prague 6 Czech Republic