

Chapter 3

Findings

Compared with other countries, small states have not moved quickly enough in the pursuit of the MDGs. The 10 benchmark states outperformed the 46 small states in terms of both targets 'achieved' and those 'on-track'. Off-track indicators are similar for both groups, but the 46 small states have substantially higher levels of indicators with missing data (see Figures 3.1 and 3.2).

3.1 Targets achieved

Table A1.3 in Annex 1 shows that the 46 small states have achieved 19 per cent of the MDG targets.¹ This compares unfavourably with the 28 per cent achieved by the 10 benchmark states. Of the 46 small states, the 32 Commonwealth small states achieved 19 per cent, and the 14 other UN SIDS also achieved 19 per cent.²

Top five CSS by targets achieved:

	%
1. Barbados	28.8
2. The Gambia	24.6
3. Jamaica and Mauritius	23.7
4. Guyana	22.6
5. Cyprus	22.4

Top five other UN SIDS by targets achieved:

	%
1. Cuba	30.5
2. São Tomé and Príncipe	27.4
3. Dominican Republic	27.1
4. Singapore	25.4
5. Cape Verde	23.7

Top five benchmark states by targets achieved:

	%
1. China	40.4
2. Russia	35.7
3. UK	35.5
4. Brazil	35.1
5. Iceland	33.3

Among the 46 small states, even Cuba, the best performing with 31 per cent of targets 'achieved', did

not rank as high as any of the top five benchmark states. Five of the 10 benchmark states have already achieved over 33 per cent of the targets.

3.2 Progress including missing data

This report defines progress with the MDGs as the sum of targets 'achieved' plus those where the status is 'on-track' (i.e. moving towards the target against the baseline value). The progress league table in Table A1.2 in Annex 1 shows that for the 56 states combined – the 46 small states plus the 10 benchmark states – those in the top ten ranking have made 48 per cent³ progress or more. In the first rank is Brazil with 67 per cent progress.

Five of those in the top ten ranking are benchmark states. The small states in the top ten are: the Dominican Republic (3rd) with 64 per cent progress; Cuba (6th) with 54 per cent; Namibia (8th) with 50 per cent; The Gambia (9th) with 49 per cent; and São Tomé and Príncipe (10th) with 48 per cent. The bottom ten in the rankings are all SIDS, with progress ranging from 27 per cent in Papua New Guinea to 20 per cent in Nauru.

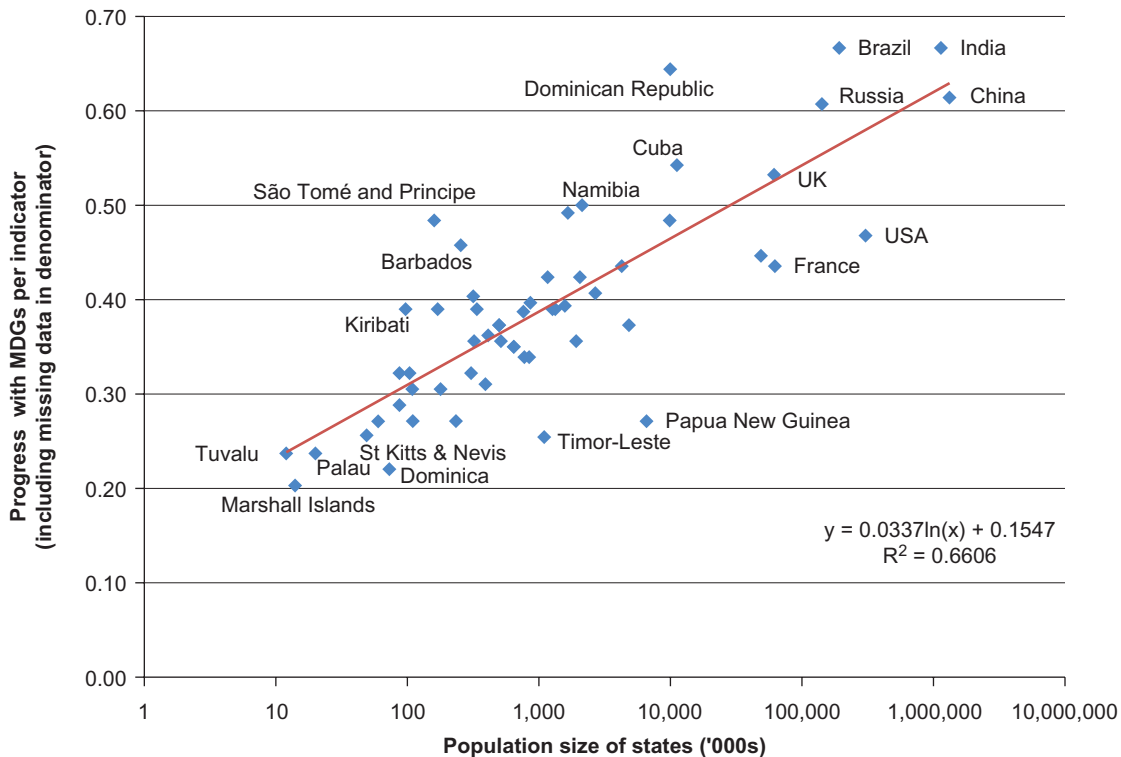
3.3 Progress and population size

Figure 3.1 shows that progress towards achieving the MDGs is positively associated with population size. In short, size makes a difference. Smaller states have found implementation of the MDGs slower going than larger states. However, some of the benchmark states have made less progress than would be expected from their population size (below the trend line) – notably France and the USA.

Some of the 46 small states are below the trend line, including Dominica, Timor-Leste and Papua New Guinea. Benchmark states above the line and which have made more progress than would be expected for their population size are Brazil and Russia. Those above the trend line and which have made greater progress than would be expected include Dominican Republic, Cuba, and São Tomé and Príncipe.

3.4 Missing data

On targets 'achieved' and on 'progress' in achieving the MDGs (Figure 3.1), the percentages have been

Figure 3.1 Progress and population size

Source: Calculated from UN data 2010

calculated with missing data accounted for in the denominators. Missing data have been a major element in the MDG system, with many countries not reporting statistics necessary for assessment.

In many of the indicators, although not all, the year 1990 was determined by the UN to be the baseline year. In this report some flexibility has been adopted by accepting later values (up to 2003) as baseline values due to the unavailability of earlier data. Similarly, reporting of the latest values by countries varies, so that when data were downloaded from the UN database in 2010, for some countries the latest reported values were for 2008 but for others the latest reported values were earlier, going as far back as 2000 in some cases.

Despite this flexibility in the acceptance of data, for the 56 states overall, missing data prevented assessment of progress in 1,563 cases (41%). For the Commonwealth small states missing data affected 961 cases (44%) and for the other UN SIDS 404 cases (43%); for CSS and other UN SIDS combined missing data affected 1,365 cases (44%) and for the benchmark states 198 cases (27%).

3.5 Missing data and population size

Figure 3.2 shows that the missing data were inversely associated with population size. Smaller states have

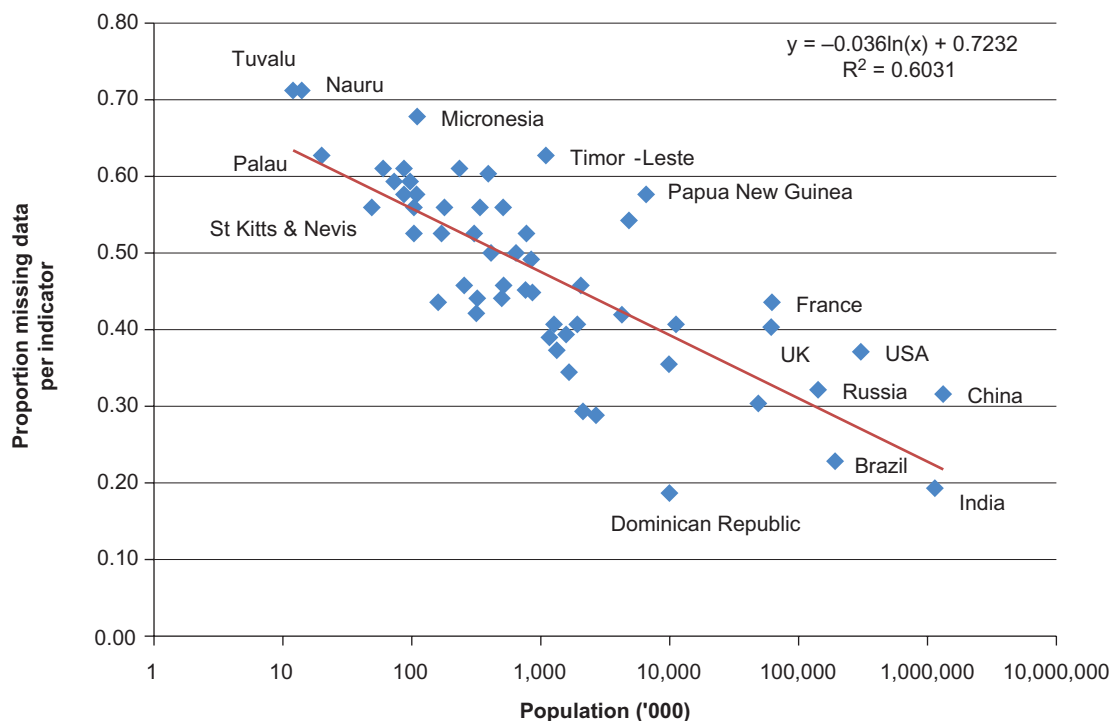
a higher percentage of missing data than larger states.

Many states are close to the trend line, but certain benchmark states had a higher percentage of missing data than would be expected from their population size (i.e. above the trend line), notably France, USA and China. Some of the 46 small states are above the trend line, notably Federated States of Micronesia, Timor-Leste and Papua New Guinea. Others had fewer missing data than would be expected from their population size (i.e. below the trend line), notably the Dominican Republic.

When missing data are included in the denominator for calculating progress, we find that progress is a function of population size. But the report also finds that missing data are a function of population size. So the report finds that the smaller states have both made less progress with MDGs than the larger states and the smaller states have more missing data than larger states. Thus progress and missing data are inter-related, suggesting that smaller countries have difficulty in collecting and reporting data on MDGs, as well as in making progress towards the targets.

The league table for missing data (see Table A1.4 in Annex 1) shows states by percentage of missing data. The highest level of missing data was in Nauru and

Figure 3.2 Missing data and population size



Source: Calculated from 2010 UN data

Tuvalu at 71 per cent. The top five rankings of states by percentage of missing data are:

	%
1. Nauru and Tuvalu	71.2
2. Micronesia, Federated States of	67.8
3. Palau and Timor-Leste	62.7
4. Antigua and Barbuda, Vanuatu and Marshall Islands	61.0
5. Brunei Darussalam	60.3

(Note that the states in the same line have the same scores.)

Five of these were microstates with populations under 100,000. One of them, Federated States of Micronesia, has a population of 110,000. The exceptions were Brunei Darussalam with a population of 392,000 and Timor-Leste with a population of over 1 million. None of these nine states with the highest levels of missing data is a benchmark state. The benchmark state with the highest level of missing data was France with 44 per cent missing.

Twenty-six of the 46 small states had 50 per cent or more missing data. Clearly these states need support in developing their data systems if they are to be able to assess their progress towards achieving the MDGs and guide policy and programmes of action.

The five states with the lowest levels of missing data were:

	%
1. India	17.5
2. Dominican Republic	18.6
3. Brazil	21.1
4. Jamaica	28.8
5. Namibia	29.3

Two of these, Brazil and India, are benchmark states, while the others are among the largest of the 46 small states. It is therefore clear that it is the smallest states that have the greatest need for institutional support for collecting and reporting MDG data.

3.6 Progress excluding missing data

When indicators with missing data are excluded from the denominator for assessing progress, the Commonwealth small states plus the 14 other non-Commonwealth SIDS combined made 73 per cent progress; of the total 46 small states, the 32 CSS made 72 per cent progress and the 14 other small states made 76 per cent progress. The benchmark states made 78 per cent progress. Overall, the 56 states together made 79 per cent progress towards the MDG targets.

The league table in Table A1.5 shows the progress with MDGs since 1990 for the 56 states, excluding in the denominators indicators with missing data. The top five states in this league table of progress were:

	%
1. Kiribati	96 (39)
2. UK	92 (53)
3. Cuba	91 (54)
4. The Bahamas	89 (39)
5. Antigua and Barbuda	86 (32)

(Figures in brackets represent percentage progress with MDGs since 1990, but including missing data in the denominator; this comparison provides a measure of the uncertainty to be attached to the assessment of progress.)

The bottom five states in this league table were:

	%
1. Belize	62 (36)
2. Botswana	60 (36)
3. St Kitts and Nevis	58 (25)
4. Jamaica	57 (41)
5. Dominica	54 (22)

(Figures in brackets for comparison represent percentage progress including missing data in the denominator.⁴)

3.7 Including or excluding missing data

By excluding missing data in the denominator, the assumption is that the pattern of progress for the indicators excluded would have followed the same pattern of progress found where data exist. This contrasts with the assumption made for assessment of progress that includes missing data in the denominator; in this case the assumption is that progress would not have been made on those indicators where there are missing data.

Thus excluding missing data provides a more optimistic assessment of progress. Including missing data gives a more pessimistic assessment. The optimistic presentation assumes that none of the missing data items, if present, would show the status of 'off-track' for those indicators; the pessimistic presentation assumes that all the missing items, if present, would be off-track.

The top five and bottom five ranks for progress made on MDGs highlight the extent of difference between the 'pessimistic' and 'optimistic' assessments, in some cases more than doubling the assessment of percentage progress. Table 3.1 uses MDG 1 as an example.

Table 3.1 Progress analysis 'including' versus 'excluding' missing data

	MDG 1	
	% progress including missing data	% progress excluding missing data
32 Commonwealth small states	17	60
14 other UN SIDS	20	63
Sub-total 46 CSS and other UN SIDS	18	61
<i>Benchmark states</i>		
Iceland and New Zealand	11	25
France, UK and US	15	33
Four BRIC states	69	86
South Africa	11	20

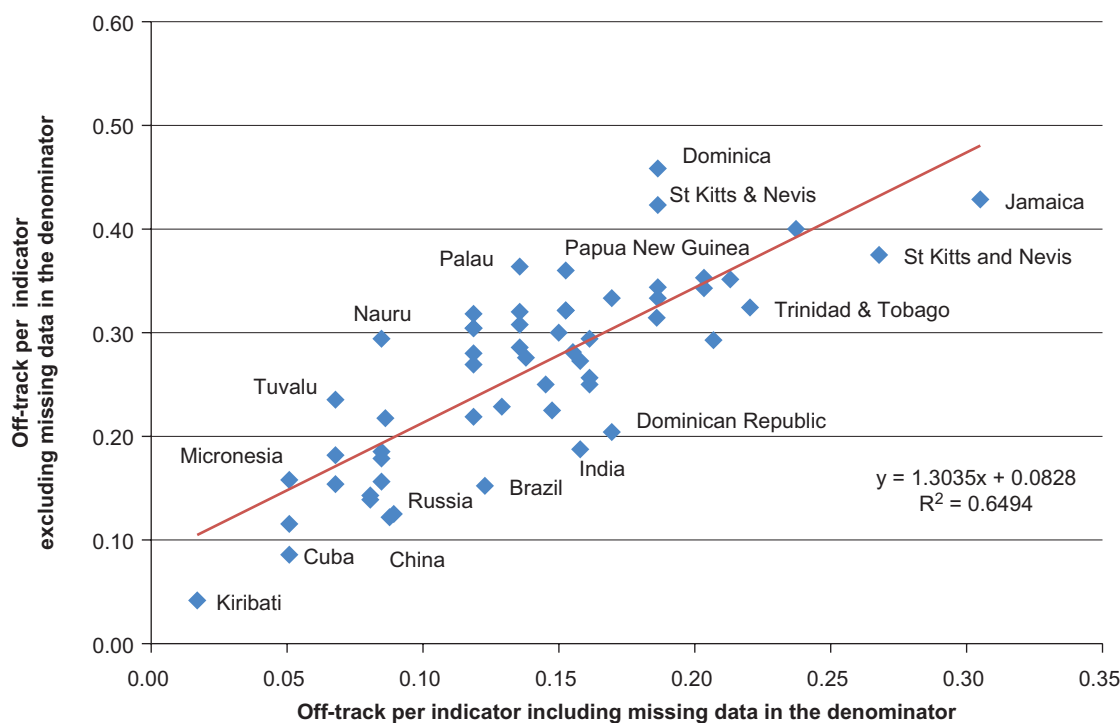
The differences in assessed performance using the 'optimistic' and the 'pessimistic' method are shown in Table A1.6. These differences reveal the measure of uncertainty for the overall assessment of performance for each MDG. In general in this report the commentary reviews performance on each indicator within each MDG using the pessimistic measure of progress by including the missing data items within the denominators for calculating percentage progress.

3.8 Variation in missing data by MDG

The absence of statistics was not evenly spread across the MDGs (see Table A1.7 in Annex 1). For the 46 small states missing data ranged from 1 per cent for MDG 4 (child health) to 71 per cent for MDG 1 (poverty relief). There was 70 per cent missing data for MDG 5 (maternal health); 63 per cent for MDG 6 (disease control); 54 per cent missing data for MDG 2 (education); 34 per cent for both MDG 7 (environmental sustainability) and MDG 3 (gender equality); and 26 per cent missing data for MDG 8 (partnerships).

There were fewer missing data for the ten benchmark states, ranging from 0 per cent for MDG 4 (child health) to 59 per cent for MDG 6 (disease control). For the benchmark states there were 53 per cent missing data for MDG 5 (maternal health); 43 per cent for MDG 2 (education); 40 per cent for MDG 1 (poverty relief); 12 per cent for MDG 7 (environmental sustainability); 5 per cent for MDG 8 (partnerships); and 4 per cent for MDG 3 (gender equality).

Taking the 56 states together, the missing data ranged from 1 per cent for MDG 4 (child health) to 65 per cent for MDG 1 (poverty relief). The extent of missing data for MDG 1 is particularly striking,

Figure 3.3 Off-track including and excluding missing data

Source: Calculated from 2010 UN data

given that it is viewed as one of the more significant goals. The implications of this absence of statistics substantially affect the assessment of progress and should be carefully taken into account as increasing uncertainty in the interpretation of results.

3.9 Performance off-track

The status 'off-track' is assigned in this review where the latest value of the indicator is not moving towards the target value in comparison with the baseline. Table A1.8 in Annex 1 sets out for the 56 states across MDGs 1–8 the ascending rank order of off-track performance. This table also shows a comparison of the percentages and ranks, including and excluding missing data. Figure 3.3 shows a close association between the two percentage scores for the 56 states, which means that both assessments are in accord in identifying the relative position of countries on the two scales.

Kiribati has the lowest percentage off-track both when including (1.7%) and excluding (4.2%) missing data.⁵ Jamaica takes first and second position in both rank orders with 31 per cent and 43 per cent off-track respectively. Figure 3.3 shows that many of the states are close to the trend line with the overall level of association high ($R^2 = 0.65$), but some states are off the trend line with very different rank orders in the two listings.

Table 3.2 shows the five states with the highest percentage of indicators off-track, including missing data, together with the percentage off-track for those states excluding missing data. This gives an indication of the level of uncertainty in assessment arising from the factor of missing data.

3.10 Comparative analysis

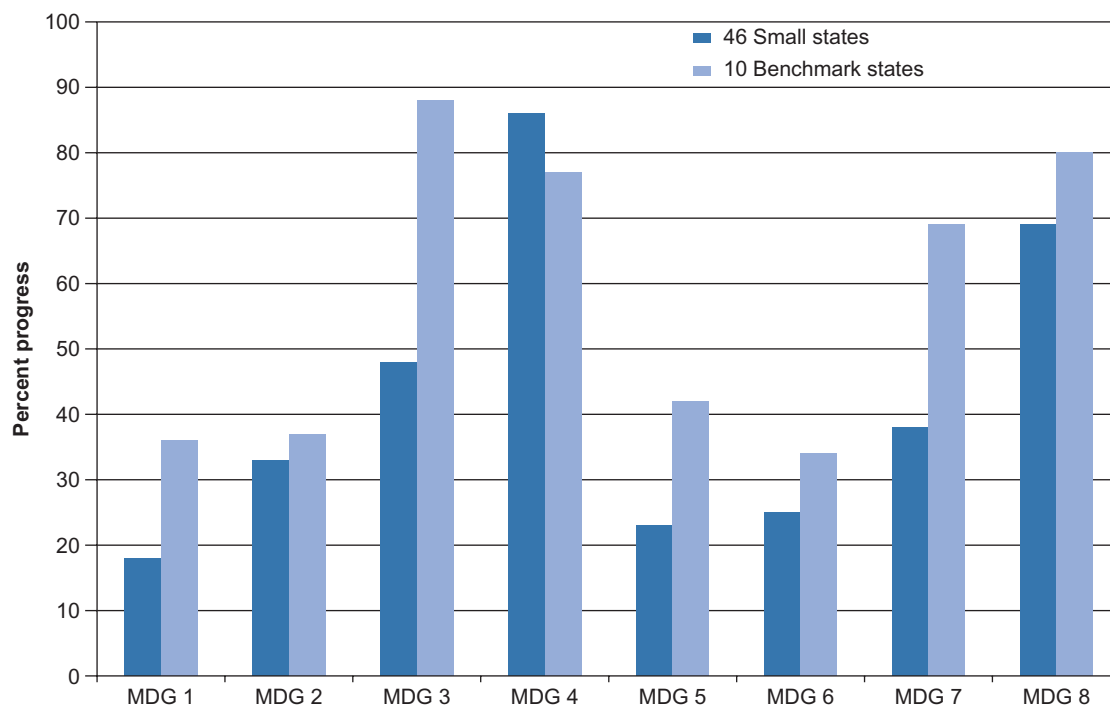
The text and tables in this report present results with missing data included in the denominators for the calculation of percentages. The principal comparisons made are between the 46 small states and the 10 benchmark states.

3.11 Progress by MDG

Figure 3.4 shows that the 46 small states have made less progress than the 10 benchmark states on all of

Table 3.2 Rankings of off-track states

Rank	State	% off-track (including missing data)	% off-track (excluding missing data)
1	Jamaica	31	43
2	South Africa	27	38
3	Botswana	24	40
4	Trinidad and Tobago	22	32
5	Guinea-Bissau	21	35

Figure 3.4 Progress by MDG (includes missing data in denominators)

Source: UN MDG database 2010

the eight MDGs except on MDG 4 (child health), where the small states achieved 86 per cent progress compared to 77 per cent by the benchmark states.

Notes

- 1 Assessed as a percentage of total indicators, with those with missing data counted in the denominator.
- 2 The review finds that the differences in performance were generally small between the 32 CSS and the 14 UN SIDS that together comprise the 46 small states. The detailed tables in the report and in the Annexes show the two groups of countries separately and combined.
- 3 Assessed on a percentage of total indicators with those with missing data in the denominator.
- 4 The arithmetic of the calculation of progress is shown in Section 2.4. The issue is essentially what to do about missing data. Should the missing data be included in the denominator or not? For example, one state might have made progress with 20 indicators out of 50. That might seem to be: $(20/50) \times 100$ per cent progress = 40%. But if in the 50 indicators there were ten with missing data, then by excluding these missing data indicators the progress percentage would be $(20/50-10) \times 100=50\%$. As the rates of missing data are large and vary greatly between states, in this report we have decided to present percentage progress separately 'with missing data' and 'without missing data'. The variation between the two assessments can be taken as a measure of uncertainty in both the individual results for each country for each indicator and in the relative positions of countries in the league tables.
- 5 For definition of progress and the arithmetic of calculations including and excluding missing data see section 2.4.