

## **Academic Programming and Labour Market Trends in Ghana: A Situational Analysis**

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### **Abstract**

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The paper undertakes a snapshot of the labour market analysis and academic programming in Ghana. The labour market was operationalised by the number of peer institutions accredited to offer similar academic programmes and enrollments representing the supply side and the number of advertisement for various qualifications, representing the demand side. Cumulative frequencies and percentage demand were compared with proposed national norms and performance targets. The results suggested that enrollments in tertiary education institutions in Ghana are not in consonance with public policy targets and these are also not aligned with labour market trends. There is a mismatch between demands for humanities heavily represented by business -related programmes and demand for the sciences against a national enrollment norm of 60:40 for Science and Humanities respectively. The study found that at undergraduate level enrollment was 35:65 in 2002 and 38: **62** in 2008; a clear mismatch with national enrollment norm. However, the observation in all data sources matches the observed labour market demand ratio of 34:66 in 2002 and the observed **39:61 in the current study**. The virtual lack of consistent and comprehensive data on the labour market, enrollment and graduation statistics at both intuitional and national levels contributes largely to the observed trend.

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*Keywords:* Academic programming, labour market, tertiary education, enrollments, quality assurance.

### **Introduction**

Quality assurance and relevance of higher education have become key issues of concern on the global higher education landscape. The commoditisation,

privatisation and massification of higher education are believed to have contributed to lowering standards and consequently affecting quality of higher education globally (Mohammedhai, 2008). The consequences of the massification of higher education and the pressures of international competition have together contributed to change the basis upon which research and teaching and learning are carried out. The challenge most policymakers face is how to balance quality with access. Massification of higher education has also exerted considerable pressure on curriculum development throughout higher education. In the wake of the commoditisation of Higher Education (HE) by GATS-WTO (Bloom, Canning and Chan, 2005), concerns over issues of quality, mutual recognition, cross border education and engagement, educational partnerships and exchanges, harmonisation, internal mechanism and systems that relate to quality have been raised. Students everywhere want to get good, satisfying jobs whilst employers expect graduates who are job ready. In line with the new paradigm of higher education, relevance for most students and curriculum developers is a multifaceted notion. A link which relates study programmes with the labour market needs is the relevance of learning outcome of curriculum.

Ofori Sarpong and Boateng (2002) note that “in terms of the supply of educated manpower Ghana is highly rated among African countries, according to the World Economic Forum/IIID (1998). However, serious doubts have been expressed about Ghana's ability to meet the increasing global competition, given the current level of skills available in the Ghanaian labour market”. This situation does not seem to have changed. The need to establish fitness of and for purpose as well as relevance of higher education has therefore become paramount.

Consequently, the project, entitled *Europe-Africa Quality Connect: Building Institutional Capacity through Partnership* a 2-year Erasmus Mundus programme was launched in October 2010 as a partnership between the Association of African Universities (AAU) and the European Universities Association (EUA). The aim is to address the need for assessing and enhancing institutional capacity for change, as well as to contribute to the international dialogue and cooperation on institutional development and quality assurance, as core elements for partnerships between universities in

Europe and Africa. The Project uses the Institutional Evaluation Programme (TEP), a EUA tool for quality assurance and improvement as a trial application in five universities in Africa. The objective is to enhance confidence in processes and graduates, enhance relevance at the national level and for mutual recognition in cross - borders engagements, credit transfer, *global networking, mobility and collaboration* of staff and faculty etc. Altbach, Reisberg and Rumbley (2009, pg. iv) report that universities have always been affected by international trends and to a certain degree operated within a broader international community of academic institutions, scholars, and research. However, the 21st century realities have magnified the importance of the global context for higher education. This makes a project such as the Europe-Africa Quality Connect most timely.

The Institute of Professional Studies was one of the five universities selected in Africa for the trial application. As part of the Self- Evaluation report, the institute was required to report on the national and regional labour market Trends. The challenges of getting readily available data for the analysis at national level, led the institute to resort to gathering primary data on the demand and supply of academic programmes in Ghana and to find out whether there is a match between the demand and supply of higher education programmes on the labour market in Ghana. The aim is to ascertain whether demand for labour matches national norms with particular emphasis on business- related programmes which is the institute's core mandate. This is because employment of graduates is reflected as one of the most important factors for the quality of tertiary education.

### **Objective of the Study**

The study sought to analyse the demand for labour in Ghana and compare it with supply of academic programmes as well as with national norms. The aim is to ascertain if national norms are in line with market realities. Though exploratory in nature, the study should provide a basis for a further and consistent analysis to provide evidence that can inform academic programming at both the institutional and national levels.

### **Overview of the Labour Market in Ghana**

*The World Bank classifies Ghana as a Lower Middle Income Country. The*

country anticipated a growth rate of 14.1% in 2011, with the outlooks for agricultural, industrial and service sectors all showing positive. Life expectancy rose in the two years after 2009, from 58 to 60; and the workforce is 49.2% female (IMF, World Economic Outlook, 2011). Against this demographic and economic background, demand for higher education is growing. Ghana has over 139,000 students in tertiary institutions (Gondwe and Walenkamp, 2011). In 2009, Ghana was the second largest cocoa and the ninth largest gold producer in the world, while its nascent oil industry was expected to generate revenue of EUR 291m in 2011 (The Economist Pocket World in Figures, 2012). Ghana is thus internationally classified as an “emerging economy” rather than a “least developed economy” (IMF World Economic Outlook, 2011). Additionally, available data indicate that Ghana has long achieved target one of the United Nations Millennium Development Goal (UNMDG 1), which is to halve the proportion of people living in absolute poverty by 2015 (UN, 2010).

The overall standard of living in Ghana has been improving steadily with the international purchasing power of the country and of individuals having grown by a factor of 7 and 3 respectively over 30 years. This is against the fact that the population in Ghana has doubled during the same period (IMF, 2011). According to the World Bank, absolute poverty refers to people living on less than one dollar (\$1) a day. However, Gondwe and Walenkamp (2011) note that theoretically, Ghana did not suffer absolute poverty in the three decades, with each person having \$1.37/day to spend in 1980 and \$4.40/day to spend in 2009 (please note: annual figures divided by 365 days). GDP growth has also been increasing steadily with 4.0 per cent in 2009, 7.7 per cent in 2010 and 13.6 per cent in 2011 (MOFEP Budget, 2012). Inflation which was 18.1 per cent at the end of 2008, stood at 8.40 per cent in September, 2011 (MOFEP Budget, 2012). The services sector grew by 4.2 per cent and contributed 48.1 per cent as its share to GDP, still making it the largest contributor to GDP in 2011. The population as estimated by July 2011 is 24,791,073, with 36.5% (male 4,568,273/female 4,468,939) being between the ages 0-14 years, while 60% (male 7,435,449/female 7,436,204) is between the ages 15-64 years and 3.6% (male 399,737/female 482,471) 65 years and over ([www.indexmundi.com/ghana/demographic.profile](http://www.indexmundi.com/ghana/demographic.profile)).

The key productive sectors of Ghana's economy are agriculture (34.3% of GDP in 2007 and employing 56% of the labour force), services (31% of GDP

*in 2007 and employing 29% of the labour force) and industry (26% of GDP in 2007 and employing 15% of the labour force; (GoG, 2005; CIA World Fact Book, 2009). Within the agricultural sector the contribution to the GDP, in order of magnitude, comes from the crops and livestock subsector followed by the cocoa, fishing, and forestry and logging subsectors respectively (GoG, 2005). Within the industrial sector the contributions to GDP, in order of magnitude, come from the construction subsector followed by the manufacturing, mining and quarrying, and the electricity and water subsectors, respectively (GoG, 2005). The manufacturing subsector has potential to grow, and currently remains limited in its growth largely due to high production costs and the influx of cheaper imports which make locally-manufactured products uncompetitive. The services sector is driven by wholesale and retail trade and restaurant and hotel services which together account for 60% of the gains for the economy from this sector (GoG, 2005). Other subsectors within the services sector include the transport, storage and communication subsector, government services, financial and business services, real estate, and community, social and personal services (Gondwe and Walenkamp, 2011).*

*The Ghana Employers Association (GEA) has a total of 336 members (GEA, 2009) where one GEA member is equivalent to one individual company. The companies must have more than 50 employees. In addition to the GEA, 1200 employers also have membership within the Association of Ghana Industries. Gondwe and Walenkamp (2011) report that, the 2006 national census held by the GSS shows that middle and higher education (i.e. universities, polytechnics, specialised colleges, technical and general secondary' schools and technical training institutes, both public and private) contribute only 9.4% of the personnel in the Ghanaian labour market. All other employees have less than a senior secondary level education (28.6% completed their primary and junior secondary education, 26.7% attended primary' and junior secondary school but did not complete the education and 35.3% have no formal education). Considering the fact that the share of workers with a higher education is limited and that the output of primary and junior secondary' school is also limited, it can be said that Ghana has achieved remarkable success in its macro-economic climate but not in educational attainment.*

The Ghana Statistical Service (GSS) provides statistical summaries on participation in the labour market however; this is less than desired to allow effective analysis of the labour market and higher education planning. The strong performance of Ghana's economy, particularly since the mid-1990s, has been linked to declining unemployment and underemployment (GSS, 2008a). Despite these positive developments, the situation for youth is still critical, with the unemployment rate among the youth aged 15-24 (i.e. people who have no work, are available for work and actively looking for work) being estimated at 61% in 2006 (GSS, 2008a). Gondwe and Walenkamp (2011) note that these statistics are in agreement with the fact that 60% of the junior secondary school leavers do not proceed further with their education.

### **Relevance of Labour Market Analysis in Quality' of Higher Education**

Production and application of knowledge have become important factors in economic development. The World Bank acknowledges that economic growth is as much a process of knowledge accumulation as capital accumulation (World Bank, 2002). However, knowledge accumulated must be relevant in order to support development. Primarily, the aim of higher education is to create knowledge to foster economic and social development (OECD, 2008). However, Gibbons (1998, pg. 7) reports that "over 90% of the knowledge produced globally is not produced where its use is required. The challenge is how to get knowledge that may have been produced anywhere in the world to the place where it can be used effectively in a particular problem-solving context". This implies that there is need to examine what type of knowledge is produced, where it is produced, how it is produced and how it is used. Some scholars have argued that the aim of higher education is to create knowledge that can be used to chart the path of progress at a later time (OECD, 2008) From this perspective output of higher education must not necessarily be immediately relevant. The efficacy of this perspective in contemporary times is, however, under question (OECD, 2008). This school of thought also suggests the mere production of knowledge should empower graduates to use critical thinking to the path of progress. However, there have been several reports expressing concern that higher education output is not meeting expectations of the labour market, making relevance a critical issue (Mohamedhdia, 2008; Gondwe and Walenkamp, 2011).

Contrary to the advocacy for relevance of higher education and the congruence with the labour market, it has been argued that focusing on the labour market needs for academic planning may also result in ignoring other vital disciplines that may not seem market-relevant or demand-driven but may be relevant for development (Gondwe and Walenkamp, 2011). An OECD report (2008) notes that there is a tension between the pursuit of knowledge generation as a self-determined institutional objective and the statement of national priority as defined in the aims and goals of the tertiary system. The objective, from a governance point of view, is then to reconcile the priorities of the individual institutions and the broader social and economic objectives of countries. This entails determining how far the former contributes to the latter as well as clarifying the degree of latitude the institution has in pursuing its own self-established objectives.

The World Bank in its World Development Report of 1998/99 has highlighted the issue of knowledge and information gaps as critical factors in the development of nations (The World Bank, 1999:1). In the World Employment Report (WER) of 1998-99, the ILO noted that, “the level and quality of skills that a nation possesses are becoming critical factors” in determining a country's ability to take advantage of the new opportunities, in a world of increasing globalisation and technological change (ILO, 1998, pg. 10).

Boateng and Ofori -Sarpong back in 2002 noted that the problem of supply demand gaps in graduate output is real in Ghana and that there is an over-supply of graduate labour in those courses that are easily accessible, in particular arts and humanities, and an under-supply in critical areas, like engineering, accounting, medicine, information technology and management. Boateng and Ofori -Sarpong further noted that tertiary education remains an important factor for escaping long-term unemployment and poverty. The existence of supply-demand gaps not only contributes to the problem of graduate unemployment but also undermines the efficiency of public investment in tertiary education.

The National Council for Tertiary Education (NCTE) notes that the lack of congruence between labour market needs and educational outcomes of tertiary education is a major lapse in Ghana (NCTE, ongoing). The NCTE

further observes that there is inadequate articulation between higher education and national development efforts. The question is 10 years after the report of Boateng and Ofori-Sarpong, commissioned by the World Bank in collaboration with the National Accreditation Board (NAB) and the National Council for Higher Education (NCTE), what has changed? Has the situation improved? Is there data that can consistently be used to ascertain changes in the labour market trends and programmes of higher education institutions in Ghana? Is there an alignment between national development needs and programmes of higher education institutions in Ghana? How many institutions have access to labour market information that may enable the development and review of existing programmes to meet the needs of the labour market. The study sought to answer these questions.

The essence of analysing the labour market trends at the national level is therefore to track congruence and improve the relevance and quality of the higher education output, and minimise the problem of supply-demand mismatch. This can also enhance strategic planning of academic programmes and augment diversity of knowledge and skills. It can also reduce the duplication of academic programmes by various tertiary education institutions. The question is can a bridge between the labour market and higher education impact development in Africa positively or would it leave some important sectors under developed in the long term? This should be food for thought for HEIs planners in Ghana.

### ***The Tertiary Education Sector in Ghana***

Ghana has a diversified tertiary education sector, the public institutions comprising 6 universities, 10 polytechnics and 4 professional institutes (Mohamedhai, 2008). It has also several private universities, university colleges and institutes. The total student enrollment in the tertiary education sector in 2006 was roughly 136,000. Enrollment in the public institutions accounted for about 94% of total enrollment, and enrollment in the 10 public polytechnics represented about a third of total enrollment in the 6 public universities (Mohamedhai, 2008).

Ghana also has a well-coordinated tertiary education sector. The National Council for Tertiary Education is charged by law to advise the Minister responsible for education on the development of institutions of tertiary

education and to formulate policies. The National Accreditation Board has responsibility for accreditation of both public and private institutions with regard to the contents and standards of their programmes. The board determines, in consultation with the relevant institution, the programme and requirements for the proper operation of that institution and the maintenance of acceptable levels of academic or professional standards. Determination of the equivalence of diplomas, certificates and other qualifications awarded by institutions in Ghana or elsewhere is also conducted by this organ.

The National Board for Professional and Technical Examinations is responsible for formulating and administering schemes of examinations, evaluation, assessment and certification for professional bodies, non-university tertiary institutions and private institutions within which were all established as part of the Tertiary Education Reforms in the early 1990s (**Gondwe and Walenkamp, 2011; Mohamedhai, 2008**).

Higher education in Ghana is offered generally at the university and higher professional institutions. Theoretical higher education is offered by both public universities and private national or international universities, while professional education is offered at the ten national polytechnics and several rational or international specialized colleges that are affiliated to some of the **local** universities for the award of professional bachelor and postgraduate degrees. (**Gondwe and Walenkamp, 2011**). Universities offer academic programmes (Bachelor, Master and PhD education) as well as sub-degree professional education courses (certificates and diplomas) through their affiliation with local tertiary level professional education institutions. The universities are autonomous, being governed by academic boards and university councils through the vice-chancellor.

Currently, the Education Sector Performance Report (ESPR) which is based on the National Education Sector Annual Review (NESAR) and was instituted with the implementation of the country's Education Strategic Plan "ESP) 2003-2015 is the source of various comparative statistics and information for the education sector (**Gondwe and Walenkamp, 2011**). The ESPR (Ghana MOESS, 2008) reports on access to education, quality of education, education management, education finance, and the state of science and technology.

**Gondwe and Walenkamp (2011)** note that education in Ghana is mainly financed by the Ministry of Education (72% in 2008), the GETFund (9.5% in 2008), internally generated funds by institutions (9% in 2008) and multilateral and bilateral donors (9.5% in 2008; Ghana MOESS, 2008). In 2010, Ghana's budget on education was 27.4% of the total national budget (Prof. Buatsi, presiding MOESS Chief Director, *pers. comm.*) in **Gondwe and Walenkamp (2011)**. Within the government, the MOE traditionally receives the largest share of the national budget.

**Table 1: Some Statistics on the Educational Sector of Ghana**

Issue	Statistics
<b>Number of pre-tertiary education institutions:</b>	<b>42,971</b>
Kindergarten (2007/2008)	15,449 (of which 28% are private)
Primary schools (2007/2008)	17,315 (of which 24% are private)
Junior secondary schools (2007/2008)	9,507 (of which 24% are private)
Senior secondary schools (2007/2008)	700 (of which 30% are private)
<b>Number of tertiary education institutions (2009):</b>	<b>33 (of which 81% are private)</b>
Universities	10 (all of which are public)
Polytechnics	At least 130 (public and private)
Other specialised post-secondary professional education institutions	
<b>Pre-tertiary enrollment:</b>	<b>6,564,633</b>
Kindergarten enrollment (2007/2008)	1,262,264 (of which 17% in private sector)
Primary school enrollment (2007/2008)	3,622,724 (of which 18% in private sector)
Junior secondary school enrollment (2007/2008)	1,224,964 (of which 17% in private sector)
Senior secondary school enrollment (2007/2008)	454,681 (of which 13% in private sector)

<b>Total known tertiary enrollment (private and public institutions in 2006/2007):</b>	
Public university enrollment (2006/2007)	139,768 (of which 34% are female)
Private university enrollment (2006/2007)	88,445 (of which 34% are female)
Tertiary level professional institution enrollment (2006/2007)	18,278 (of which 39% are female)
Polytechnic enrollment (2006/2007)	4,350 (of which 46% are female)
No. of 15–24 year olds (tertiary training age) in total national population (2007)	28,695 (of which 30% are female)
	5 million
<b>Education completion rates:</b>	
Primary completion rate (2007/2008)	88%
Junior secondary school completion rate (2007/2008)	68%
Senior secondary school pass rate (2007/2008)	40%
University completion rate	no statistics
Polytechnic completion rate	no statistics
<b>Student-to-teacher ratios:</b>	
Pre-school student -to-teacher ratio (2007/2008)	52:1
Primary school student -to-teacher ratio (2007/2008)	34.1:1
Junior secondary school student -to-teacher ratio (2007/2008)	17.4:1
Senior secondary school student -to-teacher ratio	no statistics
University lecturer-to-student ratio	no statistics
Polytechnic lecturer-to-student ratio	56:1

Source: Gondwe and Walenkamp (2011)

## Balancing Quality, Access and Labour Market Needs in Ghana

The authors conceptualise quality as *what you want and what works for you*. From this perspective the question to ask is “what does Ghana want from higher education and does that work for her? A recent study by the Hague University on **alignment of higher professional education with the needs of the local labour market notes that** “many students in developing countries do not complete their secondary education, either due to financial reasons or poor academic performance. The report further notes that, complex regulatory structures and processes limit progression of large groups of students to the post-secondary education level. In addition, the number of post-secondary education institutions in developing countries is limited and this requires a strict selection of students who may proceed with their studies at the next educational level. Most of the students who do not get selected are not rejected on the basis of low individual academic capacity but because the student absorption capacity of the institutions is limited and tough choices simply have to be made (**Gondwe and Walenkamp, 2011**). The report further notes that the number of students who fall away is very high (e.g. 60% in Ghana do not get to the post-secondary level; (Ghana MOESS, 2008), which is an unfortunate loss of talent. As a result of the theoretical nature of the secondary education currently given, the schoolleavers do not have sufficient practical or employable skills. Most end up in the informal sector where they become self-employed.

Data from the most current report of the Ghana Living Standards Survey (GLSS) indicate that about 31 per cent of adults (representing a little over 4 million people) have never been to school. A further 17 per cent (representing 2.3 million people) attended school but did not obtain Middle School Leaving Certificate (MSLC/Basic Education Certificate Examination (BECE) certificate. About 39 per cent of adults (5.1 million people) have the MSLC/BECE certificate and only about 14 per cent (1.8 million adults) obtained secondary or higher level qualification. Thus, about half (6.4 million) of adults in Ghana neither attended school nor completed middle school/JSS.

Further to this, the draft Policy for Tertiary Education a document which is being finalised by the National Council for Higher Education report “in spite

of the significant increases in enrollment in tertiary education institutions, only about 10% of the age cohorts from Junior Secondary Schools gain admission to tertiary education” (NCTE, Ongoing, pg. 15). These data put together suggest that just about 1.4 or less of adults in Ghana have access to higher or tertiary education, which includes universities, polytechnics and colleges. The statistics is not surprising in the light of the emphasis of the Millennium Development Goal 2, which pushes developing countries to focus on basic education. This has contributed quite significantly to the perpetration of semi- illiteracy in some African countries including Ghana. The question is, if higher education is an engine for socio-economic development; can the current rate of access to higher education support the increasing anticipated economic growth of about 11 % as Ghana aspires to move from lower middle to truly middle income country?

On the other hand, other reports have suggested that massification is lowering standards of higher education particularly in Africa (Mohamedhai, 2008). Mohamedhai, however, notes that these trends notwithstanding, the situation seems to be less serious in the Anglophone countries where enrollment is usually subject to a rigorous selection process and access is more or less restricted. In Kenya, for example, less than 10 % of the senior secondary graduates are admitted each year to the six public universities of the country. Nevertheless, the number of students admitted each year continues to increase in spite of the rigorous selection process. Ghana, an Anglophone country, is another example of the phenomenon of rigorous selection process which restricts access to the higher institutions of learning (Adu and Orivel, 2006). Contrary to the observations that entry requirements are quite stringent in Ghana, the National Council for Tertiary Education's recent directive to implement a much stringent requirement of a compulsory credit pass in English, Mathematics and Science have even tightened the gates. This policy has already thrown a few thousands of students already enrolled in various private universities out of school.

On the other hand, international universities are generally lowering the entry requirements to enhance access (Mohamedhai, 2008). Mohamedhai (2008) reports that in 2005, according to Trow's typology, countries in North America and Western Europe had reached almost universal higher education, while those in Central and Eastern Europe had mass higher education. Some

countries in East Asia and the Pacific, for example Australia and Singapore, have also reached mass or even universal higher education. However, it is important to note that, for sub-Saharan Africa, not only has the increase in the enrollment ratio been insignificant from 1991 to 2005 but the ratio is also by far the lowest than any other region of the world. Lomas (2001) reports that, in the United Kingdom for example, many students were admitted without the usual minimum standard requirement of two GCE Advance Level subjects for undergraduate courses. Indeed, Rust (1997) gives the example of Liverpool John Moores University where the proportion of nonstandard entrants was nearly 75%. This has led generally to falling expectations and standards in universities. China is one of the few countries that made the decision to increase university student enrollments with the goal of stimulating the country's economy and it has worked for China (Yang, 2002). Currently, Ethiopia is following the path of China to increase students' enrollments with the aim of stimulating the country's economy (DAAD Conference, 2012). However, Lomas (2001) further reports that when it comes to Africa, the challenge of balancing the seemingly mutually exclusive demands of greater access and maintaining quality seems much more acute due to a lack of resources.

Consequently, in the light of the pressures for a diversification of mass higher education, more and more courses have been introduced in both public and private tertiary institutions. However, some of these courses do not take the needs of the labour market into account (Mohamedhai, 2008). Mass higher education has therefore been criticised as having led to the devaluation of higher education by providing a “plethora of quasi-academic courses” (Lomas, 2001). In Africa, many more students graduate in courses that are not relevant to the needs of their society and therefore end up joining the thousands of unsuccessful job applicants who do not understand why they have a degree but cannot get employment.

UNESCO (1997) reports that “African societies are leaving greater and greater portions of their higher education graduates unemployed. This is not only due to the large numbers of graduates being churned out but also largely attributable to the deficit in the quality and relevance of higher education. One factor causing unemployment of graduates is the fact that larger numbers of students are enrolled in the humanities where there are

fewer job prospects, whereas there are fewer graduates in the science and technology sector, for which there is a greater need (Mohamedhai, 2008). Is this the situation in Ghana? Is national planning and standards setting for higher education informed or theorised by labour market realities? The study sought to find answers to these questions by comparing the national norm of 60:40% of Science: Humanities to labour market realities.

### **The Concept of the Labour Market as Operationalised in this Study**

Labour market has been described as nominal market in which workers find paying work, employers find willing workers, and wage rates are determined. Labour markets may be local or national (even international) in their scope and are made up of smaller, interacting labour markets for different qualifications, skills, and geographical locations. They depend on exchange of information between employers and job seekers about wage rates, conditions of employment, level of competition, and job location. <http://www.businessdictionary.com/definition/labor-market.html#ixzz1u3PBU3f6>.

In this study the labour market refers to the congruence between the supply of labour and the demand for labour which is described by the interactions between supply side and demand side dynamics.

The supply side is operationalised by two variables:

- no. of institutions offering similar programmes
- total graduate exit data or total graduation figures

While the demand-side is operationalised by number of job vacancies advertised by programme qualification. Boateng and Ofori (2002) also used a similar operationalisation for the demand side in their World Bank study of 2002.

### **Methodology**

The study was an exploratory and cross sectional survey. It relied on a mixed method approach, qualitative technique based on reviews of secondary information and interviews for the supply side and analysis of

primary survey market data for the demand side. To analyse the national labour market trends, two field data sources were used to represent the supply and demand sides. The supply side was operationalised by two variables:

- number of higher education institutions accredited to offer similar programmes by June 30<sup>th</sup> 2011 and;
- total graduation figures for various categories of programmes in the last five years

The demand-side was operationalised by the number of job vacancies advertised in newspapers for specific programmes at the higher education level within the study period and this formed the basis of the primary data. To avoid double counting only the most widely circulated and subscribed newspaper, the Ghanaian Daily Graphic was used. The study then compared the observed demand and supply of academic programmes with national proposed norms.

### **Data Collection**

Data was collected through review of reports, policy documents, websites of official agencies and the newspapers from January 1<sup>st</sup> - June 30<sup>th</sup>, 2011. An interview was conducted to validate some of the data from official websites. Key documents reviewed include:

- **Gondwe and Walekamp (2011), Alignment of higher professional education with the needs of the local labour market: The case of Ghana, ANUFFIC project report**
- **Boateng and Ofori -Sarpong, (2002), An Analytical Study of the Labour Market for Tertiary Graduates in Ghana, a World Bank Project Ghana**
- **MOESS (Ministry of Education, Science and Sports), 2008, Preliminary Education Sector Performance Report (ESPR) 2008**
- **Goolam Mohamedbhai (2008), Effects of Massification of on higher education in Africa**
- **Trends in Global Higher Education: Tracking an academic evolution**

- **Altbach, Reisberg and Rumbley (2009), A report prepared for UNESCO Conference on Higher Education with support from SIDA/SAREC**
- Ghana Living Standards Survey Report 2008
- Budget Statement 2012, Ministry of Finance and Economic Planning
- The Draft National Policy on Tertiary Education which is currently under review was used to ascertain the proposed norms and performance targets against which the field data was to be compared.

The official website of the National Accreditation Board (NAB) was used as the main data source for the supply-side and the data collected in the study was submitted to the NAB in August 2011 for corroboration. This was due to the fact that there were gaps in graduate exit data from the public higher education institutions and the exploratory nature of the study which comes with time constraints of the project did not allow for the possibility of filling those gaps in data. Additionally, total enrollment figures were not readily available from the official sources contacted. As a result demand of academic programmes was ascertained by collating advertisements made in the daily newspapers within the study period.

In all, 120 newspapers were perused and advertisements for qualifications from higher education institutions were recorded. The initial design was to source for existing data on students' graduation figures, when this failed, the researchers resorted to use total enrollments statistics from official higher education sources. However, owing to the fact that the data required were not readily available at the anticipated official sources the supply-side was only represented by the number of higher education institutions accredited to offer similar programmes and where possible enrollment figures are presented.

### **Data Analysis**

Generally data were analysed by frequency counts and percentages. The observed data from the study were compared with national norms to ascertain whether market realities match the expected national norms and targets.

## Results

### *Number of Tertiary Institutions Accredited to offer Tertiary' Programmes*

Reports from NAB website, suggest that the number of tertiary institutions accredited in Ghana has grown steadily since 2006. In 2009, there were 33 accredited institutions (of which 81% were private) and 10 polytechnics (all of which are public) and about 130 post-secondary education institutions. By 2010, 52 institutions had accreditation to run various programmes and by June 2011, there were about 68 accredited institutions running tertiary programmes. This is besides the 10 polytechnics, 41 colleges of education (made up of 38 public and 3 private), 23 nursing colleges (made up of 17 public and 6 private), and 3 colleges of agriculture, including a few other degree-awarding institutions outside the Ministry of Education (NAB website, August 10, 2011). Out of the 68 accredited institutions, 45 are private with more than 86% offering business and management-related programmes. Additionally, there are nine (9) public professional institutions out of which four (4) offer business and management-related programmes, as well as six (6) public universities with three offering similar programmes (Table 2).

**Table 2: Number of Higher Educational Institutions Accredited by NAB in Ghana, 2011**

Category of institution	Number of accreditation	Those offering business/management related programme
Public Institute	6	5
Private Tertiary Institutions	45	43
Chartered Private Universities	3	1
Public Institute-Professional	9	4
Distance Learning	5	5
<b>TOTAL</b>	<b>68</b>	<b>58</b>

**Source: Survey Results: NAB website, 24<sup>th</sup> August, 2011**

### *Enrollment and Graduation Figures in Higher Education Institutions in Ghana*

### **Graduation Statistics**

*Comprehensive data on graduation rates was not available. Though various websites of public universities and professional degree-awarding institutions in Ghana were visited to collate figures for the last five (5) years, this was not possible because of the gaps observed. The situation is due to the fact that some of the universities had no up-to-date information on exits data. Additionally, some institutions have total graduation figures because the universities or institutions hold institution-wide congregations whilst others like the KNUST hold faculty congregations which made it quite challenging to get the total graduation figures. This observation is in-line with the finding of Gondwe and Walenkamp (2011, pg. 18.) who reported "no statistic for university and polytechnic graduation rates. Boateng and Ofori-Sarpong (2002, pg. 29) also reported that the "universities do not publish data on the actual number of graduates produced annually on a regular basis". This suggests that the situation with respect to comprehensive data on higher education has not changed significantly since 2000. There is still no planned and consistent data collection and analysis of graduation or completion rates of students from higher education institutions or at national level in Ghana. All the studies on labour market trends reviewed in this study were donor-funded projects with quite different objectives.*

### **Enrollment Statistics**

*Though information was available on enrollment figures, these were not up-to-date. Review of literature indicates that generally, enrollment rates in Ghana are low compared with global average though higher than sub-Saharan African average (Boateng and Ofori-Sarpong, 2002). Boateng and Ofori-Sarpong note that tertiary gross enrollment ratio has remained low at 2.0 in Ghana in 2002, compared with an average of 6% for East Asia and South Asia in 1995. Mohamedhai (2008) also reports a 5.1 global enrollment between 2006 and 2008. The average for sub-Saharan Africa is 1%. Gondwe and Walenkamp (2011) report that in 2006/2007, Ghana had a total of 139,768 (of which 34% are female), with 88,445 (of which 34% are female) in public universities, 18,278 (of which 39% are female) in private universities, and 4,350 (of which 46% are female), and 28,695 (of which 30% are female) in polytechnics. The official government policy is to achieve an*

*enrollment ratio of 60:40 sciences to humanities manpower base by 2020 (Ghana MOESS, 2008). However, enrollments are heavily skewed towards the humanities. This was similar to finding by Boateng and Ofori -Sarpong in 2002. Report of Ministry' of Education Science and Sports in 2008 and the observation of Gondwe and Walenkamp in 2011 were similar. For universities and polytechnics 38% and 32% respectively were enrolled in science subjects (Ghana MOESS. 2008). Boateng and Ofori - Sarpong (2002) report that enrollment in the Bachelor of Arts and Management programmes as a percentage of total enrollment in the universities was above 65%) and increased from 65%) in 1994/95 to 68%oin 1999/2000. This suggests that there have not been significant changes in the science: humanities ratio since the 90s till date.*

Gondwe and Walenkamp argue that the skewness in enrollment towards humanities can be addressed by enrollment policies whereby balance is sought in this ratio. Gondwe and Walenkamp (2011) maintain that currently, at the tertiary level only one-third of applicants for the sciences (science, agriculture and engineering) are accepted for enrollment. They further argue that the reason for the skewness towards humanities is not due to the fact that students do not meet the minimum requirements set by the universities, but the insufficient training facilities (laboratory space, equipment, etc). Admitting more students than the facilities can accommodate would compromise the standard of education being offered. Qualified students who applied to study science at universities but did not get admitted often switch to the humanities and that is a waste of talent to the field. However, this study submits that there may be stronger driving forces, which may include labour market realities. All students expect to be gainfully employed upon graduation; obviously more will tend to go where they believe jobs are more available. Gondwe and Walenkamp (2011) report that in 2007, industry employed only 15% of the labour force and that *the manufacturing subsector has potential to grow, though currently remains limited in its growth largely due to high production costs and the influx of cheaper imports which make locally-manufactured products uncompetitive. Whereas the industry sector that largely drives science employment is not doing so well in Ghana, the services sector continues to grow with the sector growing by 4.2 per cent and contributed 48.1 per cent as its share to GDP, still making it the largest contributor to GDP in 2011. Additionally, low science enrollments may be*

due to the fact that there are fewer students who read science at the secondary level and whereas the science students from secondary can switch to any other field, those with humanities background cannot switch to sciences at the higher or university level.

### Demand for various Academic and Tertiary Professional Programmes

In all, 2536 job advertisements were recorded and the distribution by type of programme and month are shown in Tables 3 and 4 respectively.

**Table 3: Monthly Distributions of Jobs Advertised**

Category of programmes	January	February	March	April	May	June	C. Freg
Professional	32	50	28	50	54	58	272
Certificate	31	24	11	2	22	26	116
Diploma	6	8	40	47	22	4	127
HND	65	69	32	67	46	72	351
Bachelor	185	209	75	261	194	209	1133
Masters	54	64	29	198	96	41	482
Doctorate	8	17	1	11	8	10	55
<b>Total</b>							<b>2536</b>

Source: Survey Data, August, 2011



**Fig. 1: Labour Trends in Ghana from Jan-June, 2011****Table 4: Job Vacancies by Type of Programme**

Type of Course	Percentage of Advertised Jobs	Percentage Distribution by Type of Programme					
		Doctorate	Masters	Bachelor	Professional	Cert/Dip	HND/Others
Management and Business Admin	24.68	0.8	23.96	35.78	13.89	3.03	22.52
Accounting, Finance Banking/Insurance	31.26	0.12	13.24	48.8	23.32	4.41	10.08
Economics and Social Sciences	4.1	4.80	40.38	17.3	-	37.5	-
Computer Science/ICT	5.67		20.14	43.05		22.22	14.58
Medical/ Health Sciences	9.07	4.78	20.0	56.52		7.39	11.3
Engineering/Gas/Oil/Mining/Technical	16.64	0.71	12.32	58.76	-	11.61	16.58
Agriculture/Environmental Resource	7.37		31.01	34.22	-	27.8	6.95
Arts and Others	1.2	100	-	-	-	-	-
<b>Total Percentages</b>	<b>100</b>	<b>2.17</b>	<b>19.01</b>	<b>44.68</b>	<b>10.73</b>	<b>9.58</b>	<b>13.84</b>
<b>Total (Numbers)</b>	<b>(2536)</b>	<b>(55)</b>	<b>(482)</b>	<b>(1133)</b>	<b>(272)</b>		<b>(351)</b>

Survey Data: January to June 2011

From figure 1 above, it can be noted that the demand for humanities is about 61.24 of total jobs advertised against 38.86 for sciences. This is quite similar to findings of Boateng and Ofori -Sarpong (2000); 65.9 for humanities and 34.1 for science. Bachelor degree qualification is the most sought after followed by Masters and HND qualifications with doctorate qualification being the least. Demand for professional qualification was also lower than anticipated over the study period. The month of April recorded highest adverts in almost all programmes and disciplines.

Table 4, shows the distribution and percentages of demands for various groups of disciplines and programmes. It is observed that a large proportion of vacancies went to business -related programmes with the highest going to accounting, finance and management. Followed by social sciences particularly economics. Engineering, and oil and gas programmes score a

percentage of 16.64%, an indication of growth for demand in this sector as a result of oil and gas discovery and production in the country. For all programmes, a Bachelors degree was in higher demand except for economics and other social sciences where Masters qualification stood higher at 40.39% as compared to the corresponding 17.30% for the Bachelor degree.

**Tables 5: Trends in Demand and Supply of Academic Programmes against National Norms**

NCTE Norm		Results		
Ratio of Enrollment in Science and Humanities	60:40	Year	Total Enrollments	Demand for Qualifications
		2002	35:65	34:66
		2008	38:62	No Statistic
		2011	No Statistic	39:61

Source: Boateng and Ofori- Sarpong 2002, NCTE 2008 and survey results **2011**

The trends in Table 5 indicate that not much has changed in the higher education labour market in Ghana. In 2002, supply was 35.65 compared with i supply of 38.62 in 2008. Without a t-test, it is obvious that there is no significant difference in the two ratios over the period 2002-2008 with respect to the policy target of60:40 for science to humanities.

Additionally, demand on the labour market in 2002 was 34:66 against the study results of 39:61 in 2011. The difference is largely due to demand for engineering due to the growing construction sector and the emerging oil and gas sector.

## Conclusion

The results of the study indicate that generally in the last decade, demand for

academic programmes did not match labour market realities in Ghana. The question that arises from this conclusion is what informs national norms and targets for the higher education sector in Ghana. The persistent deviation of enrollment from the targeted policy norm suggests a need for a review of the norms against labour market realities.

The study also concludes that there is no system in Ghana for tracking and analysing labour market trends against graduation statistics and academic programming in a comprehensive and consistent manner. All studies reviewed in this study were one-off donor- funded research projects. The results also suggest that academic programming at both institutional and national levels is neither theorised nor science- based. Consequently, the study concludes that there is no alignment between the higher education labour market trends and academic programming in Ghana.

No comprehensive policy exists on tertiary education in Ghana. Several gaps also exist in available data on enrollment and graduation rates at the higher education level. Generally, enrollment average in Ghana (2%) is lower than global average (5.1 %) though higher than the sub-Saharan African average of 1 %. This is due in part to the strict entry requirements in Ghana.

### **Recommendations**

- The study recommends the urgent need to institutionalise a national higher education management and planning information system. This should include data on access, enrollments, graduation rates and demand for various programmes in the labour market on a consistent and systematic basis.
- A public repository (website) should be established for the labour market and higher education management database to provide up -to-date information on the sector.
- The Minister of Education and The National Council for Tertiary Education should collaborate with higher education institution(s) to undertake and analyse data on bi-annual basis.
- The study recommends the urgent finalisation of the on-going work on the draft tertiary education policy taking into consideration available labour market trends and key stakeholder involvement.

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