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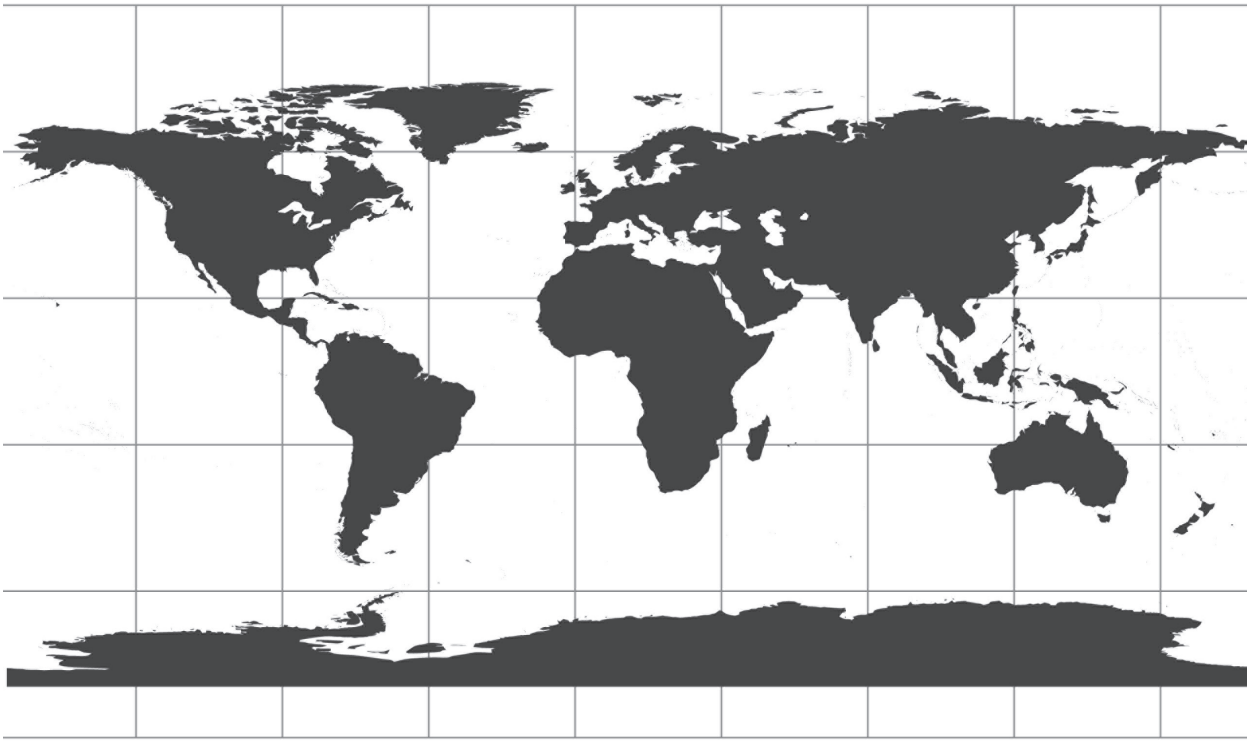
World Economic Situation and Prospects 2016



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Chapter I

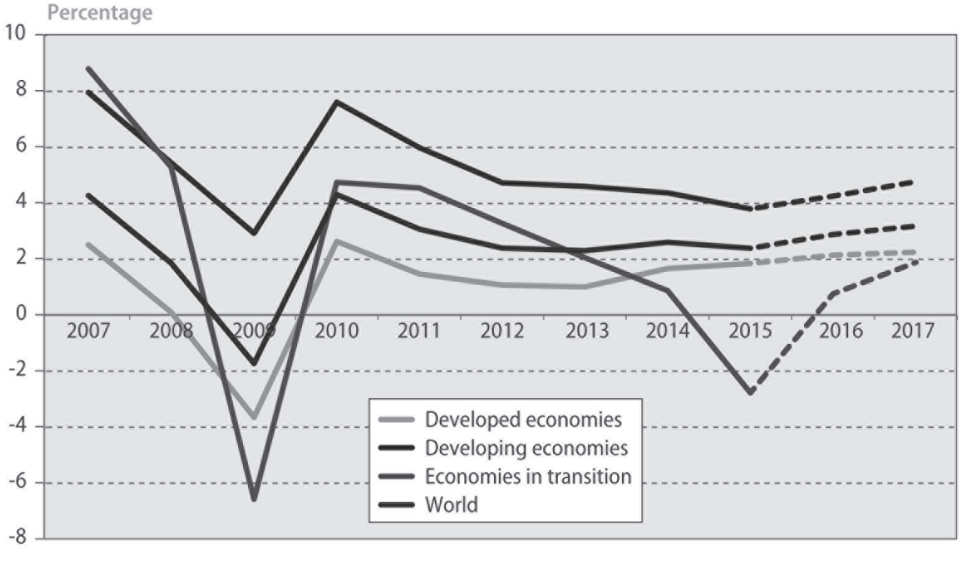
Global economic outlook

Prospects for the world economy in 2016–2017

Global growth stumbles

The world economy stumbled in 2015, amid weak aggregate demand, falling commodity prices and increasing financial market volatility in major economies. The world gross product is projected to grow by a mere 2.4 per cent in 2015 (figure I.1 and table I.1), marking a downward revision from the 2.8 per cent forecast in the *World Economic Situation and Prospects as of mid-2015* (United Nations, 2015a). The growth rates of gross fixed capital formation and aggregate demand continue to remain subdued. The world economy is projected to grow by 2.9 per cent in 2016 and 3.2 per cent in 2017, supported by generally less restrictive fiscal and still accommodative monetary stances worldwide. The anticipated timing and pace of normalization of the US monetary policy stance is expected to reduce policy uncertainties, while preventing excessive volatility in exchange rates and asset prices. While the normalization will eventually lead to higher borrowing costs, rising interest rates should encourage firms to front-load investments in the short run. The improvement in global growth is also predicated on easing of downward pressures on commodity prices, which should encourage new investments and lift growth, particularly in commodity-dependent economies.[1]

Figure I.1
Growth of world gross product and gross domestic product by country grouping, 2007–2017



Source: UN/DESA.
Note: Data for 2015 are estimated; data for 2016 and 2017 are forecast.

1 The key assumptions underlying this outlook are detailed in the appendix to this chapter.

Table I.1
Growth of world output, 2013-2017

Annual percentage change	2013	2014	2015[a]	2016[b]	2017[b]	Change from WESP as of mid-2015	
						2015	2016
World	2.3	2.6	2.4	2.9	3.2	-0.4	-0.2
Developed economies	1.0	1.7	1.9	2.2	2.3	-0.3	0.0
United States of America	1.5	2.4	2.4	2.6	2.8	-0.4	-0.1
Japan	1.6	-0.1	0.5	1.3	0.6	-0.7	0.3
European Union	0.2	1.4	1.9	2.0	2.2	0.0	-0.1
EU-15	0.1	1.2	1.8	2.0	2.1	0.0	0.0
New EU members	1.2	2.7	3.2	3.0	3.2	0.4	-0.2
Euro area	-0.3	0.9	1.6	1.9	2.0	0.0	0.0
Other European countries	1.5	2.0	1.2	1.4	2.0	0.7	0.1
Economies in transition	2.1	0.9	-2.8	0.8	1.9	-0.8	-0.1
South-Eastern Europe	2.4	0.2	2.1	2.6	3.0	0.7	0.1
Commonwealth of Independent States and Georgia	2.0	0.9	-3.0	0.7	1.8	-0.9	-0.2
Russian Federation	1.3	0.6	-3.8	0.0	1.2	-0.8	-0.1
Developing economies	4.6	4.3	3.8	4.3	4.8	-0.6	-0.5
Africa	3.3	3.4	3.7	4.4	4.4	-0.3	-0.4
North Africa	1.1	0.7	3.5	4.1	4.1	0.7	0.1
East Africa	6.9	7.0	6.2	6.8	6.6	-0.4	0.1
Central Africa	0.9	3.7	3.4	4.3	4.2	0.0	0.0
West Africa	5.7	6.1	4.4	5.2	5.3	-1.4	-1.0
Southern Africa	3.1	2.5	2.5	3.0	3.3	-0.4	-0.7
East and South Asia	6.1	6.1	5.7	5.8	5.8	-0.5	-0.3
East Asia	6.4	6.1	5.6	5.6	5.6	-0.4	-0.4
China	7.7	7.3	6.8	6.4	6.5	-0.2	-0.4
South Asia	4.9	6.4	6.0	6.7	7.0	-0.7	-0.2
India	6.5	7.2	7.2	7.3	7.5	-0.4	-0.4
Western Asia	2.0	2.6	2.0	2.4	3.0	-1.0	-1.2
Latin America and the Caribbean	2.8	1.0	-0.5	0.7	2.7	-1.0	-1.0
South America	3.1	0.5	-1.6	-0.1	2.4	-1.2	-1.2
Brazil	2.5	0.1	-2.8	-0.8	2.3	-1.7	-1.3
Mexico and Central America	1.7	2.5	2.5	2.9	3.4	-0.5	-0.3
Caribbean	3.1	3.3	3.4	3.6	3.3	0.3	-0.1
Least developed countries	5.1	5.6	4.5	5.6	5.6	-0.4	0.0
Memorandum items							
World trade[c]	3.1	3.3	2.7	4.0	4.7	-1.1	-0.8
World output growth with PPP-based weights[d]	3.2	3.4	3.0	3.6	3.9		

Source: UN/DESA.
a Estimated.
b Forecast, based in part on Project LINK.
c Includes goods and services.
d Based on 2011 benchmark.

Developed economies are expected to contribute more to global growth

Since the onset of the global financial crisis, developing countries generated much of the global output growth (figure I.2). China, in particular, became the locomotive of global growth, contributing nearly one third of world output growth during 2011-2012. As the largest trading nation, China sustained the global growth momentum during the post-crisis period, maintaining strong demand for commodities and boosting export growth in the rest of the world. With a much anticipated slowdown in China and persistently weak economic performances in other large developing and transition economies—notably Brazil and the Russian Federation—the developed economies are expected to contribute more to global growth in the near term, provided they manage to mitigate deflationary risks and stimulate investment and aggregate demand. On the other hand, bottoming-out of the commodity price decline, which will contribute to reducing volatility in capital flows and exchange rates, will help reduce macroeconomic uncertainties and stimulate growth in a number of developing and emerging economies, including in the least developed countries (LDCs) (box I.1). Developing countries are expected to grow by 4.3 per cent and 4.8 per cent in 2016 and 2017, respectively.

Box I.1

Prospects for the least developed countries

The group of least developed countries (LDCs) is experiencing a modest slowdown of their economies, with growth rates falling from 5.1 per cent in 2014 to an estimated 4.5 per cent in 2015. Weaker export demand from emerging economies, lower commodity prices, net capital outflows, and weak investment growth—and, in some cases, military conflicts, natural disasters and adverse weather effects on agricultural output—exerted downward pressure on growth this year. A rebound to 5.6 per cent growth in both 2016 and 2017 is projected, underpinned by stronger demand from developed economies, growing domestic demand and stabilizing commodity prices. Lower commodities prices (particularly oil) have reduced the import bills of resource-importing LDCs and contributed to lower inflation, although in some countries the gains have been partially offset by depreciating exchange rates.

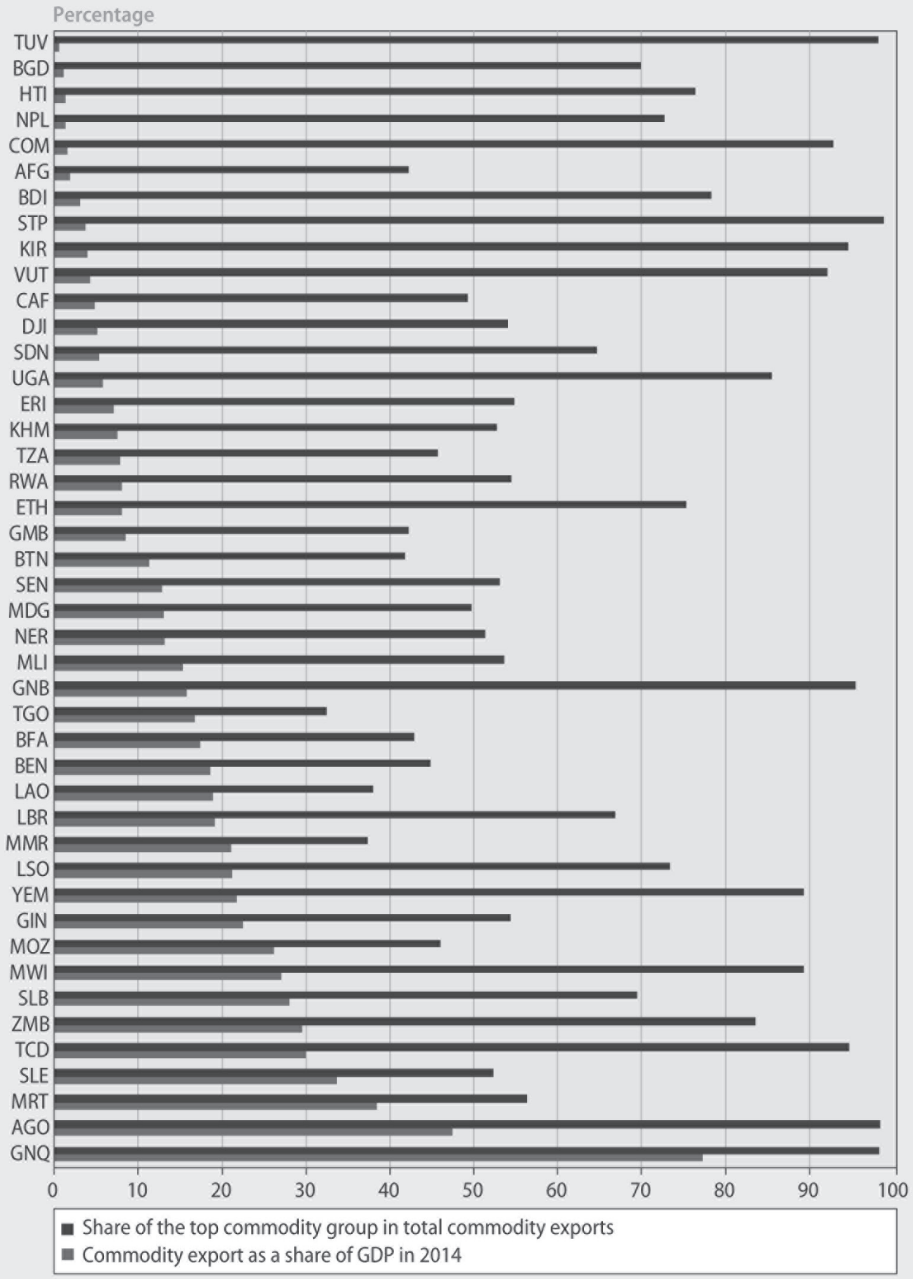
Bangladesh—the largest LDC in terms of both the population and size of gross domestic product (GDP)—is expected to benefit from the recovery in the developed economies, and is projected to grow by 6.5 per cent in 2016, largely driven by private consumption, investment and additional export demand from Europe and the United States of America. Government spending on power, water and transportation infrastructure projects is expected to increase significantly, supporting growth in the short term, but likely to result in a larger budget deficit. In Nepal, the economy is expected to see a gradual recovery in 2016, in part driven by reconstruction efforts after the devastating earthquake of April 2015. GDP growth is projected to strengthen from an estimated 3.3 per cent in 2015 to 4.6 per cent in 2016, but will remain below potential, partly reflecting the subpar monsoon, which is likely to result in weak agricultural output. Meanwhile, Yemen remains mired in a complex military conflict. In 2015, the United Nations declared the situation in Yemen as a high-level humanitarian emergency, with about 80 per cent of Yemen's population in need of humanitarian aid. According to the World Food Programme (WFP), the risk of famine in Yemen is now imminent, given that the country already had the highest level of poverty and malnutrition in Western Asia before the onset of the crisis. As a result of the ongoing conflict, oil and gas production have been suspended, which partly accounts for the nearly 10 per cent contraction of real GDP in 2015. Fiscal conditions, which were already challenging before the conflict, are expected to become unsustainable without external support, as public revenue becomes scarce and expenditures for repairing damage from the conflict rise.

The decline in commodity prices has had a significant impact on the terms of trade for a number of the LDCs in Africa, given their excessive dependence on commodity exports. Many LDCs remain highly dependent on the natural resource sector, with commodity exports representing, on average, 16 per cent of their GDP. Commodity exports are also highly concentrated in one or two products. LDCs that are highly dependent on fuel exports have clearly seen a pronounced decline in their commodity

(*continued*)

Box I.1 (*continued*)

Figure I.1.1
Commodity exports as a share of GDP and share of the top commodity group in total commodity exports for the LDCs, 2014[a]



Source: UN/DESA calculations from UNCOMTRADE and United Nations Statistics Division.
a This includes all LDCs monitored for this report.

terms of trade. By contrast, LDCs reliant on exports of agricultural, food and metal products registered

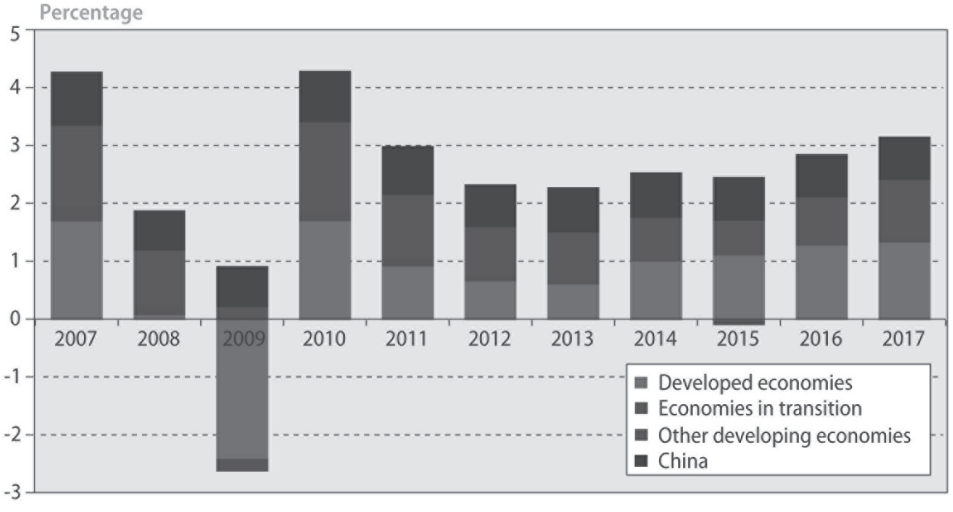
(*continued*)

Box I.1 (*continued*)

an improvement in their terms of trade, as fuel often constitutes a major import component for these economies. Both the narrow export base, which often relies on a single commodity, and the high share of commodity trade in GDP highlight the economic vulnerabilities of LDCs and underscore the need for appropriate policies and strategies for diversification. Commodity-dependent LDCs are likely to benefit from diversification strategies that promote higher local value addition through backward and forward linkages in their resource sectors (see also chap. IV, box IV.3).

Haiti—the lone LDC in the Americas—is projected to grow by 2.4 per cent in 2015, before accelerating slightly to 2.7 per cent in 2016. The medium-term growth outlook for Haiti is rather low by the LDC benchmark. While private consumption and export growth are likely to remain resilient, difficulties regarding government spending and political uncertainties will prevent economic activity from gaining further momentum. Scaling up infrastructure investments and implementing structural reforms will remain essential to boosting growth in the medium term.

Figure I.2
Contribution to global growth, 2007–2017



Source: UN/DESA.

Inflation remains benign

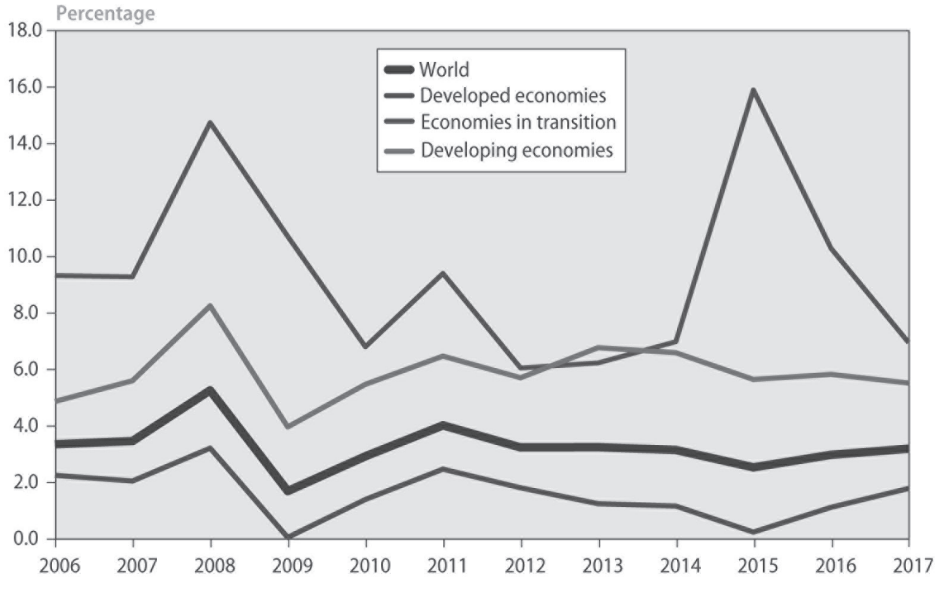
Average global inflation continues to decline amid persistently subdued economic activity, modest wage growth and lower commodity prices. In 2015, global consumer price inflation is projected to fall to 2.6 per cent, the lowest level since 2009, owing to reduced oil and commodity prices (figure I.3).[2] Inflation in developing countries is expected to rise moderately in 2016, mainly driven by higher levels of inflation in transition economies.

Deflation risks linger

Risks of deflation, however, still persist in developed countries, mainly in Japan and the euro area, and to a lesser degree in the United States, where average inflation hovered at about 0.2 per cent during the past four quarters. Across a large number of economies, low quarterly inflation has coincided with higher levels of volatility in quarterly growth in developed economies (see the section on persistent macroeconomic uncertainties and vola-

2 Inflation figures in this section exclude the recent sharp increase in the Bolivarian Republic of Venezuela; for 2015 and 2016, inflation there is projected to rise above 150 per cent.

Figure I.3
Global consumer price inflation, 2006-2017 [a]



Source: UN/DESA.
[a] Figures for 2015 are partly estimated and figures for 2016 and 2017 are forecast. Figures exclude inflation figure in Venezuela (Bolivarian Republic of).

tility). This shows that price stability—which is synonymous with low levels of inflation—is neither a necessary nor a sufficient condition for reducing volatility in real activity or for stimulating economic growth. While average quarterly inflation fell relative to the pre-crisis period in almost all major economies, volatilities of both inflation and growth increased in a majority of the economies (table I.2) amid persistently weak aggregate demand.

Unemployment challenges persist

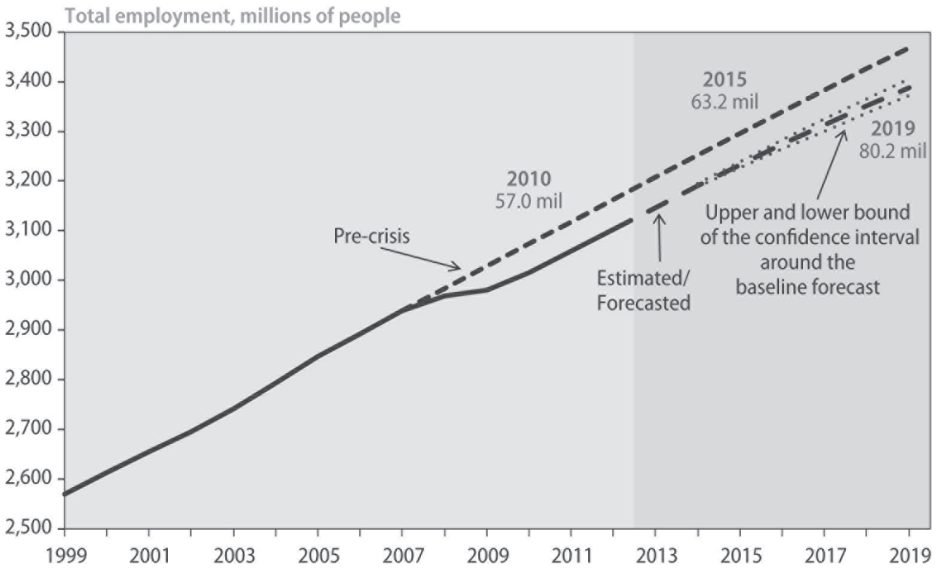
The employment gap widens

The moderate pace of global growth, in an environment of weak investment growth, has failed to create a sufficient number of jobs to close the gap in the employment rate (employment-to-population ratio) that opened up during the global financial crisis. The employment gap is estimated to reach 63.2 million in 2015 (figure I.4). The average rate of job creation has slowed to about 1.4 per cent per annum since 2011, compared to an average annual growth rate of about 1.7 per cent rate in pre-crisis years. As a result, unemployment figures remain high in many regions, even though they have improved in several developed economies. Globally, the total number of unemployed is estimated to have reached 203 million, increasing by 2 million this year (figure I.5). Youth unemployment accounts for 36 per cent of all unemployed worldwide. Global employment growth is expected to continue at the relatively modest pace during the forecast period. Unemployment rates in most countries are expected to stabilize or recede only modestly in 2016 and 2017 against the backdrop of a moderate improvement in investment and growth during the forecast period.

Long-term unemployment is on the rise in developed countries

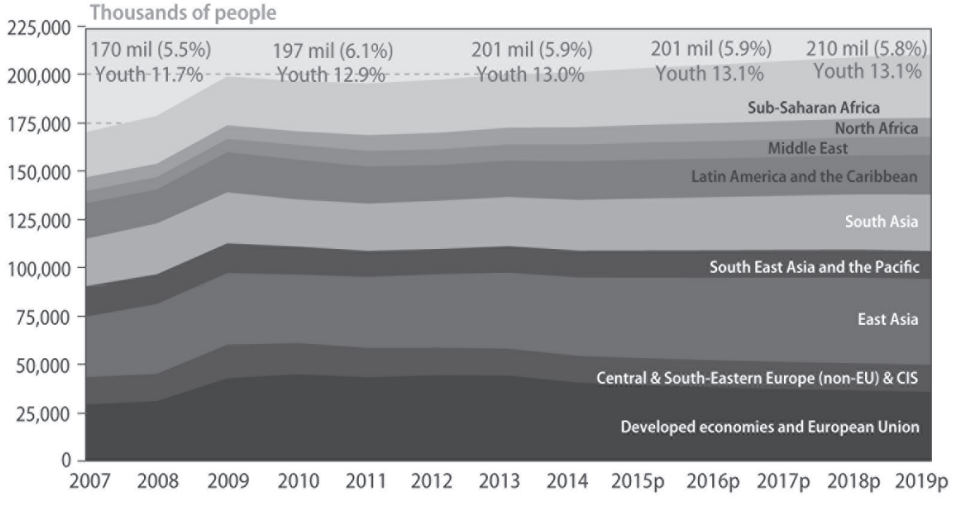
After some improvements in 2014, the growth rate of employment decelerated in the majority of developed economies during the first half of 2015. Consequently, unemployment in developed economies remains well above the pre-crisis level, despite recent improvements. In Organization for Economic Cooperation and Development (OECD)

Figure I.4
Global employment gap, 1999-2019



Source: International Labour Organization, Trends Econometric Models (November 2014), presented at the UN/DESA Expert Group Meeting on the World Economy, held from 21-23 October 2015 in New York.

Figure I.5
Total unemployment by regions, 2007–2019



Source: International Labour Organization, Trends Econometric Models (November 2014), presented at the UN/DESA Expert Group Meeting on the World Economy, held from 21-23 October 2015 in New York.

countries, an estimated 44 million workers are unemployed in 2015, about 12 million more than in 2007. The duration of unemployment has been abnormally long in many developed economies (United Nations, 2015b), bringing long-term unemployment rates to record highs, including among youth. In OECD countries, one third of unemployed individuals were out of work for 12 months or more in the last quarter of 2014, representing a 77.2 per cent increase in the number of long-term unemployed since the financial crisis.

Despite slower employment growth, unemployment figures remained relatively stable in developing countries in 2014. In a group of large developing economies and economies in transition,[3] employment growth slowed from an average of 1.4 per cent per annum between 1999 and 2007 to 1.0 per cent between 2009 and 2014, reflecting both a slowdown in average GDP growth in these economies and a simultaneous decline in the employment intensity of growth. Demographic factors, changing economic structures, increasing automation and capital intensity also partly explain the slowdown in employment growth.

Large informal sectors mask the actual level of unemployment in many developing countries

The relatively stable unemployment numbers in developing economies are also partially explained by declining labour force participation, particularly among women and youth. The real transition from employment to unemployment is not always reflected in the unemployment rate in many developing economies, because of the large informal sector in these countries. In the developing world as a whole, employment opportunities are estimated to have deteriorated in 2015, given the sharp economic slowdown in several economies.

In developed economies, the pattern of work has been shifting considerably towards more part-time employment. In the euro area, part-time employment represented 21.9 per cent of total employment in the second quarter of 2015, a 3.0 percentage point increase since the beginning of the crisis. The main concern with involuntary part-time employment is the repercussion on job security, working poverty and low long-term earnings.

In addition to slow employment growth and high unemployment rates, wages and earnings were also adversely affected by the financial crisis, signalling an overall worsening of labour market conditions worldwide. In OECD countries, the annual real wage growth was about 0.5 per cent between 2008 and 2014, significantly slower than the 1.8 per cent between 2000 and 2007. On the one hand, wage adjustments may have helped to avoid higher job losses during the financial crisis and facilitated job creation in some countries more recently. At the same time, wage adjustments, which were predicated on slowing productivity growth, increased hardship at the household level and weakened aggregate demand. Increases in part-time and temporary jobs, especially in developed economies, and a gradual shift from salaried work to self-employment in some developing regions, such as in Latin America and the Caribbean, have contributed to increasing job insecurity in many parts of the world.

Employment growth and decent work critical for realizing the 2030 Agenda for Sustainable Development

The persistent employment gap, unemployment (particularly youth unemployment), growing prevalence of part-time employment, job insecurity, and stagnant real wages will seriously undermine the global efforts for promoting "inclusive and sustainable economic growth, employment and decent work for all", as envisaged in the 2030 Agenda for Sustainable Development (United Nations, General Assembly, 2015a, p. 4).

Headwinds impede global growth

Global growth prospects face considerable headwinds in the near term, amid a macroeconomic environment of falling inflation and weak employment generation. The following headwinds—both cyclical and structural—will continue to shape the near-term outlook of the global economy as well as its long-term prospects:

3 Argentina, Brazil, China, India, Indonesia, Russian Federation, Saudi Arabia, South Africa and Turkey.

- Persistent macroeconomic uncertainties and volatility;
- Low commodity prices and declining trade flows;
- Rising volatility in exchange rates and capital flows;
- Stagnant investment and diminishing productivity growth;
- Growing disconnect between finance and real sector activities.

Persistent macroeconomic uncertainties and volatility

Persistent uncertainty has been a legacy of the global financial crisis that began in the third quarter of 2008. The policy deliberations in the United States Federal Reserve (Fed), for example, have repeatedly identified macroeconomic uncertainty as a key factor affecting the subdued economic performance during the post-crisis period. While lax regulations that allowed the financial sector to take excessive risks precipitated the financial crisis, persistence of macroeconomic uncertainty continues to adversely affect aggregate demand and investment in the post-crisis period.

In an economy, households and firms make decisions to consume or invest today based on the expectation of a future outcome. The change in the probability of a future economic outcome—income, profit, etc.—represents an uncertainty shock. Unlike an income or productivity shock, an uncertainty shock does not directly affect the level of income or wealth. It can, however, change the probability distribution of future income, which in turn can affect economic behaviour and the welfare of households and firms (see Knotek and Khan, 2011).

Uncertainty shocks persist

Persistent uncertainty can freeze investment and paralyze growth

A strand of economic research[4] generally relies on uncertainty to explain the fluctuations in real output. This research finds uncertainty to be highly countercyclical, rising during economic downturns and diminishing during financially stable times. Recessions indeed coincide with higher degrees of uncertainty (Bloom, Floetotto, and Jaimovich, 2007). When uncertainty amplifies, firms and households typically go into a "wait and see" mode, postponing costly consumption and investment decisions, especially if they are irreversible. The benefits of waiting and gathering more information about potential risks usually outweigh the cost of not doing anything when uncertainty is high. This largely explains why business activities slow down or investments freeze during economic downturns (Bernanke, 1983). In the short run, uncertainty may increase transaction costs and depress profitability. It may also induce herding behaviour among firms and depress aggregate investment.

Bloom and others (2012) shows uncertainty shocks typically induce a rapid drop and rebound in aggregate output, investment and employment, as was observed during 2009-2010 immediately after the Great Recession. An uncertainty shock also generates a negative productivity shock, as uncertainty can freeze reallocation of human and financial resources within and across firms. As such, these shocks are expected to be short-lived. Yet, seven years since the global financial crisis, uncertainties remain elevated. While the financial

4 Alexopoulos and Cohen (2009), Bloom, Bond and Van Reenen (2007), Bloom (2009), and Bloom and others (2012) provide results supporting a key role for uncertainty shocks in business cycle fluctuations.

and liquidity shocks have been relatively short-lived, with equity and debt markets reaching their pre-crisis levels as early as 2010, the uncertainty shock continues to linger.

Volatility proxies for the level of uncertainty in an economy

While there are compelling theoretical arguments that uncertainty can adversely affect growth, there is no consensus on how to objectively measure uncertainty. The empirical literature primarily uses proxies or indicators of uncertainty, such as the implied or realized volatility of stock market returns, the cross-sectional dispersion of firm profits or productivity, or the cross-sectional dispersion of survey-based forecasts.

The persistence of uncertainty in the global economy makes a strong case for revisiting the relationship between uncertainty and output growth in the 20 large developed and 20 large developing countries and economies in transition.[5] While the analyses presented here make no claim of a causal relationship between these variables, they provide important insights on macroeconomic volatility and the slow pace of global growth, and raise important policy questions that merit further research.

Trends in key real and nominal variables

Both output growth and inflation have shifted downward since the global financial crisis, representing the level effects of the crisis. At the same time, volatility of output growth has increased in developed economies in the aftermath of the crisis.

Both real and nominal volatilities are higher in the post-crisis period

As table I.2 shows, average growth rates of output, consumption and investment in the 20 large developed economies registered significant declines during the post-crisis period. The sharpest decline is observed in investment growth rates. Average inflation experienced only a slight decline in the post-crisis period, while inflation volatility experienced a sharp increase.

Surprisingly, the broad money (M2) growth also declined during the post-crisis period despite the quantitative easing (QE) policies pursued by the central banks in many developed countries. While QE injected liquidity into the financial system, a significant

Table I.2
Key macroeconomic volatilities before and after the crisis

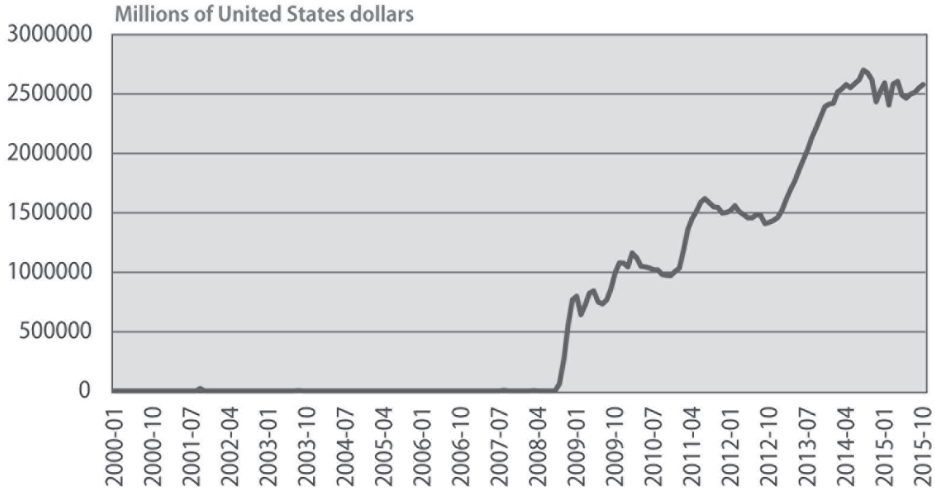
		Developed 20		Developing 20	
		2002 Q3: 2007 Q4	2010 Q1: 2015 Q2	2002 Q3: 2007 Q4	2010 Q1: 2015 Q2
Output growth	Mean	2.8	1.3	6.3	4.3
	Volatility	1.2	1.5	2.9	2.6
Consumption growth	Mean	2.6	1.0	6.5	4.1
	Volatility	1.0	1.4	2.7	3.7
Investment growth	Mean	4.4	0.9	10.9	5.6
	Volatility	4.3	4.6	8.5	7.3
Inflation	Mean	1.9	1.6	6.9	6.6
	Volatility	0.6	1.1	3.3	2.9
M2 growth	Mean	7.9	3.5	20.9	14.4
	Volatility	2.9	2.7	7.8	5.2

Source: UN/DESA calculations.
Note: Volatility is measured as standard deviation.

5 These 40 economies accounted for more than 90 per cent of the global economy in 2014. The availability of quarterly macroeconomic data determined the selection of 20 large developing economies.

portion of that additional liquidity actually returned to central banks' balance sheets in the form of excess reserves, which possibly explains why QE has had only limited effects on boosting aggregate demand or investment rates in many developed countries. Between January 2000 and August 2008, the excess reserves of banks on the Fed's balance sheet averaged $1.8 billion. The total volume of excess reserves in the Fed reached $1 trillion by November 2009. As of October 2015, the Fed has excess reserves of $2.6 trillion (figure I.6), which represents nearly 75 per cent of total assets purchased by the Fed since the onset of the financial crisis. The ballooning of excess reserves since the crisis demonstrates that financial institutions generally chose to park their cash with the Fed instead of increasing lending to the real economy.

Figure I.6
Excess reserves of financial institutions held with the United States Federal Reserve



Source: Federal Reserve Bank of St. Louis, Excess Reserves of Depository Institutions.

The financial crisis has had similar level effects on the macroeconomic variables in 20 large developing economies, although effects have been less pronounced (table I.2). For example, average output growth declined by about 32 per cent in developing countries during the post-crisis period, relative to the 54 per cent decline in output growth in the developed countries. Investment growth also declined in developing countries, albeit at a slower pace. Several factors may explain why developing countries managed to avoid a sharper adjustment in investment, consumption and output, with one factor being that the financial crisis originated in the developed countries and has had only indirect effects through trade and capital flow channels. The relative stability of growth in developing countries is also attributable to the fact that many of them managed to implement effective countercyclical fiscal and monetary measures to sustain investment and growth during the post-crisis period.

The crisis also marks a shift in volatility trends. While volatilities increased in developed economies during the post-crisis period, volatilities in developing countries generally trended downwards. Historically, developing countries experienced higher levels of volatility in output and inflation, as documented in a number of empirical studies (see Ramey and Ramey (1995); Easterly, Islam and Stiglitz (2001); Kose, Prasad, and Terrones (2005)).

These studies cite the lack of diversification, adverse terms of trade shocks, weak financial and institutional developments, and exposure to financial shocks as reasons why developing countries generally experience more output or inflation volatility.

Developed countries experienced sharp increases in volatility

Volatilities sharply increased in developed countries, despite the fact that these economies are generally more diversified and have more effective institutions. Developed countries also have more open capital and financial markets, which should have allowed for international risk sharing and reduced variability in consumption. Social protection programmes, transfers and unemployment benefits—prevalent in developed countries—should have also ensured relative stability in consumption growth. Yet, during the post-crisis period, developed economies experienced significant increases in consumption volatility, reacting in a manner contrary to the findings of Bekaert, Harvey and Lundblad (2006), which claim that countries with more open capital accounts and financial liberalizations experience lower levels of consumption growth volatility. Instead, increased volatility in the developed countries during the post-crisis period tends to support the view that open capital markets do not necessarily lead to international risk sharing and that countries with more liberalized financial and capital markets often experience higher levels of volatility in growth (see Easterly, Islam and Stiglitz, 2001; Agenor, 2003).

Output volatility and output growth

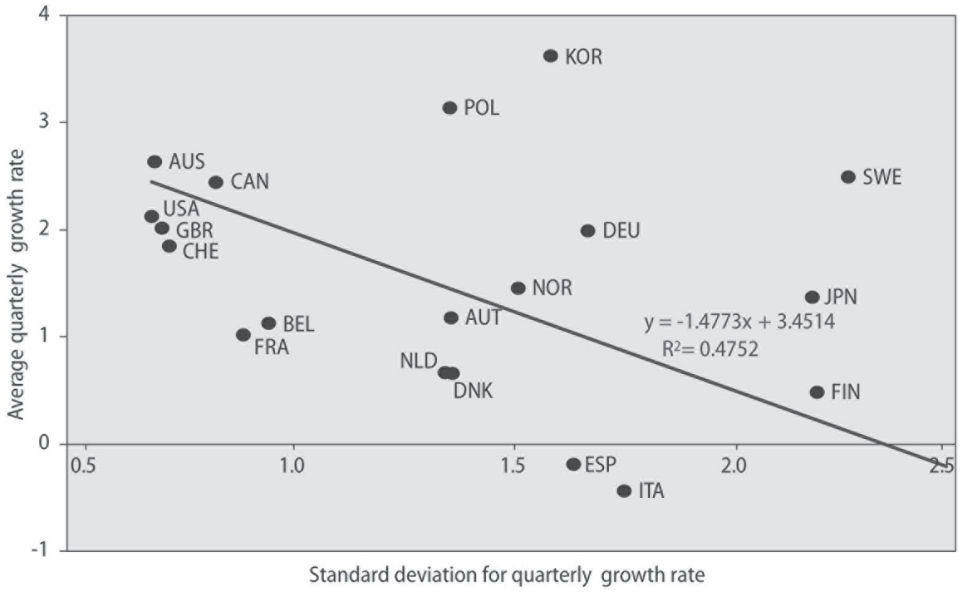
Keynes (1936) first suggested a negative relationship between output variability and average growth, arguing that businesses take into account the fluctuations in economic activity when they estimate the return on their investment. Bernanke (1983) and Ramey and Ramey (1995), also suggest the existence of a negative relationship between output volatility and growth. On the other hand, Solow (1956) suggests a positive effect of real uncertainty on output growth, arguing that output uncertainty encourages higher precautionary savings and a higher equilibrium rate of economic growth. Kose, Prasad and Terrones (2005) conclude that the relationship between growth and volatility depends on the level of economic development, where the relationship is generally positive in developed economies and negative in developing economies.

Volatility negatively affects output growth

The data show a strong negative correlation between output volatility and output growth during the post-crisis period in developed and developing and transition economies (figures I.7 and I.8). The strong negative relationship holds even if outliers are excluded from the analysis. Growth volatility is affected by volatilities in investment, consumption, inflation and money supply, given that these variables jointly determine output growth.

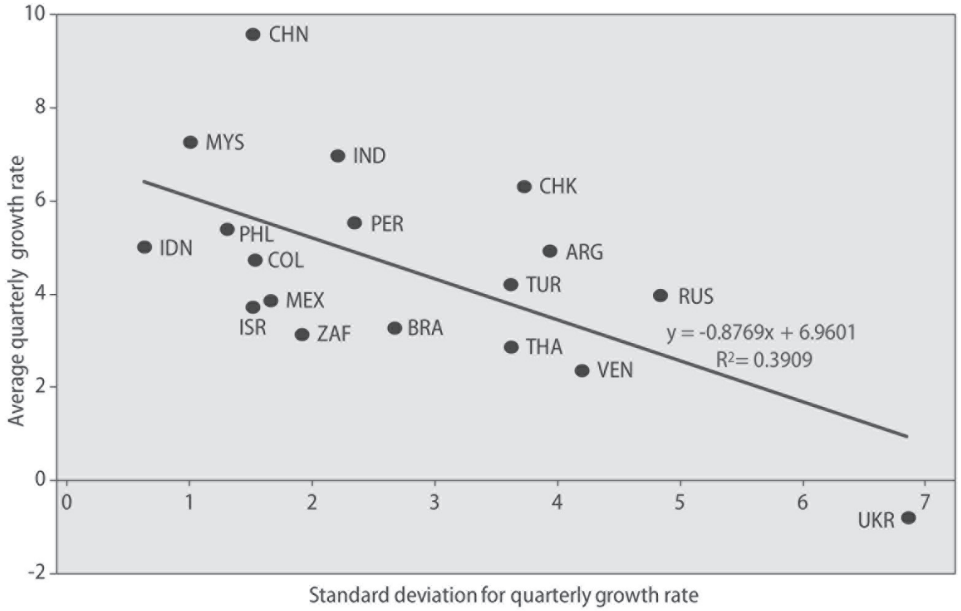
Consumption, investment, inflation and their respective uncertainties and volatilities are endogenous to growth. Yet not all macroeconomic variables are endogenous. Policy choices, institutions and interventions are typically exogenous in the short run. Effective fiscal, monetary or exchange-rate policies can help reduce uncertainties and influence the behaviour of firms and households. Macroeconomic policies, as such, need to be designed and implemented more effectively to reduce uncertainties and stimulate aggregate demand and growth of the global economy.

Figure I.7
Volatility and growth in developed economies, 2010 Q1–2015 Q2



Source: UN/DESA.

Figure I.8
Volatility and growth in developing economies and economies in transition, 2010 Q1–2015 Q2



Source: UN/DESA.