Chapter 8

Introduction to institutional profiles

Purpose of profiles

A theme which runs through the institutional policies of the Herana universities is that higher education systems in Africa serve three main functions:

- instruction of students at levels above secondary schooling, in order to produce graduates for the country’s labour market;
- research designed to produce high-level knowledge outputs of benefit to the social and economic development of the country; and
- community service in which the university makes its knowledge and skills available to its local and regional communities.

The Herana project has placed most emphasis on the first two of these functions; that is, on the role which universities must play through their production of graduates and their research activities in national social and economic development. The view of the project has been (a) that it is their knowledge activities which enable universities to make sustainable contributions to both social and economic development; (b) that these knowledge activities involve both the production of skilled graduates at all levels and of new knowledge and new applications of existing knowledge; and (c) that the nature and strength of these knowledge activities are to be found in the academic core of a university.

The academic core of a university is taken by the Herana project to consist of a limited set of quantitative inputs and outputs. The inputs for teaching are the qualifications and fields of study which the university offers, its student enrolments and its academic staffing. The outputs for
teaching are the university’s graduates at all qualification levels. Its research inputs include the university’s doctoral enrolments and those of its academic staff who are qualified to supervise research programmes. Its research outputs are its doctoral graduates and its published research articles.

Studies of national and institutional policy documents, including strategic plans, indicate that, even though both are central aspects of the academic core of a university, there are tensions between the instruction and research functions in the national policy environments of the Herana universities. The institutions are committed to both functions, but some seem to prioritise the research function in their vision and mission statements. The arguments that institutions have given for this emphasis were (a) that any country needs a limited number of research-led universities; and (b) that they either already have this status in their country or would receive such recognition if the government were to agree to the establishment of a category of research-led universities.

The tensions between the teaching and research functions have been expressed in the following ways:

- the government either does not formally recognise the research-led nature of its Herana university;
- the government emphasises equity of access and improving national participation rates rather than high-level knowledge production and so expects all universities (including those classified as research-led) to prioritise increasing their undergraduate student enrolments;
- the government fails to provide adequate financial support for the increased demands placed on academic staff and teaching infrastructure by growth in undergraduate student enrolments; and
- the government funds its Herana university as though it were a teaching-only institution and expects its research to be funded by external, mainly international organisations.

In exploring these issues and tensions each chapter in Part 3 of this book begins with an account of the national context of one of the Herana universities, and the role which the university plays in this context, particularly in relation to its knowledge-production inputs and outputs. Each institutional profile then focuses on the application of the Herana academic core criteria and assesses the performance of the university relative to the academic core targets.
Academic core targets and criteria

Table 8.1, which is an extract from Table 2.15 in Chapter 2, summarises the broad requirements built into the Herana account of the academic core.

Table 8.1 Academic core framework

| Inputs | High proportions of student enrolments in (a) science and technology programmes, and (b) in masters and doctoral programmes |
| Inputs | Upper limit on proportions of undergraduate enrolments |
| Inputs | High proportions of (a) academic staff in senior ranks, and (b) senior and junior academic staff holding doctorates |
| Inputs | Favourable full-time equivalent student to academic staff ratios |
| Outputs | High ratios of total graduates to total enrolments |
| Outputs | High ratios of masters graduates to total masters enrolments |
| Outputs | High ratios of doctoral graduates to academics with doctorates |
| Outputs | High ratios of research articles to academics with doctorates |

Discussions during 2014 to 2016 with the participating Herana universities led to specific input and output quantitative targets being linked to the academic core framework.

Academic core input targets

- A university’s enrolment should be predominantly in undergraduate programmes, but with an upper limit of 75% on the number of undergraduate students enrolled as a percentage of the total.
- At least 25% of students should be postgraduates, with a minimum of 15% enrolled in masters programmes and 5% in doctoral programmes. The balance may be studying for postgraduate qualifications below masters level.
- A university’s fields of study must fall into the categories of:
  - science and technology (SET), which includes life and physical sciences, engineering, building sciences, computing and information sciences and agricultural sciences;
  - health and clinical sciences, which includes medicine, surgery, dentistry, pharmacy, public health and veterinary sciences;
° business, economics and management (BUS), which includes financial accounting, auditing, finance, economic sciences and management studies;
° education, humanities and social sciences (EHSS), which includes curriculum and policy studies and teacher training, language and literature, fine and performing arts, communication, law, psychology, social services, sociology, political studies, history and development studies.

• A university must have a fields-of-study shape in which at least 40% of its undergraduate and postgraduate enrolments are in science and technology and the health and clinical sciences, with no more than 30% of its total enrolments in business, economics and management, and with no more than 30% in the humanities, social sciences and education.

• A university’s academic staff must include a large proportion of well-qualified, permanent, senior members. To enable the university to conduct research, including through the supervision of doctoral students, at least 60% of its academic staff must hold doctoral degrees, and at least 60% must be professors, associate professors or senior lecturers.

• The academic staff who teach must be distributed in balanced ways across all the disciplines. Acceptable average teacher-to-student ratios for science and technology and for health and clinical sciences would be no more than 15:1. Ratios across the other disciplines should be no more than 25:1.

Academic core output targets

• At least 25% of all students must, even during periods of rapid growth, complete their qualifications and graduate at the end of each academic year.

• The performance measures for doctoral graduate outputs must be based on doctoral graduates per academic with a doctoral degree. Due to differences in supervisory practices, higher ratios must be set for science and technology and health and clinical science disciplines compared with the humanities, social sciences and education. For science and technology and health and clinical sciences, a ratio of at least 0.38 doctoral graduates a year per academic with a doctorate must be set. For the education, humanities and social sciences fields, as well as business, economics, and management disciplines, the ratio must be at least 0.23.
• A university must expect each science and technology and health and clinical sciences academic with a doctorate to produce alone or with others at least two research publications per year. Each humanities, social sciences, education, business, economics and management academic with a doctorate must produce at least one a year.

**Research-activity categories**

Chapter 2 concluded with analyses of the research–activity categories into which the eight universities could be placed. The definitions of these categories took account of the levels of consistency between national and institutional commitments to research activities, empirical evidence of the performance of each university relative to the Herana academic core targets in Tables 2.15 and 2.16 in Chapter 2, and empirical evidence of changes in research performance over time. The over-arching data element requirements in the research–activity categories are summarised in Table 8.2 which is extracted from the relevant table in Chapter 2.

<table>
<thead>
<tr>
<th>Research activity category</th>
<th>Key data elements of category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research-led university</td>
<td>In terms of the quantitative elements, a research-led university can provide compelling empirical evidence of being able to sustain research activities at the target levels set by the Herana project.</td>
</tr>
<tr>
<td>Emerging-research university</td>
<td>In terms of the quantitative elements, an emerging-research university can meet some of the targets set by the Herana project and has research inputs and outputs which reflect some improvements over time.</td>
</tr>
<tr>
<td>Research-oriented university</td>
<td>In terms of the quantitative elements, a research-oriented university can meet few of the targets set by the Herana project and can provide little evidence of improvements in research performance.</td>
</tr>
<tr>
<td>Research-aspirational university</td>
<td>In terms of the quantitative elements, a research-aspiration university is one which fails to meet or come close to the targets set by the Herana project and which provides no evidence of movement towards satisfying any of the Herana research output targets.</td>
</tr>
</tbody>
</table>

These data elements show that most, but not all, of the academic core targets set out in the academic core framework in Table 8.1 above can be applied in a determination of what the appropriate research–activity is for each Herana university. The relevant data elements in the academic core framework are these:
• high proportions of student enrolments in doctoral programmes;
• high proportions of (a) academic staff in senior ranks, and (b) academic staff holding doctorates;
• high ratios of doctoral graduates to academics with doctorates; and
• high ratios of research articles to academics with doctorates.

The institutional profiles which follow will deal with all the targets contained in the Table 8.1 academic core framework but will focus on the above four points which deal with the production by the universities of high-level knowledge.

**Data sources**

The data and policies presented and analysed in the institutional profiles have been extracted from the following main sources:

• Academic core quantitative data collected in Herana Phase 1 from 2001 to 2009; in Herana Phase 2 from 2009 to 2011; and in Herana Phase 3 from 2012 to 2015. The 2017 publication *An Empirical Overview of Emerging Research Universities in Africa: 2001–2015* analyses and summarises these academic core data.
• Institutional policies and plans taken from the universities’ publicly accessible websites and from transcripts of the institutional presentations at Herana meetings.
• Quantitative data on national contexts extracted from a range of publicly accessible websites, including those hosted by government education departments, statistical services, and advisory and buffer bodies, as well as those belonging to international agencies and statistical reporting bodies.
• National policies and plans extracted from publicly accessible websites, including those hosted by government education departments and higher education commissions, as well as national parliaments.

The data accessed from institutional and national data sources was uneven in its extent and quality. In general, and due to the priority placed on data collection during the Herana project, the institutional–level academic core data that were collected were consistent and comparable across countries. In addition, all eight Herana universities published vision and mission statements on their websites, although not all
published clear strategic plans, covering the final academic years (2010–2015) of the project.

However, extracting data on the eight universities’ national contexts was more problematic. Quantitative data on population, particularly on the numbers of people in the 20–24 age group, were not readily available, and calculations and estimates based on data provided by international agencies had to be used. Official views on the purposes of higher education and of its past and future developments were often unavailable on government websites. In one case, the best document available was a parliamentary act. However, in two cases a full array of national education department strategic plans, government White Papers and parliamentary acts were available on websites.

**Structure of the institutional profiles**

The profiles have been written around a common framework featuring the following elements:

- An overview of national contexts which presents:
  - population totals and gross participation rates in higher education;
  - data on student enrolments in the national higher education system; and
  - national higher education policies and strategic plans.

- A focus on individual Herana universities which presents:
  - the vision and mission of the university including the objectives of strategic plans;
  - data on student enrolments by qualification type and field of study;
  - data on research publications in the context of national research–system outputs;
  - actual 2015 academic core inputs and outputs of the university assessed according to the Herana criteria for a research–led university; and
  - radar graphs assessing whether the university meets all the academic core criteria and then whether the research–activity category assigned to it in Chapter 2 is an appropriate one.

The contents of the profiles can be considered comparable because the research–led criteria have been accepted by all eight Herana universities
following meetings held in Cape Town in 2014 and 2016. However, problems with the availability of national data and policy documents implies that the analyses of the national context of the profiles may not be fully comparable.

**Interactions with Herana universities**

The Herana project’s interactions with the eight universities began well before the Cape Town meetings of 2014 and 2016. Requests for data were sent to the universities after a seminar held in Cape Town in 2009 and the returns were checked by the Herana team and, as necessary, referred back for clarification and often correction. One outcome of these interactions was the publication of a data manual (Bunting 2014), which was designed to ensure consistency and comparability in the production of Herana academic core data. This manual was used in the production of Herana data after 2010, and in later discussions with institutional data offices.

In January and February 2018, emails were sent to all eight universities informing them (a) that this book would be the final output of the Herana project; (b) that the profiles of the eight Herana universities would constitute a major part of the volume; and (c) that the institutional profiles would consider their research focus and plans and their production of high-level knowledge in the form of doctoral graduates and research articles. A copy of a draft of their profile was attached to these emails. Reminders were sent in March 2018 to institutions who had not responded. This section accordingly takes account of all responses and comments received from institutions by 7 April 2018.