

Global Economy

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Lecture 6

Determinants of Economic Growth - Basic Growth Theories

Growth Strategies

Development Theories

- The understanding of what generates economic growth has the fundamental meaning for human welfare.
- In order to explain growth experiences observable in the real world an enormous number of theoretical models have been developed.

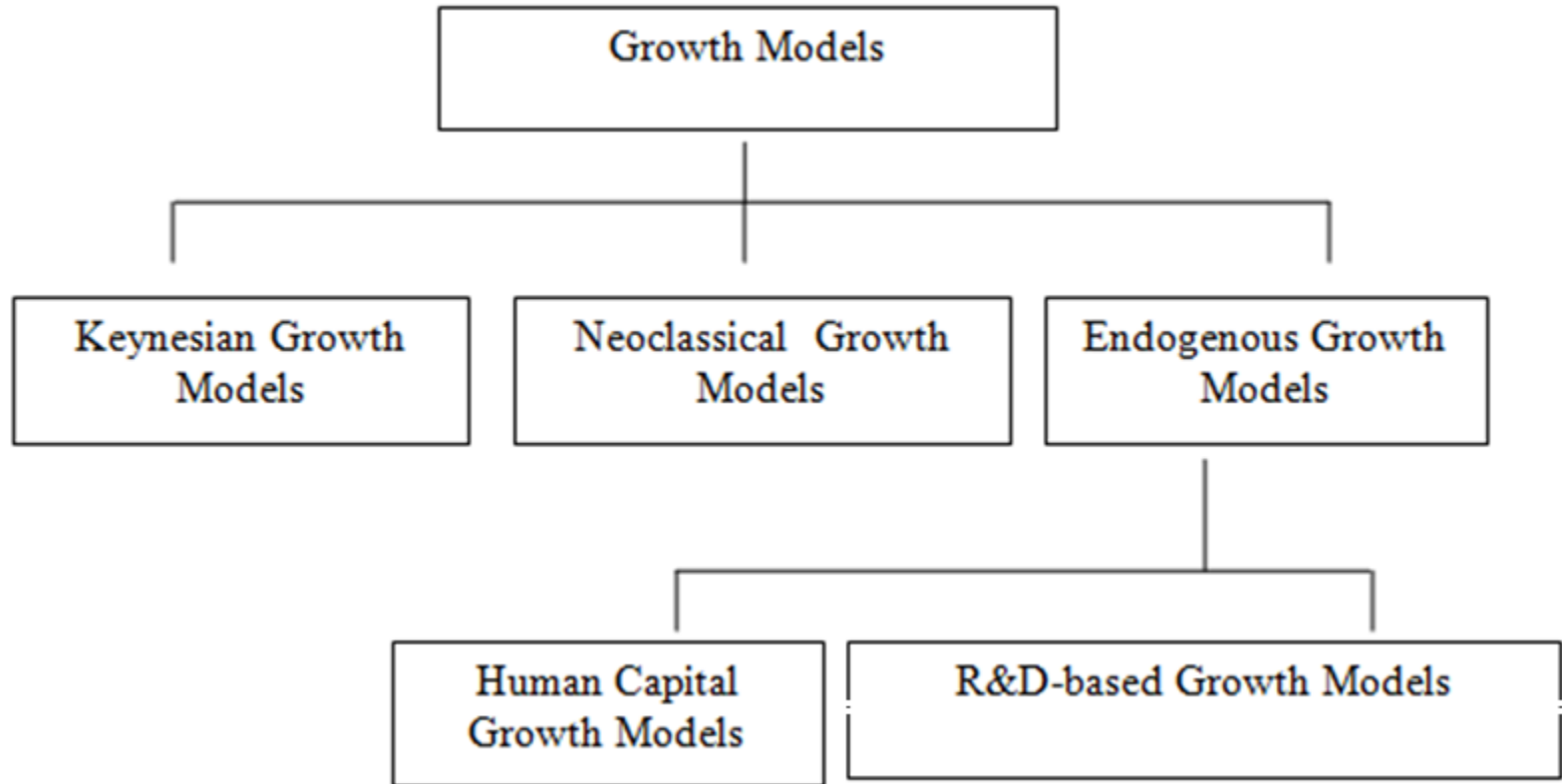
Kuznet's stylized facts (1955)

	Portion of total employees	Portion of total final consumption
Primary sector (agriculture, forestry and mining)	falls	falls
Secondary sector (industrial production)	stays constant	stays constant
Tertiary sector (services)	raises	raises

Kaldor's stylized facts (1961)

1. Per capita output grows over time, and its growth rate does not tend to diminish.
2. The growth rate of output per worker differs substantially across countries.
3. Physical capital per worker grows over time.
4. The ratio of physical capital to output is nearly constant.
5. The shares of labor and physical capital in national income are nearly constant.

Classification of Different Growth Models



The Keynesian growth models

- **The growth rate of GDP is directly (positively) related to the saving rate**, i.e., the more an economy is able to save – and therefore invest – out of a given GDP, the bigger will be the growth of GDP.
- **The growth rate of national income is indirectly (negatively) related to the economy's capital-output ratio**, i.e., the higher is ICOR, the lower will be the rate of GDP growth.
- Economic growth can be accelerated by
 - changing the saving rate
 - improving technology.

- **Neoclassical models:** Growth is determined by accumulation of capital, labour and technological progress (advances in knowledge).
- The major shortcoming of the neoclassical models is that technological progress is assumed to be exogenous.
- The exogenous models are unable to explain the sustained growth in per capita income in the world economy over last two hundred years.
- They cannot also answer the question: why, at any point in time, some countries are significantly richer than others, why, some countries grow faster than others?

- The inability of the neoclassical models to explain important features of cross-country income and growth data has caused the development of the new (endogenous) growth theory.
- In these models, growth is endogenous in the sense that the rate of (physical and human) capital accumulation or the rate of technological change and, hence, the growth rate of output per worker are endogenously determined based on optimising behaviour of firms and consumers.

- **The endogenous growth models:** the P. Romer R&D-based growth model (long-run growth is driven primarily by the accumulation of knowledge by forward-looking, profit-maximizing agents), the Uzawa-Lucas human capital model.
- Three drivers of long-term growth: machinery and equipment, human capital, research and development.

Determinants of economic growth

– empirical analysis

- Investment in physical capital,
- Investment in human capital (health, education),
- The level of financial sector development,
- Foreign trade,
- The share of the state in economy,
- Economic freedom,
- Political stability,
- Income inequality.

Growth Strategies

Growth Strategies – Washington Consensus

Source: Rodrik D., Rethinking Growth Strategies, WIDER Annual Lecture 8, 2005, p. 12.

Original Washington Consensus	Augmented Washington Consensus the previous 10 items, plus:
<ol style="list-style-type: none">1. Fiscal discipline2. Reorientation of public expenditures3. Tax reform4. Financial liberalization5. Unified and competitive exchange rate6. Trade liberalization7. Openness to FDI8. Privatization9. Deregulation10. Secure Property Rights	<ol style="list-style-type: none">11. Corporate governance12. Anti-corruption13. Flexible labour markets14. Adherence to WTO disciplines15. Adherence to international financial codes and standards16. “Prudent” capital-account opening17. Non-intermediate exchange rate regimes18. Independent central banks/inflation targeting19. Social safety nets20. Targeted poverty reduction

1989 - fall of communism in Poland

- In the winter of 1988 Poland experienced massive strikes.
- The government initiated the discussion with the banned trade union Solidarity and other opposition groups in an attempt to defuse growing social unrest.
- **Round Table Talks** (February 6 - April 5 of 1989) - beginning of Polish political and economic transformation.
- Polish officials agreed to have free, democratic elections to the lower house of Polish parliament and senate.

The main problems of the Polish economy before 1990

- Foreign debt (the Paris Club - group of financial officials from the world's biggest economies, the London Club - group of private creditors).
- In the second half of 1989 the level of foreign currency reserves was close to zero resulting in inability to purchase even the most crucial products from abroad.
- Chronic shortages, queues and inability to satisfy basic consumer needs.
- Hyper-inflation.
- Budget deficit.

Foreign debt, 1971-1989 (USD, billion)

Source: G.W. Kołodko, *Od szoku do terapii. Ekonomia i polityka transformacji*. Poltext. Warszawa 1999, p. 34.

Year	Debt	Year	Debt
1971	1.3	1981	25.5
1972	1.7	1982	25.2
1973	3.1	1983	26.4
1974	5.3	1984	26.8
1975	8.4	1985	29.3
1976	12.1	1986	33.5
1977	15.4	1987	39.2
1978	18.5	1988	39.2
1979	21.9	1989	40.8
1980	25.0		

Inflation

Source: www.stat.gov.pl

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1989	11.0	7.9	8.1	9.8	7.2	6.1	9.5	39.5	34.4	54.8	22.4	17.7
1990	79.6	23.8	4.3	7.5	4.6	3.4	3.6	1.8	4.6	5.7	4.9	5.9

- Poland mainly relied on heavy industry which was characterized by the lack of any motivational or competitive mechanisms, monopolization, inefficiency and outdated technology. Industry relied on massive subsidies.
- The agriculture was mainly based on small farms which could only survive if subsidized. Farmers did not know how to function in a free market economy.
- Service sector was minimal, light industry and distribution underdeveloped.

- **Macroeconomic stabilization** – limiting budget deficits, reducing inflation and establishing fully convertible currency with real exchange rate.
- **Economic liberalization** – market competition and the institutions of private property.

Poland 1990 – The Balcerowicz Plan

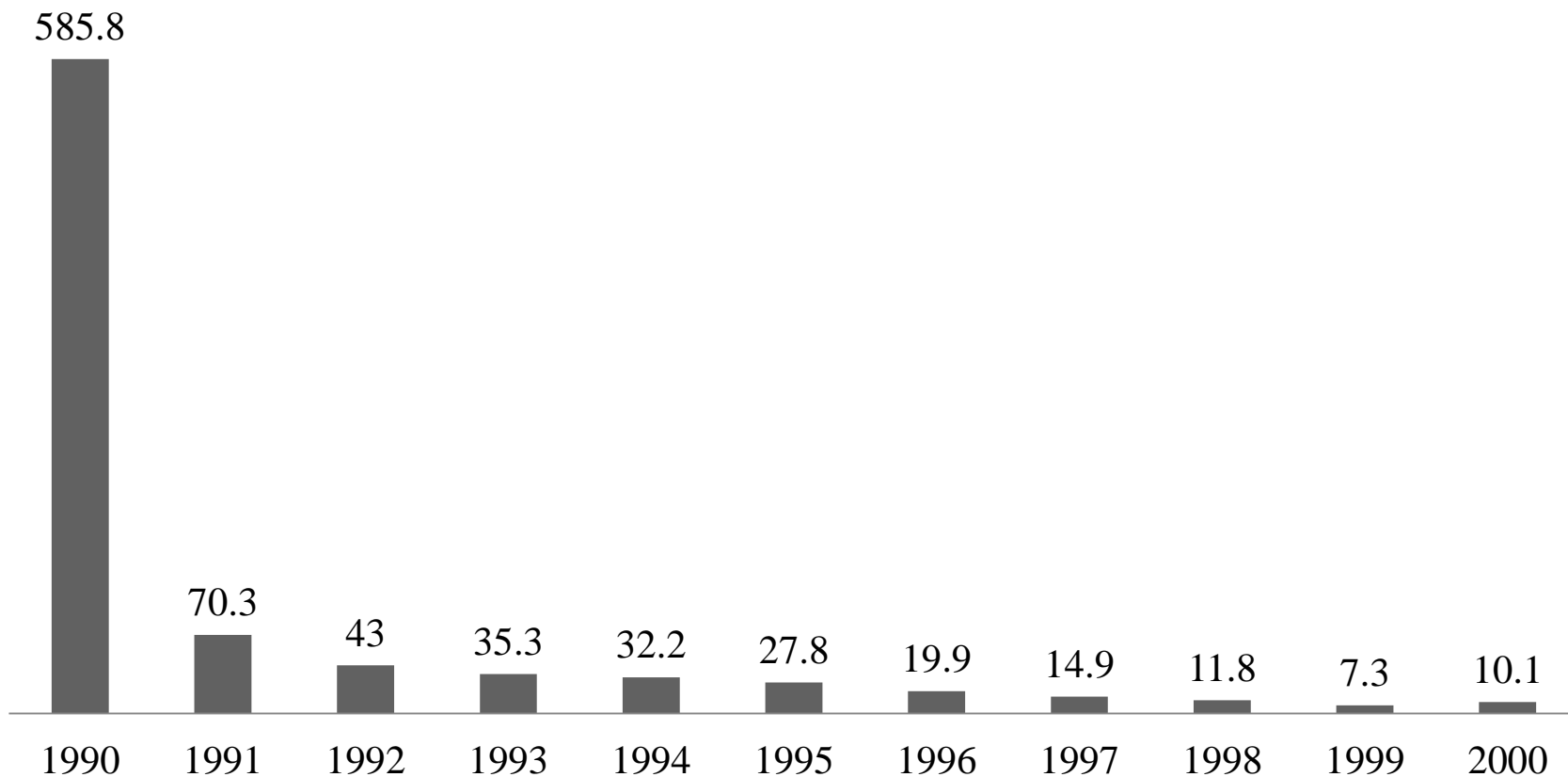
Act on Financial Economy Within State-owned Companies	The Act abolished the principle under which, unprofitable state-owned companies were financed from budget and allowed state-owned companies to declare bankruptcy.
Act on Banking Law	The Act prohibited the central bank to finance the budget deficit and issue unlimited amount of money.
Act on Credits	The Act abolished preferential loans for state-owned companies and tied interest rates to inflation rates.
Act on Taxation of Excessive Wage Rise	The Act introduced tax on extensive wage growth (so called popiwiek).
Act on New Rules of Taxation	The Act uniformed tax rule for all sectors of the economy

Poland 1990 – The Balcerowicz Plan

Act on Economic Activity of Foreign Investors	The Act allowed companies with foreign capital to repatriate their profits and exempted them from paying the tax levied on extensive wage growth. The Act obligated those enterprises to sell foreign currencies to the state. The exchange rate was set by the central bank.
Act on Foreign Currencies	The Act introduced internal convertibility of the Złoty, abolished the state monopoly in international trade and obligated companies to sell foreign currencies to the state.
Act on Customs Law	The Act introduced the same customs law for every business entity.
Act on Employment	The Act regulated the responsibilities of unemployment agencies.
Act on Special Circumstances Under Which a Worker Could be Laid Off	Act guaranteed severance pay and temporary unemployment benefits for those who lost their jobs.

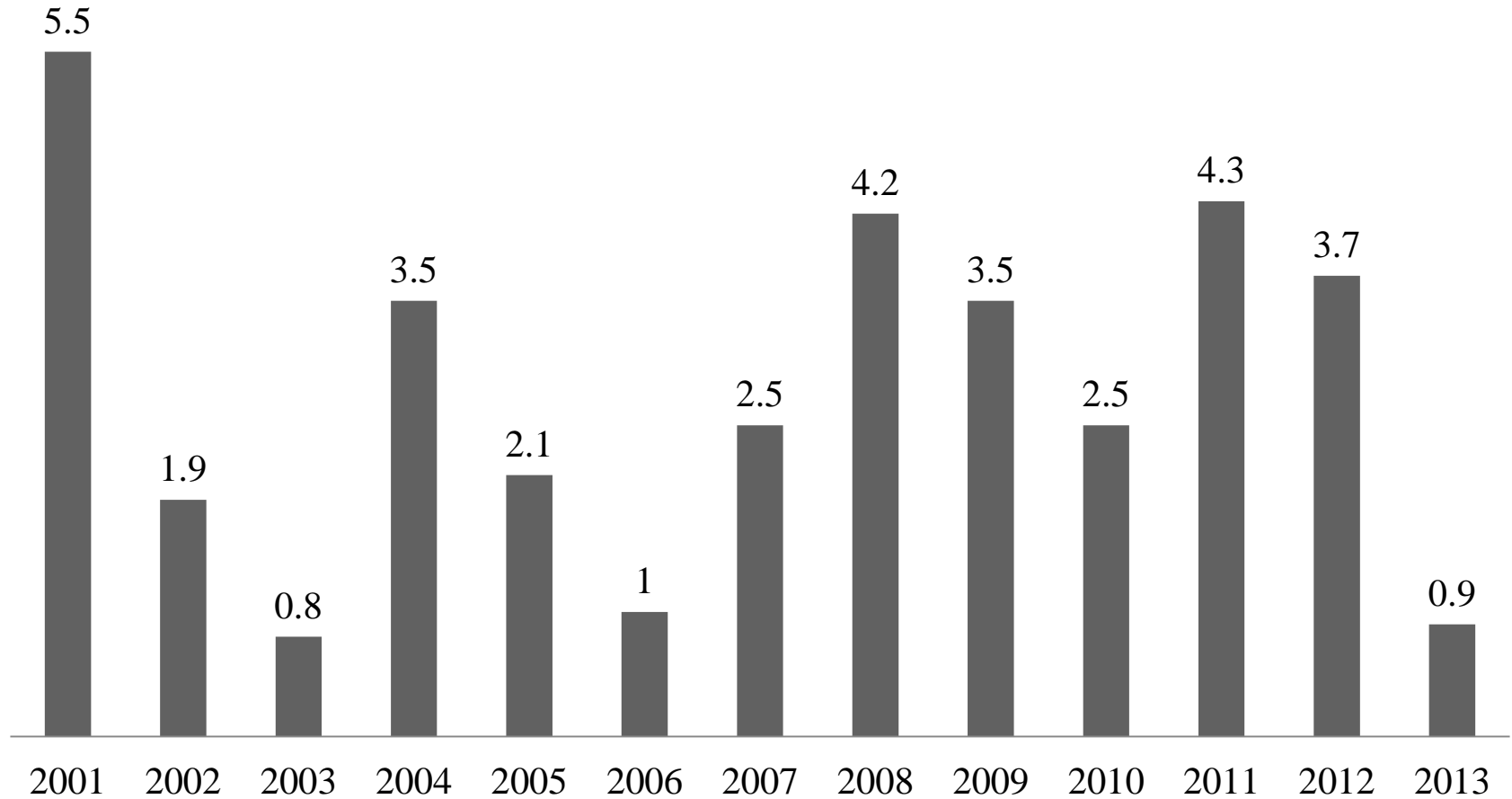
The effects of the Balcerowicz Plan - inflation, Poland, 1990-2000

Source: www.stat.gov.pl



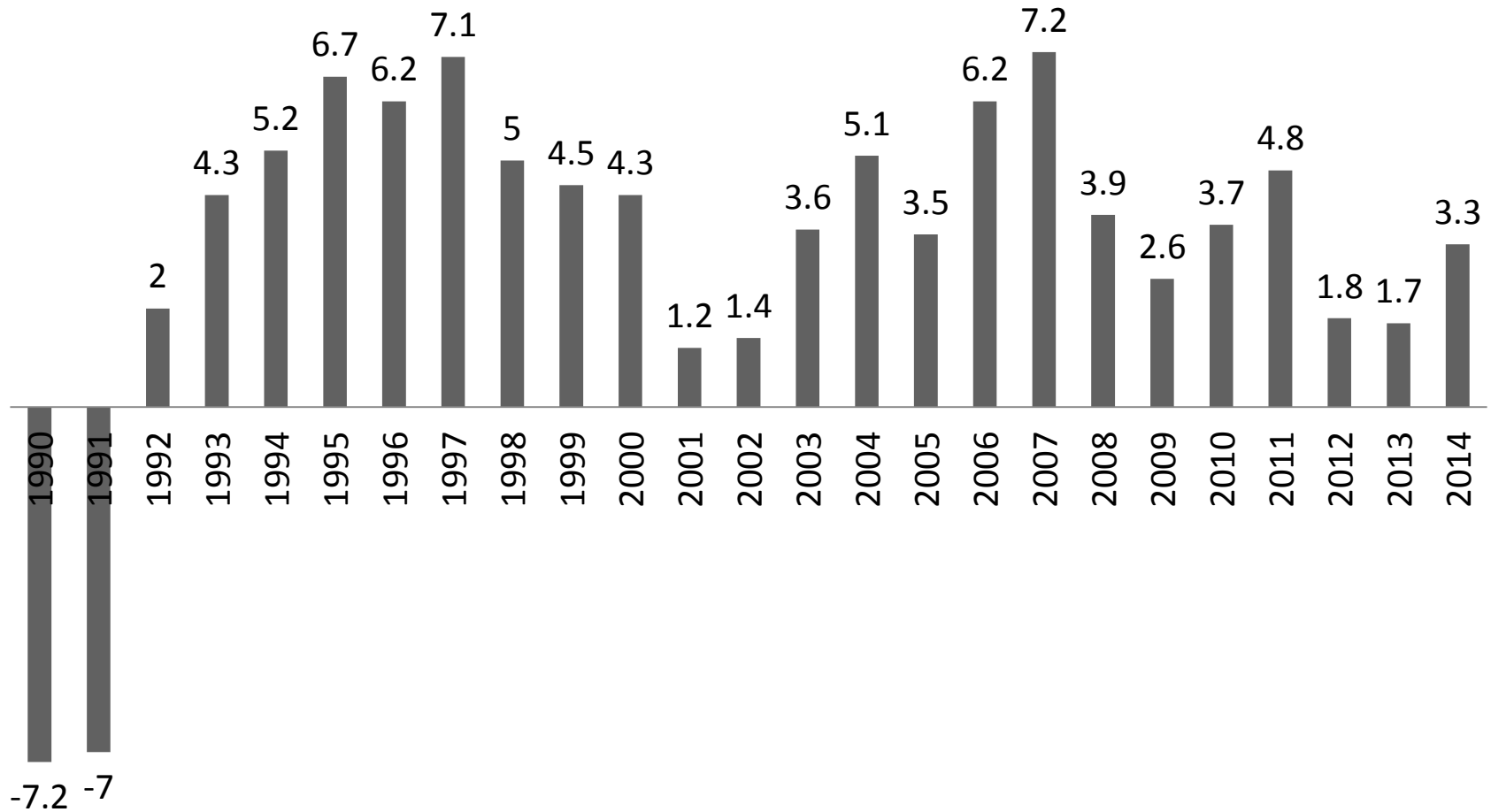
Inflation, Poland, 2001-2013

Source: www.stat.gov.pl



Real GDP growth (Annual percent change), Poland, 1990-2014

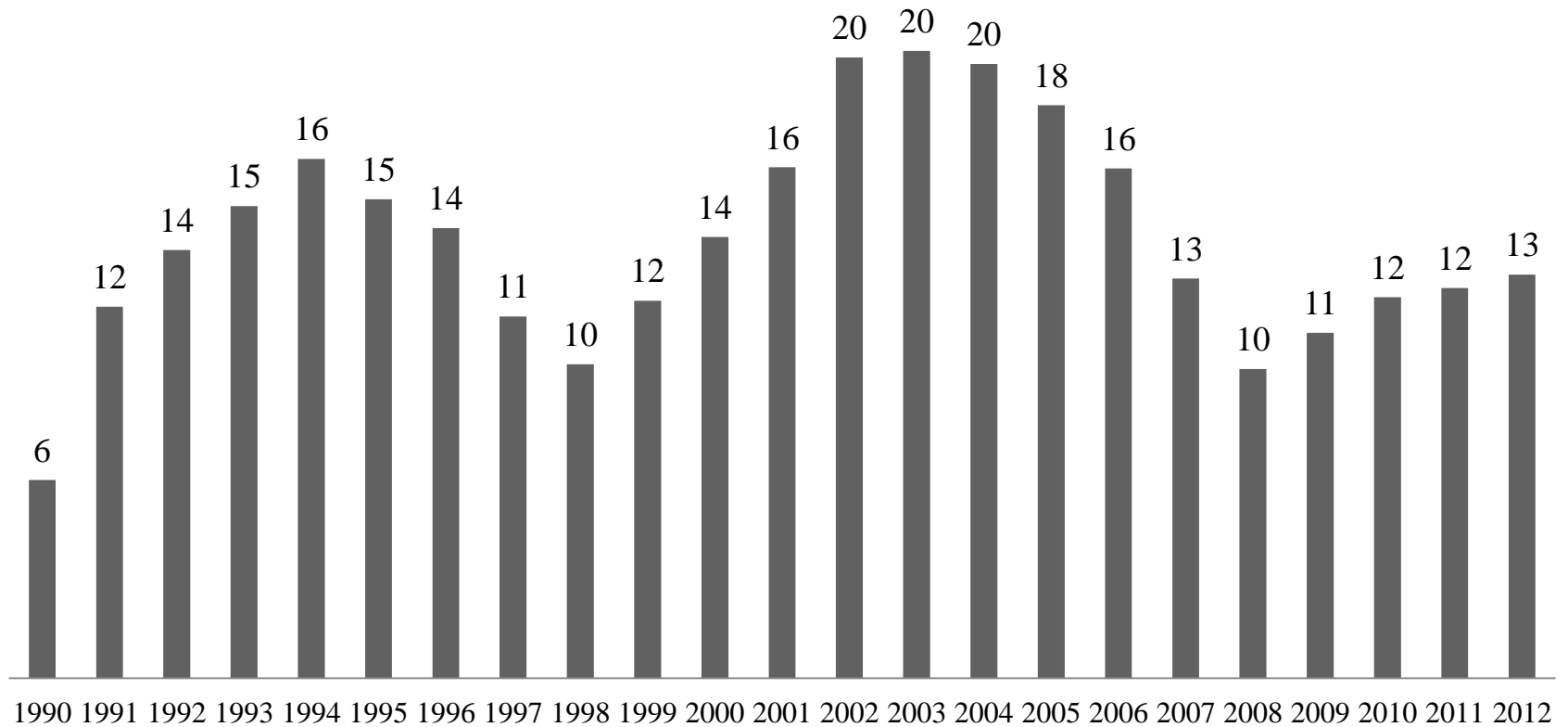
Source: www.imf.org



The effects of the Balcerowicz Plan

- Despite these successes, the Balcerowicz Plan was heavily criticized for causing a radical decline in living standards for large groups of people, mainly workers of unprofitable state-owned enterprises and state-run farms (PGRs) which were dissolved after 1989.
- The result were many poverty-stricken regions and structural unemployment that persists in some areas to this day.

Unemployment rate (annual, percent), Poland, 1990-2012

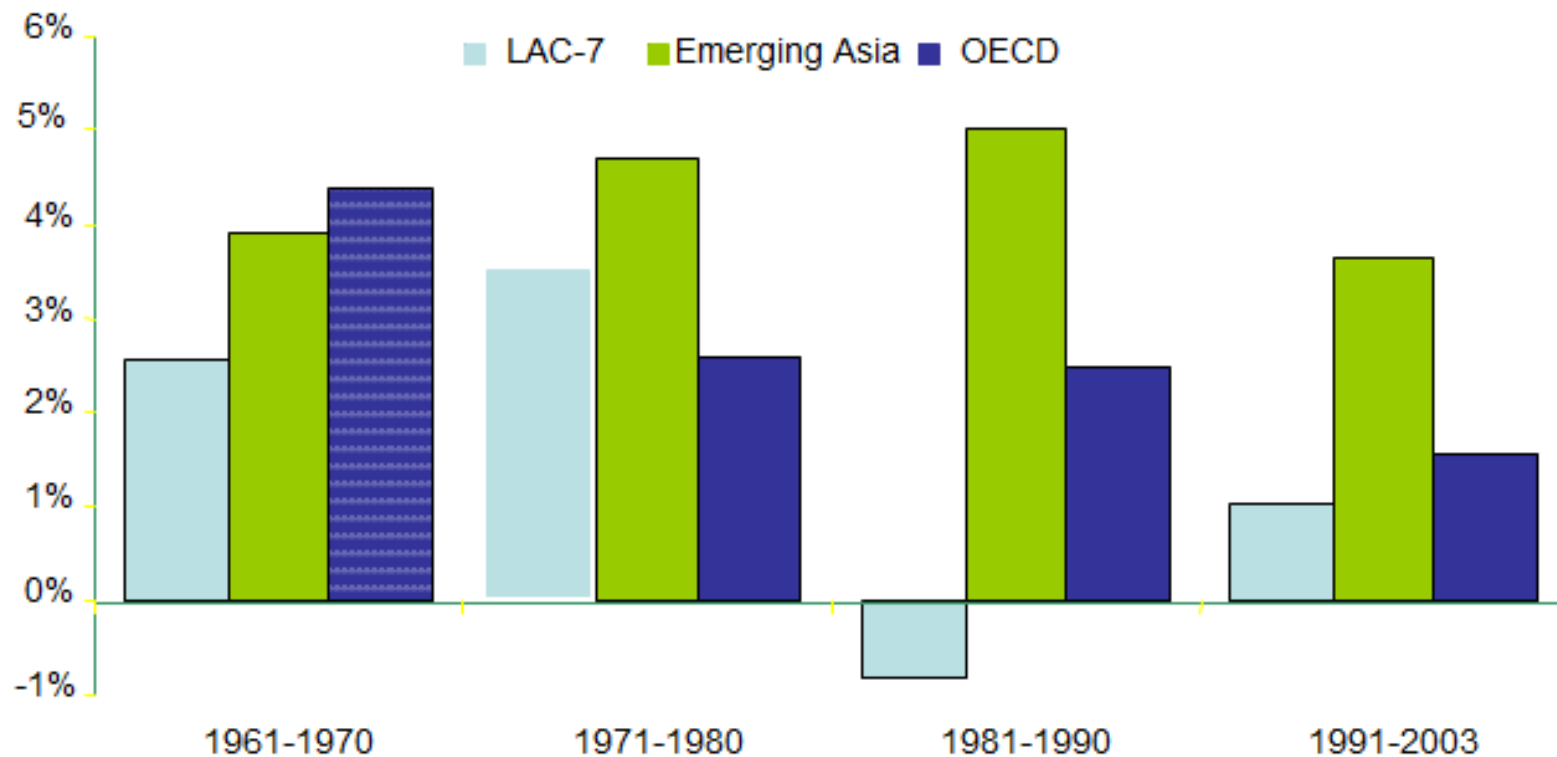


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Source: Rodik D., Rethinking Growth Strategies, WIDER Annual Lecture 8, 2005, p.3



Emerging Asia includes Indonesia, Korea, Malaysia, Philippines and Thailand
LAC – Latin American Countries

Source: Rodik D., Rethinking Growth Strategies, WIDER Annual Lecture 8, 2005, p. 5

Country	Growth rate in the 1990s	Trade policies in the 1990s
China	7.1	Average tariff rate 31.2%, NTBs, not a WTO member (11 December 2001)
Vietnam	5.6	Tariffs range between 30-50%, NTBs and state trading, not a WTO member (11 January 2007)
India	3.3	Tariffs average 50.5%

East Asian Anomalies

Source: Rodrik D., Rethinking Growth Strategies, WIDER Annual Lecture 8, 2005, p. 6

Institutional domain	Standard ideal	„East Asian” pattern
Property rights	Private, enforced by the rule of law	Private, but government authority occasionally overrides the law (esp. in Korea)
Corporate governance	Shareholder (“outsider”) control, protection of shareholder rights	Insider control
Business-government relations	Arms’ length, rule based	Close interactions
Industrial organization	Decentralized, competitive markets, with anti-trust enforcement	Horizontal and vertical integration in production (chaebol); government-mandated “cartels”

East Asian Anomalies

Source: Rodrik D., Rethinking Growth Strategies, WIDER Annual Lecture 8, 2005, p.6

Institutional domain	Standard ideal	East Asian” pattern
Financial system	Deregulated, securities based, with free entry. Prudential supervision through regulatory oversight	Bank based, restricted entry, heavily controlled by government, directed lending, weak formal regulation
Labor markets	Decentralized, deinstitutionalized, “flexible” labor markets	Lifetime employment in core enterprises (Japan)
International capital flows	“Prudently” free	Restricted (until the 1990s)
Public ownership	None in productive sectors	Plenty in upstream industries

GDP growth 2002-2016

Country	GDP growth	Country	GDP growth
Quatar	10.6%	Yemen	-3.7%
Myanmar	10.0%	Libya	-1.6%
Azerbaijan	9.6%	CAR	-0.5%
China	9.5%	Greece	-0.5%
Ethiopia	9.1%	Zimbabwe	-0.4%
Turkmenistan	8.8%	Puerto Rico	-0.3%
Angola	8.7%	Italy	-0.1%
Rwanda	7.8%	Portugal	0.2%
Cambodia	7.6%	Bahamas	0.5%
Bhutan	7.6%	Brunei Darussalam	0.5%

GDP growth

Country	2002-2016	2007-2016	Country	2002-2016	2007-2016
France	1.1%	0.8%	Slovakia	4.1%	3.1%
India	7.4%	7.3%	Spain	1.4%	0.3%
Italy	-0.1%	-0.6%	Sri Lanka	5.9%	6.0%
Iran	3.6%	2.5%	Turkey	5.7%	4.8%
Lithuania	3.9%	2.0%	Ukraine	1.6%	-1.1%
Pakistan	4.4%	3.9%	Uzbekistan	7.6%	8.4%
Poland	3.7%	3.6%			

The Fastest Growing Least Developed Countries

Country	GDP growth 2001-2015	GDP p.c. growth, 2001-2015	GDP growth 2006-2015	GDP p.c. growth, 2006-2015
Afghanistan	7.4%	4.0%	7.5%	4.5%
Angola	7.6%	4.0%	8.4%	4.9%
Bangladesh	5.8%	4.4%	6.2%	4.9%
Bhutan	7.6%	5.4%	7.4%	5.6%
Cambodia	7.7%	6.0%	6.9%	5.3%
Ethiopia	9.2%	6.2%	10.4%	7.6%
Lao PDR	7.3%	5.7%	7.9%	6.1%
Mozambique	7.8%	4.8%	7.3%	4.3%
Myanmar	10.4%	9.5%	9.2%	8.4%
Rwanda	8.0%	5.0%	7.9%	5.0%
Sudan	5.2%	4.2%	4.6%	4.6%
Timor-Leste	5.3%	4.1%	6.9%	5.0%

- On the supply side, GDP has been generated mainly through the services sector in Sudan, Bangladesh, Afghanistan, Mozambique, Rwanda, Lao PDR, and Cambodia.
- In 2015, services accounted for more than 50% of GDP in Sudan, Bangladesh, Afghanistan, Mozambique, and Rwanda and nearly 50% in Lao PDR.
- Services generated more than 40% of GDP in Cambodia.
- Services slightly dominated over the industry sector in Myanmar, and the industry sector over the services in Bhutan.
- Services followed by agriculture generated GDP in Ethiopia.
- The industry sector was the main driver of growth in Timor-Leste and Angola.

- On the demand side, domestic private consumption was the main source of growth in eleven analysed LDCs.
- In 2015, the share of household final consumption expenditure in GDP was more than 70% in Afghanistan, Timor-Leste, Rwanda, Angola, Cambodia, Myanmar, Bangladesh, Lao PDR, Ethiopia, and Sudan and nearly 70% in Mozambique.
- The contribution of gross domestic investment to GDP was less than that of domestic consumption in all countries, except Bhutan. In Mozambique and Ethiopia the share of gross capital formation in GDP was more than 40% in 2015.
- Growth was boosted by government spending in Timor-Leste.
- Exports of goods and services were an important driver of growth in Cambodia.

- In the years 2006-2015, Afghanistan, Mozambique, Rwanda and Ethiopia sustained strong growth mainly because of foreign assistance.
- Mozambique's economy boomed not only on official development assistance but also on large inflows of foreign direct investment.
- Remittances were an important source of development finance in Bangladesh. They had relatively high level in Timor-Leste, too.

Country	Remittances, (% of GDP), 2006-2015	ODA, (% of GDP), 2006-2015	FDI, (% of GDP), 2006-2015
Afghanistan	1.6% (2008-2015)	37.1%	0.9%
Angola	0.03%	0.3%	-0.5%
Bangladesh	9.1%	1.4%	1.2%
Bhutan	0.6%	8.3%	1.9%
Cambodia	1.7%	6.5%	8.1%
Ethiopia	1.7%	10.0%	1.9%
Lao PDR	0.5%	6.4%	5.1%
Mozambique	1.0%	16.8%	19.8%
Myanmar	0.6%	1.8%	3.3%
Rwanda	2.1%	16.6%	2.3%
Sudan	1.6%	3.5%	2.9%
Timor-Leste	6.5%	8.9%	3.5%

- There is no single path to rapid economic growth. In the years 2006-2015, Rwanda recorded high economic growth due to sound economic policies, peace and political stability. Now, is one of the best performing countries in Africa.
- Sound macroeconomic policies and political stability were also conducive to economic growth in Cambodia.
- Government's interventionist policies enhanced Ethiopia's economic development.
- In Mozambique, economic growth resulted from implementation of market-based economic policies and the improvement of investment framework.

- The Angola's and Sudan's GDP growth has been mostly driven by the oil sector. During the period 2006-2008, the economies grew mainly because of high oil prices. After the outbreak of global crisis, economic growth in Angola and Sudan has been adversely affected by decreasing oil revenues because of low export prices.
- In the years 2006-2015, the Ethiopian government implemented two national five-year plans to improve economic growth and reduce poverty. They prioritised agricultural and export-led industrialisation.

- In the fastest growing LDCs, GDP has been mostly generated through the services and industry sectors.
- Bangladesh has developed transport, energy, and information and communication technology to provide the basis for development of the textile and clothing industries.
- In Lao PDR, the basic contributors to GDP were wholesale and retail trade, hotels and restaurants, financial services and telecommunications.
- Transport, tourism and travel services have a great potential as drivers of Myanmar's economic growth.
- Bhutan's economy was dominated by hydropower industry and the building of new power projects.

- A few LDCs sustained strong growth mainly because of foreign assistance and in other countries remittances were a significant source of development finance.
- Resource rich LDCs recorded high inflows of foreign direct investment.

Growth Disasters in Least Developed Countries

Country	GDP growth 2001-2015	GDP p.c. growth, 2001- 2015	GDP growth 2006-2015	GDP p.c. growth, 2006-2015
Burundi	3.1%	-0.29%	3.6%	0.08%
CAR	-0.5%	-2.31%	-1.7%	-3.51%
Comoros	2.1%	-0.34%	2.0%	-0.43%
Eritrea*	1.6%	-1.20%	0.7%	-1.47%
Gambia	3.3%	0.06%	3.5%	0.19%
Guinea	2.4%	0.02%	2.1%	-0.54%
Guinea-Bissau	2.7%	0.41%	3.2%	0.82%
Haiti	1.2%	-0.35%	2.0%	0.55%
Kiribati	1.5%	-0.46%	1.4%	-0.53%
Liberia	2.6%	-0.43%	6.1%	2.78%
Madagascar	2.6%	-0.33%	2.7%	-0.12%
South Sudan*	-10.9%	-14.4%	-10.9%	-14.4%
Togo	3.1%	0.35%	4.1%	1.32%
Vanuatu	2.4%	-0.04%	3.1%	0.73%
Yemen	0.1%	-2.56%	-1.8%	-4.44%

- On the supply side, the **services sector** contributed more than 50% to GDP in Kiribati, Vanuatu, Gambia, Eritrea, and Madagascar.
- **Services followed by the industry sector** have been generated GDP in Haiti and Guinea and **services followed by agriculture** in Liberia.
- The **industry sector** has been the main driver of growth in South Sudan.
- GDP in Yemen has been generated through the **industry and services sectors** while in Burundi, Central African Republic, Comoros, Guinea-Bissau, and Togo by the **agriculture and services sectors**.

- Except South Sudan, Yemen, Guinea and Eritrea, the industry sector has been contributed less than 20% to GDP of the remaining countries.
- In the years 2001-2015, the labour productivity declined in all countries, except Togo and Vanuatu.
- Generally, the economies have been dominated by the informal sector, with numerous micro and small businesses that geared towards the local markets.
- In terms of employment, agriculture has been a major sector in most LDCs.

Employment by sector, 2000, 2015 (per cent of total employment)

Country	Agriculture		Industry		Services	
	2000	2015	2000	2015	2000	2015
Burundi	91.7	91.1	2.4	2.5	5.9	6.4
CAR	62.9	63.5	9.5	9.7	27.6	26.8
Comoros	65.4	65.1	9.7	9.6	24.9	25.2
Eritrea	72.4	70.0	7.2	7.8	20.3	22.3
Gambia	53.7	30.8	9.1	14.5	37.2	54.7
Guinea	74.8	74.7	6.3	5.6	18.9	19.7
Guinea-Bissau	60.7	50.1	9.7	12.1	29.5	37.8
Haiti	49.2	43.3	11.1	12.1	39.7	44.5
Liberia	48.9	44.8	10.4	11.3	40.7	43.9
Madagascar	74.2	73.0	10.1	9.1	15.7	17.9
Togo	56.9	50.8	6.7	7.7	36.4	41.5
Vanuatu	62.4	62.2	6.8	7.0	30.9	30.8
Yemen	41.2	32.4	14.4	17.5	44.5	50.0

- On the demand side, domestic private consumption has been the main source of growth in all countries. The average share of household final consumption expenditure in GDP was more than 85% in all LDCs, except Vanuatu, South Sudan, and Yemen. In Liberia, the share was exceptionally high (more than 140%).
- The contribution of government final consumption expenditure to GDP was relatively high in Eritrea and Burundi.
- The share of gross domestic investment in GDP was very low in Guinea-Bissau, Togo, Central African Republic and South Sudan.

- Remittances from diaspora have been important sources of income in 5 countries.
- Least developed countries have benefited from ODA. In the years 2001-2015, the average share of ODA in GDP was bigger than 10% in ten countries.
- The only country that has attracted foreign direct investment is Liberia.

Country	Remittances, (% of GDP), 2001-2015	ODA, (% of GDP), 2001-2015	FDI, (% of GDP), 2001-2015
Burundi	1.1%	26.8%	0.7%
Central African Republic	n.a.	13.0%	1.8%
Comoros	17.1% (2003-2015)	10.4%	1.1%
Eritrea*	n.a.	19.7%	2.3%
Gambia	10.8%	12.4%	6.1%
Guinea	1.3%	7.7%	4.1%
Guinea-Bissau	5.3%	14.6%	1.6%
Haiti	22.0%	14.1%	1.2%
Kiribati	10.1% (2006-2015)	17.1%	0.3%
Liberia	15% (2004-2015)	63.9%	35.4%
Madagascar	2.1%	9.8%	5.8%
Togo	9.1%	7.5%	4.6%
Vanuatu	2.3%	12.6%	6.2%
Yemen	7.9%	2.3%	1.0%

Economic growth and development in the LDCs
has been constrained by

- **civil war** (Central African Republic, South Sudan, Yemen),
- **political instability** (Burundi, Comoros, CAR, Guinea, Guinea-Bissau, Haiti, Madagascar),
- **vulnerability to natural disasters** like fires (Comoros), extreme weather (Comoros, Eritrea, Haiti, Kiribati, and Vanuatu), and locust attacks on crops (Eritrea),
- **shortage of skilled workers**

Economic growth and development in the analysed LDCs has been constrained by

- electricity shortages,
- poor telecommunication infrastructure,
- underdeveloped financial system,
- limited access to credit and financial instruments,
- weak legal system,
- weak protection of property rights,
- strict foreign exchange controls and high interference of the state in the economy (Eritrea),
- military spending (Eritrea),
- remoteness from international markets (Kiribati, Vanuatu)

Country	Ease of doing business, 2017		Corruption Perception Index, 2016	
	Score	Rank	Score	Rank
Burundi	46.92	164/190	20	159/176
CAR	34.86	184	20	159
Comoros	48.52	158	24	153
Eritrea	22.87	189	18	164
Gambia	51.92	146	26	145
Guinea	49.80	153	27	142
Guinea-Bissau	41.45	176	16	168
Haiti	38.24	181	20	159
Kiribati	48.52	157	30.8 (2011)	95 (2011)
Liberia	43.55	172	37	90
Madagascar	47.67	162	26	145
South Sudan	32.86	187	11	175
Togo	48.88	156	32	116
Vanuatu	63.08	90	35.3 (2011)	77 (2011)
Yemen	33.00	186	14	170

- In the years 2001-2015, 15 LDCs had negative or very low average GDP per capita growth rates.
- GDP in those countries has been primarily generated through services and agriculture sectors. Except four LDCs, the industry sector has been contributed less than 20% to GDP.
- The poorest countries were highly dependent on agriculture which provided a living for the vast majority of their population.
- On the demand side, domestic private consumption was the main source of growth in the examined countries.

- The countries have been heavily dependent on foreign assistance.
- 10 least developed countries were classified as aid-dependent.
- Remittances were a significant source of finance in 5 of them.
- The countries, except one, has not attracted foreign direct investment.

- Economic growth in the LDCs has been mainly constrained by conflicts, political instability, recurrent climate shocks (drought, floods, earthquakes), weak institutions, pervasive corruption, poor governance, insecurity, and lack of basic infrastructure.

- Economic growth
- Economic development
- Socio-economic development
- Sustainable development