PART FOUR

Conclusions and recommendations
A tale of two halves

By the end of the previous millennium science and higher education in Africa – according to most indicators – were in dire straits. The cumulative effect of the funding policies of the last two decades of the previous millennium, the huge growth in student enrolments in higher education institutions, combined with continuing political instability in many African countries created a state of affairs which we described in earlier works (Mouton (2008) as the ‘de-institutionalisation’ of science. Scientific institutions in many African countries were fragile and susceptible to the vagaries of political and military events. They were severely under-resourced, and suffered because of a lack of clarity and articulation of science governance issues (demonstrated by constant shifts in ministerial responsibility for science). In particular, African sciences was hugely dependent on international funding for R&D. The cumulative effect of the brain drain of the 1970s and 1980s meant that a whole generation of senior academics and scientists had been lost. This would have a devastating effect on the ability of many universities to build the next generation of scientists. At a practical level, when enrolments in postgraduate student numbers did begin to increase at the turn of the millennium, there were simply not enough supervisors and mentors for these students.

A new narrative emerged around the turn of the century. In Chapters 2 and 3 of this book, we looked more closely at whether this was simply empty rhetoric or whether there was evidence of the ‘rising tide of African science’. Our findings from both standard bibliometric analyses, research output and impact, and of funding acknowledgements, revealed that there are indeed signs of a more positive shift. Our bibliometric analyses showed that over the past ten years, Africa has seen an increase in the numbers of publications, more international collaboration and increased mobility of African scientists. But we cautioned that these more positive trends do not necessarily reflect the impact of deliberate interventions and strategies of many African states. In fact, we emphasised that many of these more positive developments are occurring outside (and even despite) the decisions and funding of science and innovation by many African governments. In particular we pointed to the fact that these positive changes are directly linked to the continued increase in investment by international funders and the accumulative effect of increased international collaboration between foreign scientists and African scientists in multi-authored teams in such fields as high-energy physics, infectious diseases and tropical medicine. Based on their analyses of funding acknowledgements, the authors of Chapter 2 concluded that ‘all in all, the whole production of the continent is characterised by the presence of non-African funders, with the European Union, the NIH and the Wellcome Trust as some of the most important examples’.

It is against this background that we conducted our study of young scientists in Africa. Our results reflect this dual narrative: Some of the findings confirm that our respondents are reaping the benefits from increased availability of funding, more opportunities for mobility and hence increased international collaboration. At the same time, the continued legacy of weak institutions, long-lasting impact of brain drain and the general lack of established support structures are also reflected in the frustrations and negative experiences of young scientists about the many challenges they face.