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4. DIFFERENTIATION WITHIN THE POSTSECONDARY EDUCATION SECTOR IN GHANA

INTRODUCTION

Until about 1990, the higher education sector in Ghana included only a handful of state-owned public universities that offered undergraduate diploma, degree, and postgraduate degree programs. In general, admission to the first level of higher education was open to candidates exiting the secondary education system. Competition for placement into the few available programs of study was keen and many qualified secondary school leavers were denied a university education. The situation was compounded by a growing population of students graduating from the lower levels of the education system. In 1986, in response to the pressures on the university and limited absorption capacity, the government established the Universities Rationalization Committee (URC) to make recommendations towards reforming the postsecondary education sector.

The URC recommended the expansion of the higher education system to include all postsecondary institutions that offer programs of study at the certificate, diploma, degree or postgraduate degree levels. In 1991, the government accepted the report of the URC which re-designated the expanded postsecondary education sector as tertiary education, effectively making university education a subset of the tertiary education sector. (Government of Ghana 1991). Since the early 1990s therefore, state-owned universities no longer dominate an expanded tertiary education sector.

This chapter discusses the typology and characteristics of the tertiary education system in Ghana. The focus is on the differentiation within the sector, its responsiveness to the increasing demand for postsecondary education and the human resource requirements for rapid growth and industrialization in a globalized and knowledge-driven world economy (World Bank 2008; Task Force on Higher Education and Society 2000)

P. G. Altbach et al. (Eds.), Responding to Massification, 39–50.

OVERVIEW OF THE EDUCATION STRUCTURE

The education structure in Ghana is divided into three main components: a basic education cycle comprising eight years of kindergarten and primary schooling; three years of junior high school (JHS); three years of academic, technical, or vocational secondary study or second cycle senior high school (SHS); followed by tertiary study which could be completed by any of the following:

- four years of university education for a bachelor degree
- three years of polytechnic education for a Higher National Diploma (HND)
- three years of college education for a diploma in various disciplines, including teacher education and training, agriculture, and nursing

The education system is characterized by huge dropout rates, with only about 10% of pupils entering primary school progressing to the tertiary level. The enrollment figures for the different levels of education during the 2014/15 academic year reflect the throughput of students within the system. The available data for the period show an enrollment of 4,342,315 at the primary school level; 1,591,279 at the JHS level; 847,487 at the SHS or second cycle level; and only 312,619 at the tertiary or postsecondary level. Using these numbers and in the absence of a reliable cohort analysis, the transition rates between the different levels may be estimated as 36.6% between primary school and JHS, 53% between JHS and SHS, and 36.9% between SHS and tertiary education. In general, about 66% of qualified senior high school (SHS) graduates choose to pursue further education at a university, with the rest opting for polytechnic (24%), teacher training (6%), or nursing (4%) education. Altogether, it is disturbing that only 7.2% of primary school pupils continue to access postsecondary education. This very low transition rate to tertiary education is due mainly to the large number of learners who drop out of the system because of poor performance. The basic education system in Ghana may therefore be described as inefficient, and non-responsive to the learning needs and academic ambitions of students. This has led to intense policy debates and calls for fundamental reforms and overhaul of the education system.

However, other factors apart from examination performance may account for the small percentage of students accessing postsecondary education. These factors include the low absorption capacity and limited diversity of the tertiary education system and the low-income levels of parents.

TYPOLOGY OF THE POSTSECONDARY EDUCATION SECTOR

The following eight institution types with differentiated mandates comprise the postsecondary education landscape:

- State-owned or public universities
- Public specialized professional higher/tertiary education institutions
- Privately-owned or private universities and university colleges
- Public polytechnics and technical universities
- Public and private teacher training colleges of education
- Public and private nursing training colleges
- Public and private colleges of agriculture
- Tutorial colleges, distance learning/online, and local campuses of foreign registered institutions

The public university sector includes a university for health and allied sciences, a university for energy and natural resources, and a university for development studies that are relatively younger institutions that were established specifically to train graduates for the health, energy, and rural development sectors. While the older universities offer courses in a wider range of disciplines and professions, these newer universities have narrower, discipline-focused and clearly distinct mandates.

The specialized professional tertiary education institutions offer courses (often at the masters degree level) in a core professional area. These include the Ghana Armed Forces Command and Staff College (postgraduate courses in defense studies), the Kofi Annan International Peace Keeping Training Centre (courses in peace keeping and conflict management), the Institute of Local Government Studies, the National Film and Television Institute, and the Ghana Institute of Journalism.

Private tertiary education in Ghana is a recent phenomenon. University education was entirely public until 1993 when the National Accreditation Board (NAB) was established to regulate tertiary education in the country. At present, private universities and university colleges far outnumber public institutions, constituting about 35% of the total number of all tertiary institutions and about 30% of tertiary enrollments (Table 1). Most of the private universities (more than 90%) are for-profit and owned by Ghanaians.

The mandate of the polytechnics is to train students at the tertiary level in the fields of manufacturing, commerce, science, technology, applied social sciences, and applied arts, and to offer opportunities for skills development and applied research. In 2016, eight of the ten polytechnics in the country were upgraded to the status of technical universities to train highly-skilled human resources of the type that are not currently available in the country. The technical universities are intended to be different in orientation from the traditional universities with a mission similar to that of the

universities of applied sciences in Germany and the Netherlands.

The technical universities are expected to be practice-oriented and skills-driven with a focus on providing technology solutions to small and medium enterprises through practical research rather than engaging in fundamental or cutting-edge research. The expectation is that the technical universities will offer a logical academic and professional progression pathway at the tertiary level for practically-inclined SHS students and lower-level TVET graduates without departing from the practice-oriented philosophy of polytechnic education and training. It is also expected that the technical universities will enhance the attractiveness of TVET, in the sense that young people with aptitude for technical education will no longer see the TVET track as a dead-end, but rather as an avenue for developing their practical skills to the highest level possible, whether they start as apprentices, artisans or technicians. However, the technical universities will not imitate or mimic the traditional universities (National Council for Tertiary Education 2014).

The colleges of education, agriculture, and nursing train mid-level professionals at the diploma level, for teaching at the basic education level, for agricultural extension services, and for the health delivery services sector.

Included in the category of tertiary institutions are tutorial colleges, distance learning, online, and campuses of foreign-registered institutions that prepare learners for qualifications awarded by external bodies. The tutorial colleges do not award their own certificates.

It is important to emphasize that all categories of tertiary institutions, whether public or private, must receive both institutional and program accreditation before being allowed to mount programs or admit students. It is an offense under the NAB law to establish or run a tertiary level institution without accreditation.

ENROLLMENT DATA

The numbers and enrollment figures for the different institution types currently operating in the country and that have been duly accredited by the National Accreditation Board are shown in Table 1. The enrollment data for the technical universities, that are yet to separate from the polytechnic subsector, are subsumed under the numbers for the existing 10 polytechnics.

Table 1: Numbers and enrollments of accredited institutions (2014/15)

Types of Institutions	*Number of Institutions*	*Enrollments (2014/15)*		
		Male	*Female*	*Total*
Public Universities	10	94,836	52,344	147,180
Public Specialised/ Professional Institutions	6	6,094	4,692	10,786
Private Universities & University Colleges	68	36,722	26,638	63,360
Polytechnics & Technical Universities	10	35,574	18,404	53,978
Public Colleges of Education	38	20,551	16,012	36,563
Private Colleges of Education	7	4,765	4,114	8,879
Nurses Training Colleges	27*	3,424	8,903	12,327
Colleges of Agriculture	4*	670	74	744
Tutorial Colleges, Distance Learning/Online, and Off-Shore Campuses of Foreign Institutions	21	NA	NA	NA
Total	191	202,636	131,181	

* Includes 5 private colleges of education
** Includes 1 private college of agriculture
Source: National Accreditation Board & National Council for Tertiary Education, Ghana.

During the five-year period 2011-2015, enrollment in public universities increased by 35% while that of the private universities went up by 20.8%. Overall, the total number of students enrolled in the postsecondary education sector increased by 28.5%. While the private universities far outnumber the public universities by almost 7:1, they accounted for only 30% of the total number of students enrolled in 2015. Two main reasons account for this: the public universities have better reputation as older and better-resourced institutions and are generally considered more prestigious. On the other hand, many of the private universities are not only less endowed, they charge comparatively higher tuition fees than the public universities.

At the university level, student enrollment in science, technology, engineering and mathematics (STEM) disciplines is low, at about 40%, out of which only 6% is in engineering. Both within the university and polytechnic subsectors, enrollments in social science, arts and humanities disciplines dominate. Student teacher ratios (STR) are highest in the arts and humanities disciplines, reaching as high as 41:1 at the polytechnics. The low level of enrollments in STEM subjects at the tertiary level is partially attributable to the low enrollment and poor performance of science students at the senior high school level.

PARTICIPATION AND EQUITY OF ACCESS

In Ghana, the Gross Enrollment Ratio (GER) at the tertiary level is low. According to the 2010 Ghana Population Census, the population of the age cohort of 19-23 years is 2,345,048. With a total student population of only 333,817 at the tertiary level in 2015, the GER is calculated as 14.23%, far below the norm of 25% set by the National Council for Tertiary Education (NCTE). With a total population of about 25 million, it is seen that for every 100,000 inhabitants only 1.35 are enrolled in postsecondary education. Using the male and female enrollment figures in Table 1, the Gender Parity Index (GPI) is calculated to be 0.65 in 2015. The generally low participation of women in postsecondary education in the country is a concern that the educational authorities and institutional administrators have attempted to address this through several targeted interventions.

Some of the notable measures to expand equitable access to tertiary education include an admission regime that lowers the competitive admission threshold, not entrance requirements, for female applicants as well as applicants from under-resourced senior high schools, especially those located in the rural or deprived areas of the country. Under this intervention, female applicants who satisfy the minimum entry requirements, but who otherwise may not get the chance to be admitted because of the fierce competition for places, are given the opportunity to enroll. Similarly, applicants from poorly resourced or officially designated deprived secondary schools are offered the opportunity to acquire university education so long as they satisfy the nationally approved minimum academic requirements for tertiary education, although they may not meet the competitive grade cut-off points or thresholds.

QUALITY ASSURANCE MECHANISMS

Quality assurance occurs at three levels within the tertiary education sector. At the supervisory and policy level, the National Council for Tertiary Education (NCTE) sets the standards and norms mainly in relation to minimum admission criteria, academic staff mix and qualifications, student-teacher ratios that are differentiated by discipline and programs of study, and funding requirements. The National Accreditation Board (NAB) regulates the sector by enforcing the approved norms in addition to assessing

institutional governance arrangements, the academic integrity of the qualifications delivered, the quality of the learning environment and physical infrastructure, as well as the employment prospects of graduates. The third level of quality assurance is the existence of Quality Audit Units in most of the universities to provide institutional level structures for quality control and enhancement. The existence of internal quality assurance mechanisms is a key institutional accreditation requirement.

INSTITUTIONAL AUTONOMY AND ACADEMIC FREEDOM

Tertiary institutions in Ghana enjoy almost unfettered autonomy and academic freedom. They are subject only to the laws that established them. Heads of public universities and polytechnics are appointed by their respective councils or board of governors in accordance with their statutes. Although university and polytechnic council chairpersons are appointed by the government, the councils are insulated from direct government interference in their decision-making process. The council, not the government, is the appointing authority of vice chancellors of universities and rectors of polytechnics.

The Academic Board, chaired by the vice chancellor or the rector, has sole authority over the programs that should be offered or discontinued, subject only to the approval of the NCTE that is responsible for allocating public funds, including infrastructure investment capital, to all public tertiary institutions. The degree of academic freedom is however total. The institutions have control over the curriculum and how it is delivered, the appointment of professors and promotion of academic staff, the conduct of research and publication of research findings, the academic requirements for students to graduate, and the establishment of partnerships and linkages with industry and academic institutions worldwide.

ACADEMIC STAFF PROFILES

The minimum academic qualification for teaching at the tertiary level is a masters degree obtained by coursework and research, although most public universities now require a doctorate for appointment to the lowest academic rank of lecturer. During the 2014/15 academic year, the total number of academic staff within the tertiary education sector was 6,177.

The public university subsector had the highest number of teachers. Out of the 3,440 teachers in the subsector, 734 (21%) were female. The academic staff mix is heavily loaded at the lower ranks, with 56.9% in the lecturer grade, 30.1% in the senior lecturer grade, 9.4% associate professors and only 3.6% professors. These percentage distributions of teachers fall far short of the norms set by the National Council for Tertiary Education (NCTE). The NCTE norms require that professors constitute at

least 10% of the staff mix; associate professors, 15%; senior lecturers, 30%; and lecturers not more than 45%.

For the polytechnic subsector, the academic staff numbered 1,885 full time teachers, with 329 (17%) women. The academic staff profile in the polytechnics is dominated by masters degree holders or teachers in the lecturer grade who constitute 86.5% of the teaching population. Only 0.4% of the teachers are associate professors.

Since the NCTE is the sole agency that is mandated by law to exercise oversight responsibility over the entire tertiary education sector, the NCTE norms on academic staff qualifications and mix apply equally to both the university and the polytechnic subsectors. While both subsectors have failed in varying degrees to meet the standard staffing norms, it is obvious that the polytechnics lack highly qualified academic staff in the professorial grade. This situation may be explained by the lower remuneration for teachers at the polytechnic, while the same teachers with the same qualifications can benefit from better salaries and conditions of service when teaching at the university. There is also the greater prestige associated with teaching at the university.

It may be argued, however, that differentiated academic staff profiles should be a characteristic feature of a diversified postsecondary education system. There is therefore need for a policy debate among relevant stakeholders on whether teacher qualifications in practice-oriented and skills-driven institutions such as polytechnics should be the same as those for mainly teaching and research-focused universities.

The academic staff profiles of teachers in the private university subsector show a huge departure from the staff mix in the public universities and NCTE norms. With a total academic staff population of 2,359 during the 2014/15 academic year, only 7.8% of teachers in the private universities are either professors or associate professors. Slightly more than 17% are senior lecturers while almost three quarters (74.8%) are on the entry level rank of lecturers. There is some suspicion within the regulatory bodies (NCTE and NAB) that many of the teachers in the private university subsector are in fact full-time teachers in the public universities who double as part-time teachers in the private universities. For this reason, the NAB accreditation requirements stipulate a minimum number of full-time teachers for every program of study. However, the regulatory system is not robust enough to detect and sanction abuses associated with teachers operating on full time basis in a public university and unofficially on part-time basis in a private university. On the other hand, public sector teachers and the private universities are happy to keep the status quo as part-time opportunities provide extra income while the private universities profit by not incurring the mandatory costs associated with the payment of health benefits and social security obligations for full-time employees on their payroll, as stipulated by the country's labor laws.

PUBLIC INVESTMENT IN THE POSTSECONDARY SECTOR

The education sector is the biggest employer in Ghana, employing more than half of the country's total public sector workforce of about 600,000. In 2014, the government spent 5.2 billion Ghana (GHS) cedis, (equivalent to about US$1.3 billion) on the entire education sector, which is about 20.5% of the national budget. At the secondary and tertiary levels, public funding is supplemented by household contributions in various cost-sharing formulas. Annual household contributions average about GHS 800 million (US$ 200 million). The postsecondary or tertiary sector's share of the annual education budget has been fluctuating over the years. In 2011, it was 17.9%; 19% in 2012; 19.4% in 2013; and 16.2% in 2014 (Ministry of Education 2015).

Funding for the public tertiary education sector comes largely from government subsidies, the Ghana Education Trust Fund (GETFund), and income generated internally by the institutions from student fees, consultancy services, and other economic ventures and projects. The GETFund is a financial facility established by law to support education delivery in the country. It is based on a levy of 2.5% of the value added tax (VAT) collected on goods and services. The GETFund provides between 8% and 10% of the tertiary sector's finances, the internally generated revenue accounts for about 30-40% while government funding or subsidy hovers around 50%. The most striking feature of the government funding to the sector is that about 96% of the allocation goes into the payment of salaries and allowances, leaving little or practically nothing for financing academic improvements. Over the years, the tertiary education sector has seen substantial gaps between government allocation to the sector and actual institutional requirements. According to the NCTE, the funding gap was 46.56% in 2014 and 39% in 2015. These budgetary shortfalls negatively affect the capacity of the institutions to renew or upgrade their teaching and learning facilities or effectively support staff development and research activities.

SYSTEM DIFFERENTIATION

Although some universities have begun a process of reform to their institutional character and mission, the policy debate on the size and shape of the institutions within the tertiary education system has yet to be undertaken. In general, the expansion of the postsecondary education system has not been accompanied by any significant differentiation in institutional governance, course offerings, admission requirements, and qualifications delivered. Institutional and program differentiation is necessary, not only for broadening the array of courses available to learners but also for responding to the diverse skills needs of employers and the job market. Differentiation takes place when autonomous institutions make different choices, in particular in regard to their institutional mission, curricular emphasis, admission requirements, staff qualifications, financing mechanisms, and governance arrangements (N'gethe et al. 2008).

Although horizontal differentiation within the postsecondary sector is evident in terms of the different types of similar institutions (such as public, private, online, distance-learning, or same-sex colleges), there is very little vertical differentiation in terms of the different types and levels of study programs offered. A critical analysis of the postsecondary sector reveals that although the sector is diversified, the subsectors exhibit similar characteristics (Afeti 2016). In general, all the universities, both public and private, have similar governance structures, admission requirements, pedagogical approach, and exit qualifications. The same is true for the polytechnics, the colleges of education and the nursing training colleges. In other words, for any one of the subsystems, the components exhibit similar epistemological behavior. Within the university subsystem, only one (Akrofi-Christaller Institute of Theology, Mission and Culture) is a purely research university offering only masters and PhD degrees. Additionally, this institution is one of the only four chartered private universities in the country authorized to issue their own degrees. In practice, accredited private universities are required to be affiliated to a mentor (often public) university for a minimum period of ten years during which their graduates receive certificates awarded under the seal of the mentor institution.

In terms of institutional size and shape, the private universities tend to be generally smaller in size, more focused on teaching than research, offering fewer programs and having smaller student populations. Very few of them offer science and engineering programs, mainly in view of the costs and resources required for mounting such programs.

The public and private universities (a few of which are campuses of foreign providers) resemble one another in terms of course offerings and types of exit degrees. Many of the universities offer similar programs with similar course titles. The polytechnic subsystem is even more undifferentiated. The programs they run are the same in content and title. The curriculum structure is the same for all the polytechnics and the final examinations are moderated and the diplomas are certified by a sole awarding body, the National Board for Professional and Technician Examinations (NABPTEX). The colleges of education and the nursing training colleges are similarly undifferentiated.

Postgraduate research degrees, industry-specific professional qualifications, and market-responsive certificates are rare within the postsecondary education system. The result is the flooding of the labor market with undifferentiated graduates with similar skills, leading to a significant rise in the level of graduate unemployment in the country.

RESEARCH AT THE TERTIARY LEVEL

Only a few institutions are involved in any appreciable level of research, although university and polytechnic lecturers receive annual book and research grants of about

US$ 1,500 each. These grants are not tied to research output and the lecturers are not held accountable for the use of their grants. Research output, as measured by publications in peer-reviewed journals is low. The premier university in the country, the University of Ghana, produced only 250 such publications in 2015. In order to streamline research funding and stimulate research and knowledge production activities in the country, the government has decided to establish a National Research Fund, which shall receive and approve applications for research funding on a competitive basis.

Overall, postgraduate training is largely at the masters degree level, with masters students constituting about 90% of all postgraduate enrollments and only 10% in PhD programs in 2015. At the University of Ghana, for instance, out of a total student population of 40,244 in 2015, only 4,953 (12.3%) and 577 (1.43%) are masters and doctoral students. The total number of PhD students produced by all the country's universities in 2015 is fewer than 200. Mindful of these challenges, the government has developed an ambitious strategic plan that aims to raise the production of PhDs to 500 per annum and postgraduate enrollment to at least 40% of the student population by 2030. However, the government has not identified any university as a research university that would receive special funding and grants for research.

CONCLUSION

Although the postsecondary education sector in Ghana is significantly diversified and has been rapidly expanding over the past twenty years, the sector has remained largely undifferentiated. Differentiation of the sector to accommodate the learning needs of different categories of students and the diverse skills needs of the labor market is a key policy issue that is beginning to engage the attention of stakeholders in the country. Differentiation holds the key to providing different kinds of graduates to respond to the different needs of the economy and in the most efficient way possible with regard to the use of available and often scarce human and financial resources. Alternative postsecondary institutions differentiated in terms of mission, function, modes of delivery, duration, and cost of provision could be an appropriate initial response to the increasing demand for access to tertiary education by students and the diverse skills needs of industry.

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