ANNEX 2

Trends in private participation in infrastructure in low and middle income countries, 1990–2007[1]

Summary of key trends

- Private participation in infrastructure in low- and middle-income countries has increased considerably since 1990.
- EAP and LAC project numbers decreased following the late-1990s economic crises.
- Median project size decreased in the early 2000s, recovering to around US$100 million in 2007.
- Concessions and management contracts grew steadily since 1990, but remain a minority.
- The number and value of projects in sub-Saharan Africa lag behind most other regions.
- Commonwealth projects are dominated by India and Malaysia, leading to low levels of divestitures and increases in concessions since 2002 within the group.
- Around 5 per cent of all projects reaching financial closure between 1990 and 2007 have been cancelled, at an average of 6.9 years after financial close.

Overview

Private participation in infrastructure has become increasingly important in low- and middle-income countries since 1990.[2] Progress is highlighted by 58 projects reaching financial close in only eight countries in 1990, compared to 288 projects across 64 countries in 2007.[3]

However, while the growth of private participation in infrastructure has been remarkable, the trend from 1990 has not been uniform. Figure A2.1 reveals the large fluctuations that have occurred in the value of new private sector investment commitments since 1990.[4]

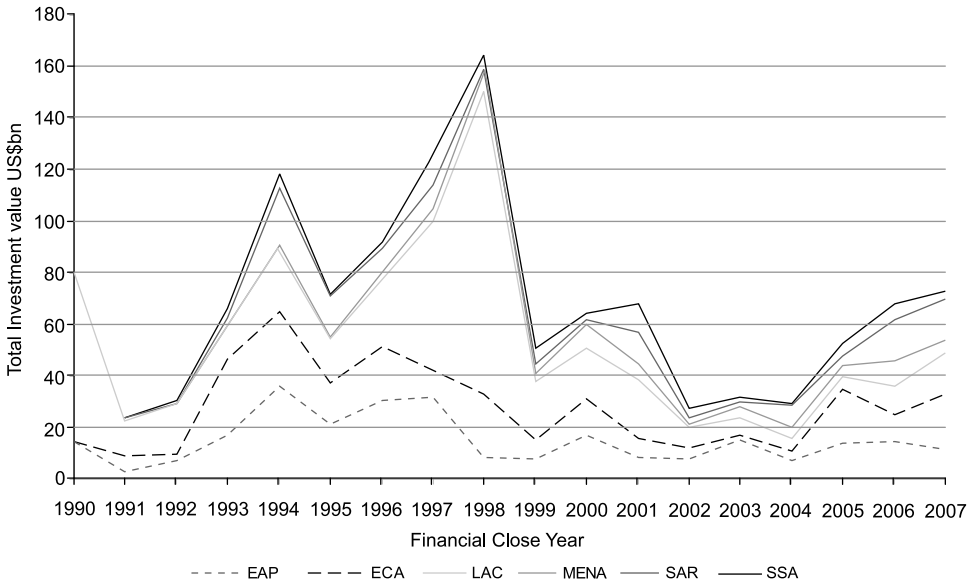

Figure A2.1. Investment commitments in low- and middle-income countries, 1990–2007

As Figure A2.1 shows, there was a near sixfold increase in investment commitments, from US$23.7 billion in 1991 to a peak of US$164.8 billion in 1998. Rapid growth in LAC projects fuelled this boom. The decline that followed was strongly influenced by currency and debt crises in the EAP and LAC regions.[5] Investment commitments temporarily stabilised at this level before halving again during the recession of the early 2000s. Private sector investments have increased since 2002 to reach US$73 billion of new committed investments in 2007.

The trend in the value of investment commitments depends on both the number of projects reaching financial closure and their size. Figure A2.2 shows the former, tracking the number of projects that reached financial close in each year from 1990 to 2007.

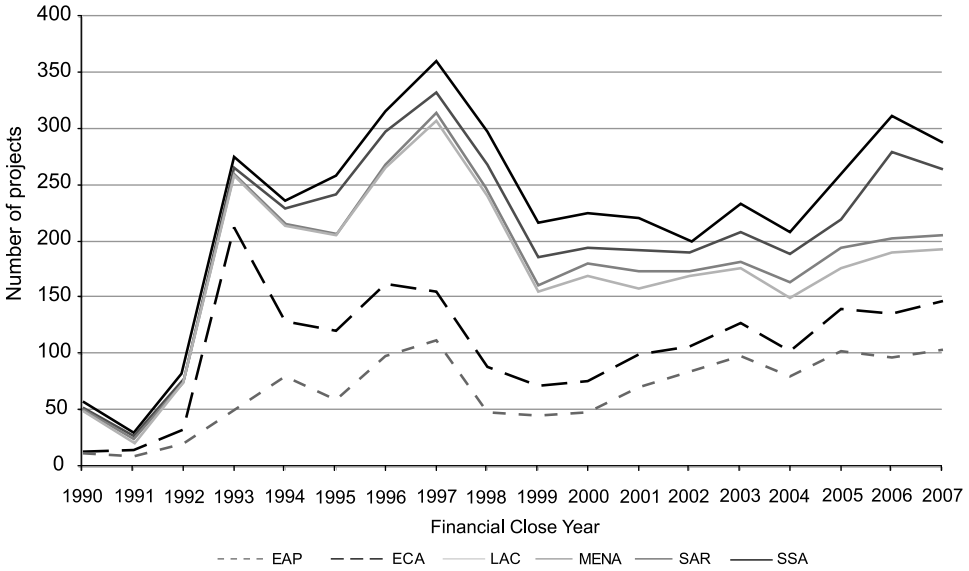

Figure A2.2. Number of projects reaching financial close in low- and middle-income countries, 1990–2007

Figure A2.2 shows that despite the 1998 peak in total value of investment commitments, the number of projects rapidly decreased, particularly in the EAP region. While there was a boom and bust in project numbers in the 1990s, there has been a greater degree of stability in the number of projects since 2000, and an increase since 2004.

Figure A2.3 shows the changing median project size over the period.[6]

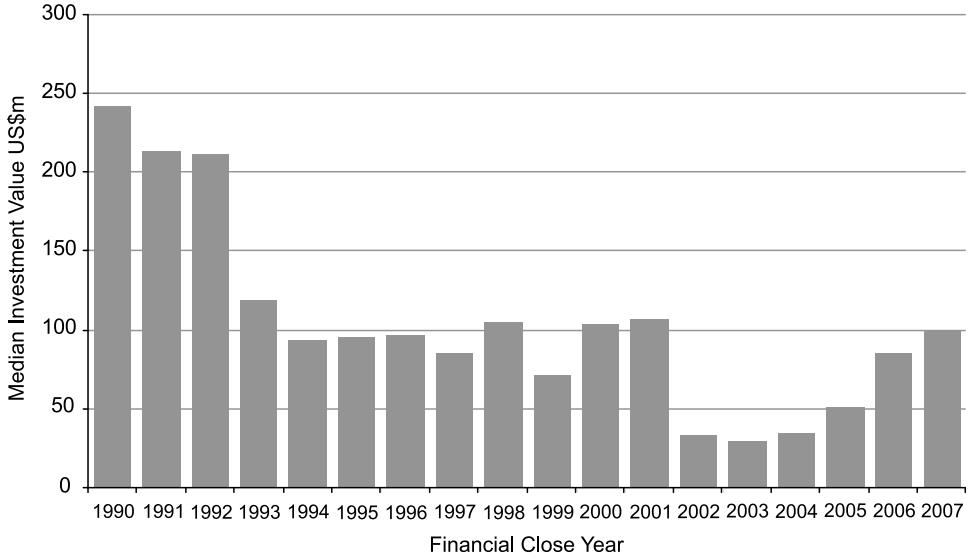

Figure A2.3. Median and investment value in infrastructure projects involving private sector participation, 1990–2007

Median project commitments were high in the early 1990s compared to the 2000s, with some large divestitures driving the higher project value (for example, the US$33.1 billion Telefonos de Mexico divestiture in 1990). However since 1993 the median project value has held steady around US$100 million, with a further fall in 2002. This latter downward adjustment was caused by several factors, including:

- local economic crises and turbulence;
- the bursting of the dot com bubble;
- the decline of some large investors (including Enron); and
- a shift towards a larger number of management and lease contracts.

The figures above also show differences in the nature of the declines in investment commitments following the late 1990s and early 2000s recessions. The decrease in total investment commitments in the late 1990s was the result of reductions in both the number of projects and their size. On the other hand, the reduction following 2001 appears to have been predominantly caused by a reduction in project size, with little change in project numbers. The cutback in size also persisted longer than in the late 1990s only returning to the US$100 million mark in 2007.

Finally, Figure A2.4 shows the number of projects by type of private sector participation over the period 1990 to 2007.

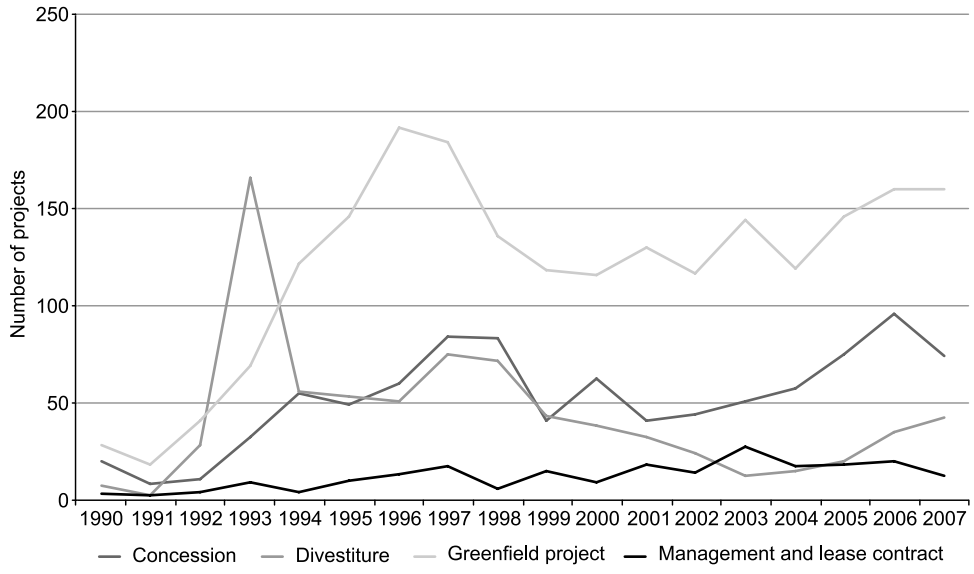

Figure A2.4. Number of projects reaching financial close by type of private sector participation, 1990–2007

Figure A2.4 shows relatively steady growth in concessions, and management and lease contracts since 1990. The number of divestitures and greenfield projects grew rapidly in the first half of the 1990s, but then declined to lower levels soon after reaching their peaks. Greenfield projects have been the most frequent type of private sector participation since the late 1990s.

Trends by region

The overall picture painted above reflects both the growing awareness and application of private sector participation in infrastructure projects globally, but also its sensitivity to macroeconomic shocks. Further details can be explored when regions are examined individually.

Historically, the LAC and EAP regions have led in the use of private sector participation. They accounted for approximately 60 per cent of both projects and investment commitments between 1990 and 2007. However, their shares have dipped since 2004, with transactions being spread more evenly across regions. LAC reached its private sector investment peak in 1998, only to fall and settle at 13 per cent of this value in 2007. The mid-1990s boom was largely based on Brazilian telecom and energy divestitures. The emphasis has now shifted to transport concessions and greenfield energy projects. Although the absolute number of these types of projects was higher in earlier years, they now represent a greater proportion of the total projects, given the lower number of divestitures. The EAP region had the largest number of projects involving private sector participation in 2007, but at only the fourth highest value. China dominates this region, with 63.1 per cent of all projects from 1990 to 2007. However, in terms of value, Malaysia, the Philippines, Indonesia and Thailand are also major players.

Projects in South Asia region (SAR) countries generated US$16.0 billion of commitments in 2007, the third largest value by region. This represents a rapid growth from only US$1.7 billion in 2003, and was propelled by increased private participation in both the energy and transport sectors. The development of transport projects involving private sector participation has made a large impact in SAR. The sector comprised less than 6 per cent of regional private sector commitments from 1990 to 2004, but contributed 43 per cent from 2005 to 2007.

Sub-Saharan Africa has traditionally lagged behind most other regions, both in terms of the number and value of projects implemented. This trend has not changed. Private sector participation in infrastructure projects across the region expanded rapidly through the 1990s, only to realise a sharp fall in 2002. It recovered to its peak level in 2005, from which it slightly receded as the number of transport projects decreased. However, growth in the region has been steadier than in other regions. This can be partly attributed to the high proportion of low-income countries, as these have been more robust to shocks (see Figure A2.5). Private sector participation in infrastructure has also been relatively low in the Middle East and North Africa (MENA) region.

Europe and Central Asian (ECA) countries generated the highest value of infrastructure projects involving private sector participation in 2007 for only the third time since 1990. Russian energy divestitures boosted figures in a region where investment commitments have been particularly volatile. The number of projects has gradually risen over time to 43, but is overshadowed by the 1993 peak of 162.[7]

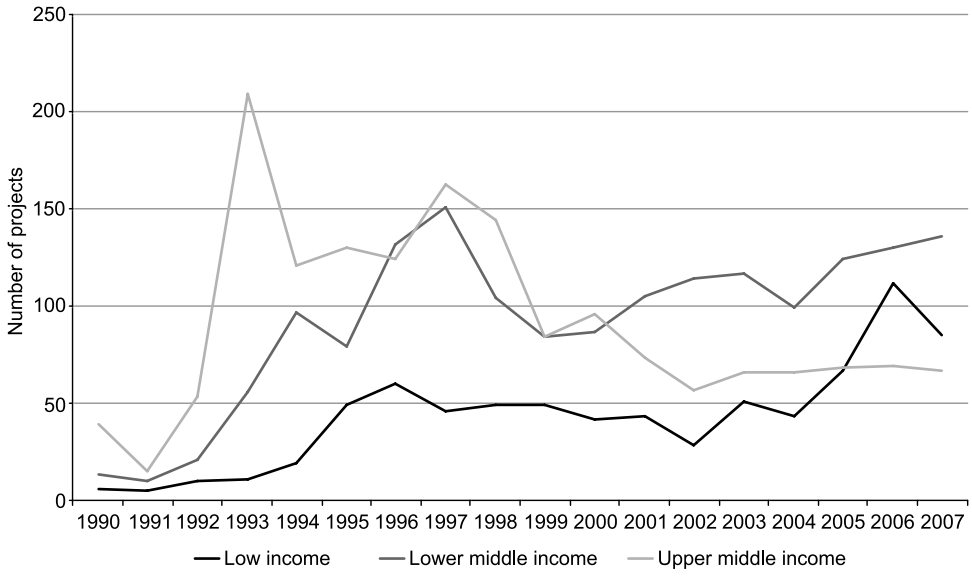

Figure A2.5. Number of projects involving private sector participation reaching financial close by income group, 1990–2007

The portfolio of private sector participation in infrastructure projects across Commonwealth countries covers a wide range of projects and locations. However, it is dominated by Malaysia and India, who together accounted for 63 per cent of total Commonwealth country investment commitments in the period 1990–2007 by value, as shown in Figure A2.6. In part because of efforts in these countries, Commonwealth countries represent a significant proportion of all these transactions in recent years. From 2005 to 2007, Commonwealth countries generated 37.5 per cent of projects reaching financial close and 34.6 per cent of total investment commitments. The recent increase in Commonwealth concession projects and the comparatively low level of divestitures in the group (Figure A2.7) is also largely influenced by activities in these two countries.

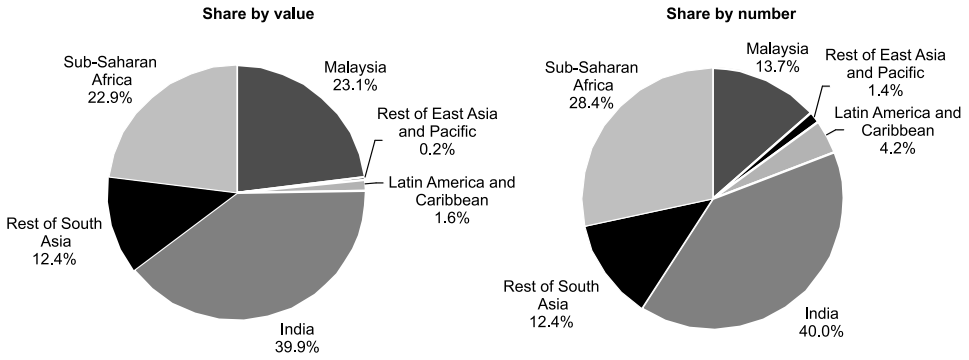

Figure A2.6. Global distribution of Commonwealth infrastructure projects involving private sector participation, 1990–2007

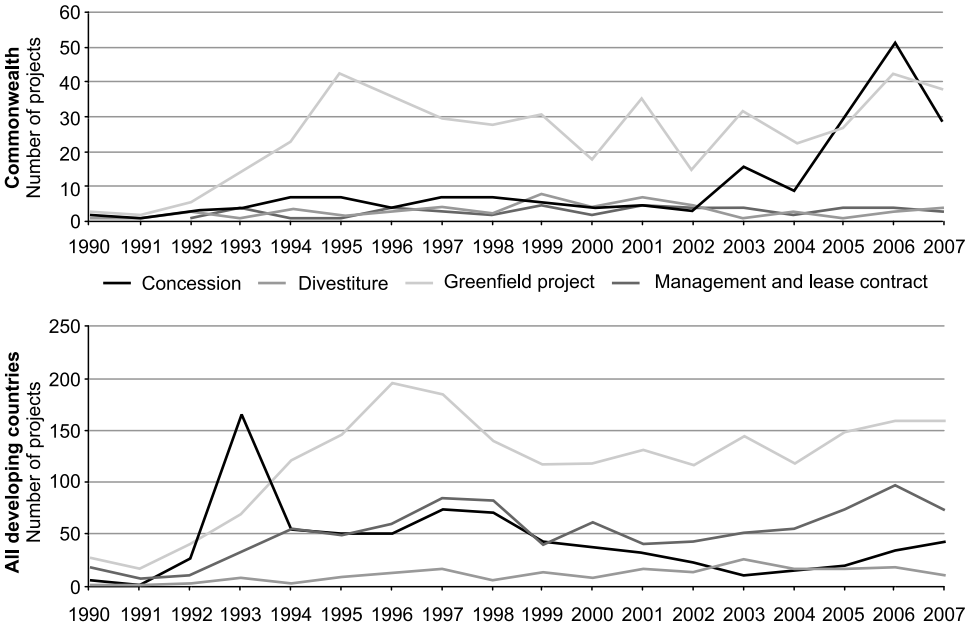

Figure A2.7. Type of private sector participation across Commonwealth countries and all developing countries, 1990–2007

Distribution by country

A closer examination of the regional data reveals that the spread of private sector participation is not evenly distributed among countries within regions. These differences are illustrated in Table A2.1.

Private sector involvement has been concentrated in a small number of countries, but with a long tail of countries with fewer projects. This, however, does not mean that smaller countries have not been active relative to their size. Chile, Argentina and Malaysia are the top three countries in terms of number of projects per capita.[8] Dominica has the highest number of projects per capita, with three for its population of just over 73,000 (the equivalent of over 41 projects per million people).

Table A2.1. Top ten countries by project commitments, project number and projects per head, 1990–2007

Country	*Value US$ billion*	*Share (%)*	*Country*	*No. of projects*	*Share (%)*	*Country*	*Projects per million people*[9]
Brazil	67.2	18.1	China	337	20.9	Chile	7.80
China	35.6	9.6	Brazil	143	8.9	Argentina	4.64
India	33.9	9.1	India	98	6.1	Malaysia	4.23
Argentina	25.9	7.0	Argentina	91	5.6	Colombia	2.97
Philippines	18.3	4.9	Russia	88	5.5	Russia	2.19
Russia	17.4	4.7	Philippines	62	3.8	Kazakhstan	2.16
Malaysia	14.3	3.9	Thailand	51	3.2	Ecuador	2.04
Indonesia	13.6	3.6	Mexico	48	3.0	Guatemala	1.96
Thailand	11.0	3.0	Chile	43	2.7	Peru	1.95
Mexico	10.0	2.7	Colombia	34	2.1	Brazil	1.72
Total top ten	**247.1**	**66.5**	**Total top ten**	**995**	**61.6**		
Grand total	371.5		Grand total	1,614			

Trends by sector

Both trends and type vary considerably between sectors. Figure A2.8 presents the overall trends by sector and Figure A2.9 provides details on the type of private sector participation by sector.

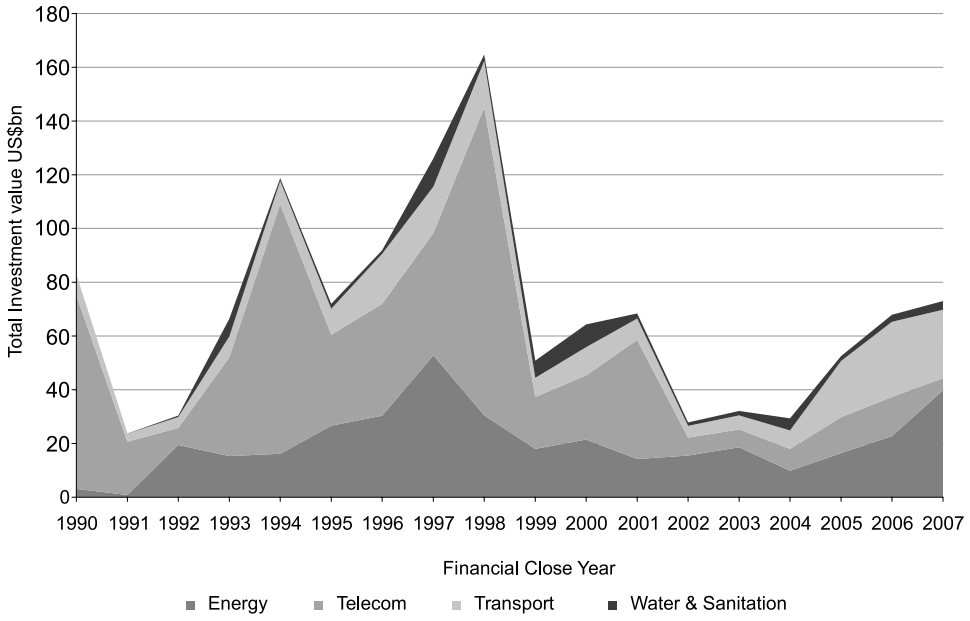

Figure A2.8. Value of investment commitments by sector, 1990–2007

As can be seen in Figure A2.8, telecoms have dominated the value of investment commitments in infrastructure projects with private sector participation since 1990, with water and sanitation projects attracting the lowest investment commitments.

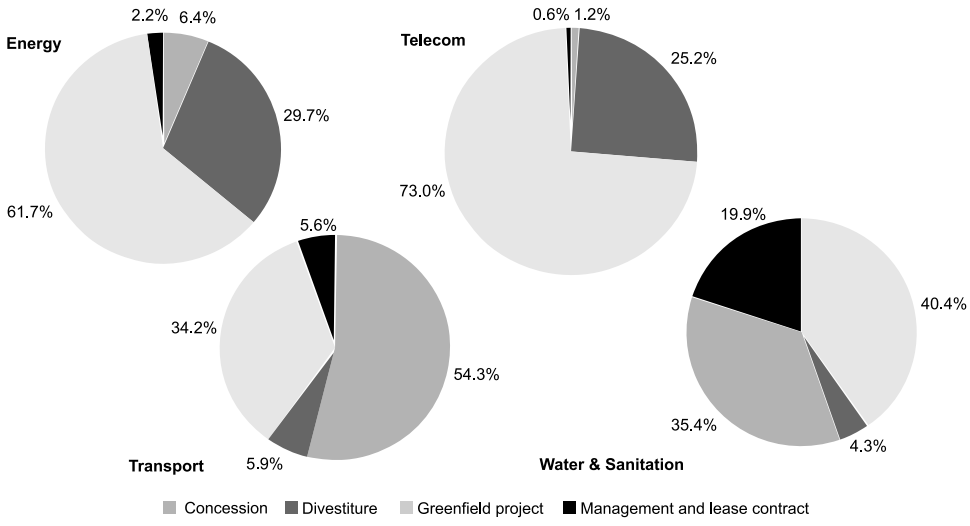

Figure A2.9. Share of number of project types by sector, 1990–2007

Figure A2.9 shows that the majority of energy projects have been in the form of greenfield projects, nearly 75 per cent of which were in electricity generation. Most of the remainder are divestitures, 40 per cent of which are also in generation, a further reflection of the high number of generation projects in energy as a whole (58%). The pattern is similar in the telecom sector, but with mobile access projects dominating. Divestitures were much less popular in the 2000s than at the mid-1990s peak of energy and telecom privatisation throughout upper-middle income countries.

A high proportion of greenfield projects have been in the transport, and water and sanitation sectors. However, concessions dominate in these two sectors. Additionally, a significant proportion of water and sanitation projects have been management or lease contracts.

Trends in failed projects

Out of the sample of 4,078 private infrastructure deals reaching financial close between 1990 and 2007, 194 were cancelled. These represented 4.76 per cent of all deals. The cancellation rate in Commonwealth countries in the sample was lower at 4.16 per cent. Cancelled projects had investment commitments of US$63.4 billion, 5.10 per cent of the total value committed. Projects were cancelled on average 6.9 years after financial close (see Figure A2.10).

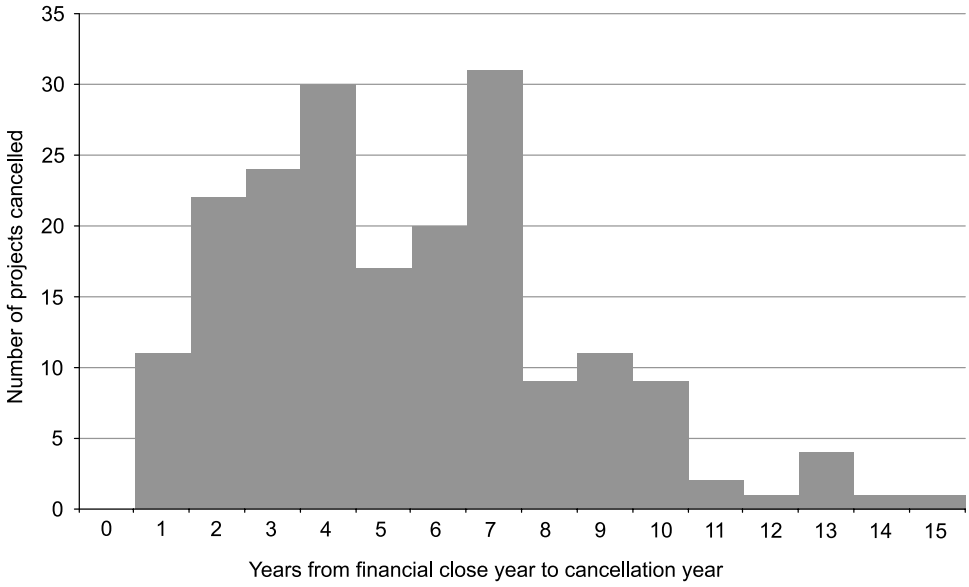

Figure A2.10. Frequency of years from financial closure until cancellation

Figure A2.10 shows that no projects were cancelled in the year in which they were negotiated. The majority of cancelled projects are terminated between two and seven years after financial close.

Figure A2.11 shows differences in project status across sector and region.

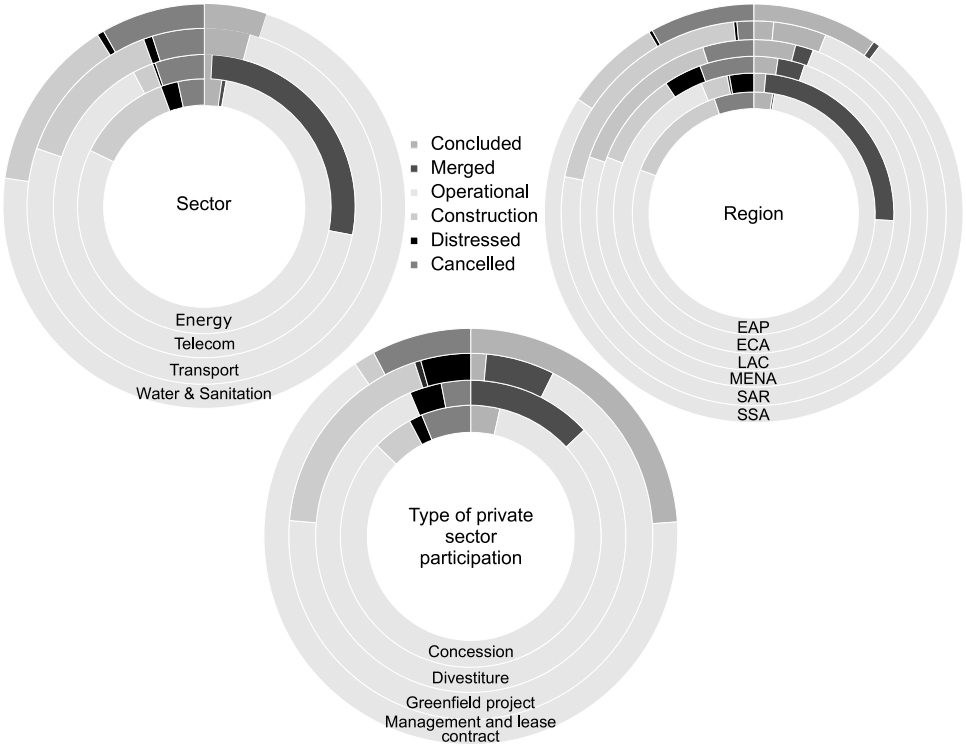

Figure A2.11. Project status by sector, region and type as at end of 2007

It is not surprising that failure rates vary along lines of sector, region and type, as shown in Figure A2.11. The highest rates of cancellation occurred in the water and sanitation sector, the sub-Saharan region and in management and lease contracts. Eight per cent of projects in each of these categories reaching financial close in the period 1990–2007 had been cancelled by the end of 2007. Cancellation, however, is only one kind of failure and the data do not capture the number of projects that have been renegotiated or the varying degrees of distress.

Notes

1. The data in this annex has been sourced from the World Bank/PPIAF Private Participation in Infrastructure database available at http://ppi.worldbank.org/ and covers energy, telecom, transport, and water and sanitation projects in low- and middle-income countries (i.e. those with Gross National Income (GNI) per capita of less than US$11,455 in 2007, as defined by the World Bank).
2. While there was some activity prior to 1990, levels were comparatively low.
3. This reflects the number of new projects, not the number active at the time.

4. The graph depicts investment commitments as against investment payments per year.
5. Total investment commitments declined by nearly US$114 billion in 1998 as crises emerged in LAC.
6. The average size of projects per year is sensitive to a small number of very large projects in a number of years. The skewed nature of the distribution of values can be seen in the difference in 1998 between the mean value of US$590.6 million, compared to the median of US$105 million. Since 2000, the distribution has narrowed but is still skewed, with the mean being around US$140 million above the median.
7. Russian telecom or energy divestitures accounted for 151 of these. If Russian transactions are omitted, the number of transactions in the ECA region follows the global trend more closely.
8. Restricted to countries with populations of over 10 million people to counter anomalous values from small island states.
9. For countries with populations of over 10 million people.