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MONEY AND MORALITY IN HIGHER EDUCATION. SEVEN COUNTRIES CASE STUDIES

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6.1 Introduction

How does the attribution of funds and their origin impact ethics in higher education? This main question of this research paper leads us to ask three secondary questions: What is the evolution of the higher education domain? Who funds higher education and through what means? Is ethical commitment part of the funding strategies?

6.1.1 Methodology

This research paper proceeds in a succession of two moments: 1. Identifying global trends related to higher education. 2. Focusing on some case countries, trying to compare them with the global situation. 3. Conclusions. The paper works with data from the World Bank and

[52] This chapter is the fruit of a research study of Marie Renee Andreescu as student during her three months' internship Feb-April 2019 at Globethics.net in Geneva, during her studies at the Graduate Institute in Geneva. Supervisor of the internship was Prof. Dr Christoph Stückelberger who edited and partly updated the research for publication.

UNESCO. However, an important challenge was missing data for some aspects and countries.[53]

The World Bank provides on its website a table with all the data they have on each country, until 2015. This was very interesting as I wanted to do a time series analysis, to see the evolutions in higher education over time. This proved to be impossible as there were many countries that did not have any data available, or only had data for one year instead of twenty. Developed countries had a complete panel of data, while the data from the developing world was pretty scarce. The conclusions, therefore, would have only applied to developed countries and would have been pretty useless for our efforts to identify the places where gaps between the local and average international situation exist. The gaps would have most likely been even bigger if developed countries were only taken into account. This was even more problematic as the data missing was from the specific countries we wanted to use as case studies. Therefore, the methodology had to be adapted. Since sufficient data was not available, we switched to a more qualitative study; doing a lot of readings on governmental and international reports on the global trends in higher education. Data was cross-referenced to see if information was confirmed by other reports. Main sources used were studies by UNESCO, the British Council and the UN to get a general overview, but many other sources have been integrated on specific topics. This study had to differentiate between general data on education that focused mainly on primary education and the data on higher education. The responses to SDG4 seem to concentrate on primary education and this can be understood, as it is the unavoidable basis for further education and essential to the improvement of alphabetization rates. However, the fact that investment in primary education creates not only the biggest social, but also economic returns might also have something to do with the choice in priorities.

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[53] Special thanks to Daniel C. Levy who has agreed to help with data on private higher education.

Data were also directly drawn from governmental national reports, by accessing their online archives. This was somewhat complicated, as sufficient understanding of each education system was required in order to make data comparable. For instance, some countries consider high schools part of higher education, which increases the numbers of students enrolled in classical tertiary education. We then had to subtract high schoolers from the overall number. In addition, sometimes linguistic problems occurred as some reports are published in national languages, and not readily available in English or French. However, with translations and additional research, reports could be understood.

Reasons for missing data in databases of international organisations such as the World Bank and UNESCO can be manifold: some data are sensitive and countries are not keen to share in an open international database for political and social reasons. In some cases, data are really not available or not reliable.

Most of the data collected in this study are analysing the evolution of higher education between 2000 and 2015, although where data were available, we went further back in the past. According to each situation, historical moments that were significant, were identified. Country progress data are based on information from the World Education News + Reviews.[54]

6.2 The Evolution of Higher Education

6.2.1 A growing domain: Six Country Case Studies

Global higher education enrolment rates have increased and are forecast to keep increasing in the future. Global tertiary enrolments were approximately 65 million in 1990 and they reached 170 million in 2009, so they have increased by 160 percent in 20 years. In 2015, global tertiary enrolments reached 213 million, an increase of 327 percent compared to 1990! The world's 18-22 age population over the same period

[54] https://wenr.wes.org.

grew by one per cent per annum, implying a significant rise in the global gross tertiary enrolment ratio. Between 2002 and 2009, China and India dominated global growth in tertiary enrolments, accounting for 26 million (44 per cent) of the overall increase of 55 million. In percentage terms, a number of other countries of significant critical mass registered exceptionally strong growth rates in tertiary enrolments over the same period: Brazil (+68 percent), Turkey (+74 percent), Indonesia (+53 percent), Nigeria (+68 percent), Pakistan (+179 percent), Malaysia (+41 per cent), Vietnam (+127 percent), Saudi Arabia (+70 percent) and Bangladesh (+84 percent).[55]

The increase in enrolment rates is correlated with two factors: demographic growth and economic growth. There is statistical evidence that an increase in GDP leads to important increases in enrolment rates, especially in emerging economies with GDP per capita less than US$10,000 where a small increase in the GDP contributes to a significant rise in the enrolment rate. This research found strong correlation in certain countries between student and trade growth. In some countries, such as Canada, Japan, China, South Korea and India, the correlation is above 70 per cent.[56]

From 2015 to 2030, UNESCO forecasts a 16 % growth in global population and a 56% growth in higher education enrolment that is set to reach 332 million students. The enrolment trends are different according to the countries' economic situation. Lower- and middle-income countries will see the higher education demand from the traditional college-age population grow larger relative to the supply of institutions. High-income countries will face stagnant enrolment unless they expand their pool to include the non-traditional domestic population (age over 24) through lifelong, online, or blended learning. High-income countries are also capable of reaching underserved (or unserved) students in lower

[55] The British Council, *The Shape of Things to Higher Education Global Trends and Emerging Opportunities to 2020*, London: The British Council, 2012.
[56] Ibid.

and middle-income countries. Some strategies include: transnational education, and recruiting international students to campuses[57]. International student enrolments at US Universities dropped 2016-2020 during four consecutive years from 300,000 to 267,000 students per year, without counting the COVID-related drops in the academic year 2020-2021 which was a 43 percent decrease as of fall 2020 compared to the previous year![58] At US Universities, 53 percent of international students came from China (35 percent) and India (18 percent).[59]

Argentina: Argentina had a demographic growth of 16% from 2000 to 2015 and a GDP growth of 50% over the same period. The number of students enrolled in higher education has grown by over 67 per cent, which is a growth rate higher than GDP growth.

China: China is one of the countries dominating global growth in tertiary enrolments, the enrolment in higher education going up by 480%, meaning here 36 million more students in higher education from 2000 to 2015. This growth is exclusively a consequence of economic growth: the GDP has increases by 300% over the same period, while the demography hasn't changed much (the population has in-creased by only 8%) due to the anti-natalist state policies. However, the number of students still has room to grow: in 2015 only 45% of the young people eligible for higher education were actually enrolled in it and less than 15% actually graduated. China aims towards a 20% target of higher education attainment by 2020.

China's higher education is highly stratified. Structurally, it is divided into two sectors: regular higher education and adult higher education.

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[57] Rahul Choudaha & Edwin Van Rest, *Envisioning pathways to 2030: Megatrends shaping the future of global higher education and international student mobility. Studyportals, 2018.*

[58] https://www.insidehighered.com/news/2020/11/16/survey-new-international-enrollments-drop-43-percent-fall.

[59] US Government, *Open Doors Report on International Educational Exchange.* www.opendoorsdata.org.

As of 2015, the Ministry of Education reported a total of 2,845 Chinese higher education institutions (HEIs) in both the regular and adult higher education sectors. Tertiary education can also be obtained through a prescribed self-study program.

Ninety percent of China's HEIs (2,553) are in the regular higher education sector. Over 70 percent of undergraduate students are enrolled at regular higher education institutions. Not all Chinese institutions of higher education, even in the regular sector, offer degrees; many offer graduation certificate only. Around 1,202 institutions in the regular higher education sector are academically oriented and grant degrees.

Indonesia: Indonesia is also one of the countries experiencing the biggest growth in enrolment numbers, which went up by 65% from 2000 to 2015. However, population only increased by 22% and GDP by 118% which suggests that the GDP growth would be enough to make up for the higher enrolment rates. Gross enrolment ratio remains low going from 14% to 23% of eligible young people, meaning that three quarters of young people do not have access to higher education.

While enrolment grew through the first nine years of basic education have also improved significantly in recent years, at the upper secondary level just 51 percent of the population aged 15-18 attended school in 2012, well below the Southeast Asian average of 65 percent. This occurred despite the fact that the government is constitutionally obligated to direct 20 percent of the national budget towards education, something observers say does not happen in reality. Official figures for 2010 put education expenditures at 17.1 percent of the national budget, which represents 3 percent of GDP, low comparative to most neighbouring countries.

According to the Directorate of General Higher Education, in 2009 there were 3,016 institutions of higher education in Indonesia, an increase of 28 percent from 2005 when there were 2,428 institutions. Competition for places at Indonesia's best public universities is fierce. In 2010, 447,000 students sat for the National University Entrance Ex-

amination, with just 80,000 seats available. The Council's 2012, Going Global report: *The Shape of Things to Come*, predicts that the number of Indonesians in higher education will grow by a total of 2.3 million to 7.8 million students by 2020, making it the fifth largest system in the world after China, India, the United States and Brazil.

Types of Higher Education institutions in Indonesia:

IKIPS (Institutes and Teacher Training Institutes), which rank as universities with full degree-granting status, but across a specialized field of study. In 2009, there were 54 institutes.

Islamic Institutes. These have the same rank as universities but under the auspices of the Ministry of Religious Affairs.

Colleges or Advanced Schools, (Sekolah Tinggi) offer academic and professional university-level education in one particular discipline. In 2009, there were 1,306 colleges.

Single-Faculty Academies offering diploma/certificate technician-level programs only. In 2009, there were 1,034 academies.

Polytechnics are attached to universities and provide sub-degree junior technician training. In 2009, there were 162 polytechnics.

Community Colleges offering two-year programs with credits that are transferable to university programs, similar to the U.S. model. Community colleges are a recent addition to the Indonesian higher education system and are being introduced in a bid to meet rapidly increasing demand for skilled workers among Indonesian employers. The government hopes to open as many as 500 community colleges across Indonesia in the next four years.

Kenya: Kenya is a lower income country whose rapid economic growth - the GDP went up by 100% from 2000 to 2015 - lead to even more rapid growth in enrolment numbers that have risen by 168%. The population has also increased by 51%. In recent years there has been a huge expansion of the higher education sector in Kenya. Where there were just five public universities in the country in 2005, today there are 22 with plans for as many as 20 new universities. Growth in the univer-

sity sector has largely come about through the upgrade of pre-existing colleges. In addition, there are 17 private universities and 14 public and private university constituent colleges. An additional 14 institutions have letters of interim authority to operate. All of the above have the authority to award academic degrees.

Nigeria: The data is provided by the National Universities Commission. The National Universities Commission (NUC) is a parastatal under the Federal Ministry of Education (FME); one of its main purposes is to "grant approval for all academic programmes run in Nigerian universities". This basically means that the NUC is the institution that gives accreditations to private universities. Nigeria is one of the countries with the biggest growth in enrolment numbers during the last twenty years. From 2000 to 2015, the number of students enrolled in higher education grew by 171%, a growth more significant than world average. This is due to demographic and economic factors. Nigeria has a very young population and in the last 20 years the population grew by 46%, creating a great demand for higher education. From the economic point of view, Nigeria's GDP increased by 175% during the same period, but the GDP per capita in 2017 remains well under 10,000 US dollars, putting Nigeria in the lower-income countries' category. This means that any increase in GDP contributes to a significant rise in the enrolment rate.

In Nigeria the higher education system is divided between federal, state and private universities. The number of recognized universities has grown tenfold from 16 to 152 between 1980 and 2017. However, the universities suffer from overcrowding and there are insufficient places for all the students that want higher education.

Philippines: The number of HEIs in the Philippines has grown rapidly over the past decades. Between 2007 and 2015, the number of HEIs increased from 1,776 to 1,943. That makes the Philippines the country with the highest number of HEIs in Southeast Asia. For example, the Philippines has more than four times as many HEIs than Vietnam (445 in 2015), a country with a similar-size population.

The Philippines have an important growth of GDP, 113% from 2000 to 2015 and of population by 32%, but enrolment numbers have only increased by 62%, which is unexpected for a lower to middle income country that has a GDP per capita under 3000 dollars. In 2017, the National Economic and Development Authority of the Philippines published the Philippine Development Plan, 2017-2022, detailing the country's aspirations for the next five years. The plan envisions the Philippines becoming an upper-middle income country by 2022, based on more inclusive economic growth that will reduce inequalities and poverty, particularly in rural areas. Human capital development is a key element in this strategy and has been the impetus behind various political reforms over the past years. Recent education reforms have sought to boost enrolment levels, graduation rates and mean years of schooling in elementary and secondary education, and to improve the quality of higher education. Many of these reforms were adopted against a backdrop of declining educational standards in the Philippine education system during the first decade of the 21st century.

A UNESCO mid-decade assessment report of Southeast Asian education systems, published in 2008, for example, found that participation and achievement rates in basic education in the Philippines had fallen dramatically, owed to chronic underfunding. In higher education, the government seeks to expand access and participation, but even more importantly, tries to improve the quality of education. The Philippine National Development Plan is quite outspoken on this subject and notes that while the number of higher education institutions (HEIs) in the Philippines is ten times more than its neighbouring countries, the Philippines' lacklustre performance in producing innovators, researchers (81 researchers per million population versus 205 in Indonesia and 115 in Vietnam), and knowledge producers (28 out of 777 journals or 3.6 percent are listed under Thomson Reuters, Scopus or both) indicates . . . that the country has lagged behind many of its ASEAN neighbours in producing the . . . researchers, innovators . . . and solutions providers

needed to effectively function in a knowledge economy". Main measure - going from a 10-year school system to a 12-year one.

The K-12 reforms will inevitably lead to decreased higher education enrolments, at least in the short-term, since many of the students that would usually have entered higher education after grade 10 now have to complete two additional years of school. Between 2015/16 and 2016/17, the total number of tertiary students already dropped from 4.1 million to 3.6 million – a decrease that is particularly apparent when looking at undergraduate enrolments. Data from the Commission on Higher Education (CHED) shows that undergraduate enrolments dropped by 12.7 percent between the 2015/16 and 2016/17 academic years, and is expected to drop by a further 22 percent in 2017/18, before starting to recover in 2018/19, when the first K-12 cohorts start to enter higher education.

Population growth and the prospect of increasing economic prosperity imply that the total number of tertiary students in the country is set to increase rapidly. The Philippines is expected to be among the world's top 20 countries in terms of tertiary enrolments by 2035.

Russian Federation: Russia's case is very particular, because Russia is in a demographic crisis, population has decreased by 1.4% from 2000 to 2015 and even as the GDP has increased by 74%, the demographic factor has slowed down the growth in enrolment numbers, only increasing by 5% over the same period. The enrolment numbers were growing until 2010, but then rapidly decreased by 3 million students. To this, one must add the economic difficulties faced by Russia. In recent years, the Russian government has enacted deep spending cuts across the board. Economic sanctions, deteriorating exchange rates, and a decline in the price of oil, Russia's main export, have led to severely decreased revenues, and tightened governmental spending in multiple sectors. According to government data, federal spending on education decreased by 8.5 percent between 2014 and 2016, from 616.8 billion rubles to 564.3 billion rubles (USD 10 billion).

However, the Russian higher education system is very competitive and efficient, having achieved over 50% higher education attainment and the gross enrolment ratio of over 80 % shows that less than 20% of college-aged young people forego higher education. The country aimed to radically enhance the global ranking of its universities by 2020, and to attract substantial numbers of internationally mobile tertiary-level students from around the globe. At the same time, the government has actively worked to send scholars abroad and incentivise them to return home as part of a broader effort to modernize the lagging economy.

The United Nations estimates that the Russian population will shrink by 10 percent in the next 35 years, from 143.4 million people in 2015 to 128.6 million in 2050 (medium variant projection, 2015). According to the World Bank, Russia's labour force shrinks by an estimated one million workers annually due to aging, and that aging will drain pension funds while increasing public debt. Further compounding labour shortages is a net outmigration of scientists and highly skilled workers, even though current outmigration rates remain a far cry from the massive brain drain that Russia experienced shortly after the collapse of the Soviet Union. In the near term, these pressures may ease, at least in the education system. After sharp declines in the 1990s, Russia's birth rates have, since the 2000s, rebounded, and current increases in fertility rates have given some observers cause for optimism. However, most analysts maintain that current fertility rates remain too low to stem overall population growth, and that demographic pressures remain one of Russia's biggest economic challenges.

In 2012, the government initiated a process of reforms and consolidation that had, by 2017, already reduced the number of institutions by more than 14 percent, from 1,046 accredited tertiary institutions in 2012/13 to 896 in 2016. In 2015, the government announced that it intended to close or merge as many as 40 percent of all higher education institutions by the end of 2016, with a particular focus on the private sector. It also intended to reduce the number of branch campuses operat-

ed by universities by 80 percent. It is presently unclear, however, to what extent these cuts will go forward. In late 2016, Russia's newly appointed minister of education suspended the mergers due to resistance from affected universities. The reform effort is driven by concerns about educational quality. The main goal of the reforms is to merge poorly performing universities with higher quality institutions, an objective that was spurred by a 2012 quality audit which revealed severe quality shortcomings at 100 universities and 391 branch campuses

South Africa: South Africa is a classic example of average growth in GDP (57% from 2000 to 2015), in population (29%) and enrolment numbers (79.5%). The biggest increase in enrolment numbers happened after the end of the apartheid system in 1994 - since then the number of enrolled students has doubled. The University of South Africa with 300,000 students is the largest university of Africa.

6.3 An Innovative and Competitive Domain

Global Modern universities are providing classes to an ever increasing number of students. Higher education institutions have changed during the last 20 years, in two different forms: on one hand, they have become more linked to professional development (which will be treated further on, when talking about employability) and on the other hand, they have increasingly integrated technology in their teachings, through three different forms[60]:

Development of artificial intelligence that popularizes knowledge (anyone can have access to gigantic databases)

Internet-enabled distance learning. Massive Open Online Courses (MOOCs) threaten to make many schools and universities at least partially redundant. They make education available for free. There is a possibility for MOOCs to expand throughout the world and popularize edu-

[60]Josef C. Brada, Wojciech Binkowski and Masaaki Kuboniwa, *International Perspectives on Financing Higher Education*, Palgrave: Macmillan, 2015.

cation. MOOCs may have another effect as their economies of scale are very different from traditional university courses. Thus, the optimum size of a MOOC will be much greater than that of a traditional university with campus, buildings and hardware. This implies that, in many countries, the market for MOOCs will only allow for a few players.

Interactive learning material appears creating the possibility for universities to merge into large international chains with a very large number of students and receiving endowments from sponsors. Modern MOOCs have appeared in 2011 and have rapidly increased since. Around 23 million new learners signed up for their first MOOC in 2017, taking the total number of learners to 81 million. Here is a list of top MOOC providers by registered users:

Coursera	30 million
EdX	14 million
XuetangX	9.3 million
Udacity	8 million
FutureLearn	7.1 million

New courses continue to be created and launched. In 2017, over 800 universities around the world have launched at least one MOOC. MOOC providers are also partnering with companies (mostly tech) to launch courses. The total number of MOOCs that have been announced stands at 9,400, up from 6,850 in 2016. More than 500 MOOC based credentials are now available. "Coursera's specializations lead the pack with over 250 credentials; followed by edX with around 170 credentials split across 4 types: MicroMasters, XSeries, Professional Certificate, and Professional Education. XuetangX also launched 8 micro-degrees". Many (if not the majority) of the new courses that were launched in 2017 are part of credentials. A few of the longer courses originally

launched in 2012 and 2013 have also been split up into multiple courses and re-launched under a credential.[61]

Online graduate degrees are a lucrative monetization opportunity for MOOC providers. Initial results from these MOOC-based degree programs have been good. The Online Master of Science in Computer Science (Udacity and Georgia Tech) has around 6,000 students enrolled. The iMBA (Coursera and the University of Illinois) has over 800 enrolled students, while the Online Masters in Analytics (edX and Georgia Tech), announced at the beginning of 2017, has 650 students enrolled. The potential revenue to be earned from these three degrees is greater than $65 million, based on the current number of enrolled students.

Coursera planned to launch 15-20 degrees by 2019, while FutureLearn has announced that they will launch 50 degrees in partnership with Coventry University. XuetangX, also announced their three online Master's degrees with Zhengzhou University.

We can differentiate between three kinds of MOOCs:[62]

1. *MOOCs for marketing*, as a way to promote the university of an institution.
2. *MOOCs for life-long learning*, making learning accessible everywhere.
3. *MOOCs for credit* and continuing professional development, linked with the focus of innovative higher education institutions on employability.

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[61] Class Central, *MOOCs by the numbers in 2017*, Available from https://www.class-central.com/report/mooc-stats-2017, 2018.

[62] Mark Brown, "*Why Invest in MOOCs? Strategic Institutional Drivers*," In D. Jansen; L. Konings (Eds.) The 2018 OpenupEd Trend Report on MOOCs. Maastricht: EADTU, 2018.

6.4 A Transnational Domain

The internationalisation of higher education is maybe the main change of the last 25 years. This is due to an increase in interconnectivity in the economic world, which has created the need for students aware of global challenges and the labour market for the highly skilled, and internationally recognised qualifications has exploded. "International student mobility has increased tremendously over the past three decades, from 0.8 million students worldwide in 1975 to 4.1 million in 2010. This trend has been accelerating in recent years, driven by large increases in student mobility from China, India and European countries in particular. Growth is projected to continue in the future to reach approximately 5.8 million around 2020 and 8 million by 2025). A noteworthy development is the new European mobility strategy launched at the last Bologna Ministerial conference in Bucharest which sets the specific target of 20% of graduates in Europe to have studied or been trained abroad by 2020. While not representative of global trends, the Bologna developments are nevertheless important drivers of student mobility given the geographic scope of the Bologna process."[63] "The largest numbers of mobile students in 2020 are expected to be from China (585,000), India (296,000), South Korea (134,000), Germany (100,000), Turkey (84,000), Malaysia (82,000) and Nigeria (67,000); largest increase from India (+71,000 from 2011), followed by Nigeria, Malaysia, Nepal, Pakistan, Saudi Arabia and Turkey."[64]

Data are scarce on the international mobility of academic staff; however, studies show that 80 per cent of countries' research impact is determined by their research collaboration rate. In addition, Nobel prizes are increasingly won by researchers working in a country other than

[63] Assessment of Higher Education Learning Outcomes, AHELO, *Feasibility Study Report, Volume 1*, OECD, 2012.

[64] The British Council, *The shape of things to come: higher education global trends and emerging opportunities to 2020*, 2012.

their country of birth. Over 60 per cent of the winners in 2010 and 2011 had studied or carried out research abroad. "Another significant trend relates to the profound changes in the organisation and structure of national higher education systems to improve their transparency and interoperability. This phenomenon has been most evident in Europe with the Bologna Process aimed at establishing a European Higher Education Area (EHEA) and enhancing the comparability and compatibility of higher education structures and degrees in Europe by 2010 (Bologna Secretariat, 1999). The Bologna Process is far-reaching, insofar as a number of non-EU countries have endorsed the Bologna declaration and joined its convergence process, to reach 47 participants, spread geographically between Iceland, Portugal, Turkey and the Russian Federation."[65] A major development has been the establishment of the European Credit Transfer and Accumulation System (ECTS), a student-centred system based on the student workload required to achieve the objectives of a programme in terms of the learning outcomes and competencies to be acquired. Similar developments are taking place in other world regions with the development of the University Mobility in Asia and the Pacific (UMAP) Credit Transfer Scheme (UCTS) to promote university student mobility in the Asia Pacific region.

There is a large increase in the number of Transnational Education institutions, meaning that the learners are located in a country different from the one where the awarding institution is based. TNE is attractive to students seeking to gain a foreign qualification without moving from their country of residence. It can also be attractive to employers and governments looking at options for human resource development, including multinational or global corporations with a geographically dispersed workforce. Globally some 200 branch campuses existed in 2012 around the world, serving around 120,000 students, with 37 more set to open by 2013 Overall, the United Arab Emirates remains the most popu-

[65] Assessment of Higher Education Learning Outcomes, AHELO, *Feasibility Study Report, Volume 1*, OECD, 2012.

lar host country (with 37 campuses), and the US by far the most popular source (accounting for 78 campuses worldwide).[66]

Argentina: In the last 20 years, Argentina made the transition from being a country that mainly sent students out to other destinations to becoming a country that receives a lot of international students - in 2000, the net flow of internationally mobile students was of -3,655, but it had reached + 67,371 in 2015. Argentina is the main destination for study in Latin America but its popularity is continental - it mainly hosts Latin-American students.

China: China encourages mobility for its students, and is a member of the University Mobility in Asia and the Pacific (UMAP). The net flow of internationally mobile students is negative and has increased by 90% from 2000 to 2015. In 2010, the government announced plans to increase the number of international students in China to 500,000 by 2020 (up from 265,000 at the time). To attract foreign academics and students, Chinese universities have substantially increased the number of undergraduate and graduate programs taught exclusively in English. Plan 111, launched in 2005, aims to attract global talent to China's top-tier universities. Since the early 1990s, generous funds have also been made available to encourage Chinese star academics working abroad to return to their home country.

China also uses education as a form of soft power to increase its influence in other countries. Examples include the Confucius Institute program, which operates at higher education institutions around the globe to promote Chinese language and culture. Another effort, the China Scholarship Council, provides funding for both Chinese students abroad and foreign students in China. A spate of recent measures also seeks to strengthen ties with specific regions. For instance, in early 2016, China's government announced the establishment of 10,000

[66] The British Council, *The shape of things to come: higher education global trends and emerging opportunities to 2020*, 2012.

scholarships for nationals of Arab League member states and 30,000 scholarships for students from Africa.

Indonesia: Currently the number of outbound Indonesian students account for less than one percent (0.7%) of all Indonesian tertiary students, very low compared to global averages; and inbound rates are even lower. In 2012, the British Council estimated that growth in the number of internationally mobile Indonesian students would average 20 percent in the coming years, stating that Indonesia will be one of the world's "major international education markets in the next few years."

Kenya: According to UNESCO data, there were 13,573 Kenyan students studying abroad in 2012, with 3,776 in the United States, 2,235 in the UK and 1,191 in Australia. These numbers have been declining significantly over the last decade. The number of Kenyans going to the U.S. for a graduate education is significantly less, indicative of the generally improved opportunities for research degrees at Kenyan universities and the widening of domestic access at the undergraduate level. While not captured in the UNESCO data, local Kenyan media reports suggest that the vast majority of internationally mobile Kenyan students are in neighbouring countries. More than 20,000 Kenyan students are estimated to be studying in Ugandan universities, and approximately 5,000 in Tanzania.

Nigeria: Nigeria is the number one country of origin for international students from Africa, the number of Nigerian students abroad has increased by 160% between 2005 and 2015, from 27,000 to 71,000. This is due to the fact that the national higher education system does not meet the demand for university seats, local education is considered of poor quality, and the rise of a middle class that can afford to send its children abroad. However, the number of outbound students might decrease in the coming years because of economic struggles. Since 2016, Nigeria has been in economic crisis due to the crash of prices in the oil industry, an industry which financed a lot of scholarships to study abroad. A vast

majority of students were forced to return to Nigeria due to an inability to pay the tuition fees abroad.

Philippines: "Like most Asian countries, the Philippines also seeks to internationalize its education system and promotes transnational education (TNE) partnerships with foreign HEIs. To formalize this process and assure the quality of the programs offered, CHED in 2016 established concrete guidelines for transnational programs. Importantly, programs can only be offered in collaboration with a Philippine partner institution. Both the foreign provider and the Philippine partner institution must also be officially recognized and seek authorization from CHED, which is initially granted for a one-year period for graduate programs, and for two years in the case of undergraduate programs. CHED has entered agreements with a number of countries, predominantly in Europe, but its most significant relationship is with the United Kingdom. The British Council, the U.K.'s designated organization to promote international exchange, considers the Philippines an ideal location for a TNE hub, due to its expanding population of university-age students, CHED's commitment to internationalization, and the use of English as a language of instruction in a majority of higher education programs. In 2016, CHED and the British Council entered an agreement designed to support twinning, joint degree programmes, dual degrees and franchise models in priority fields of study between institutions in the Philippines and the UK." In 2017, this was followed by ten Philippine universities, including the country's top institutions, being designated to receive seed funding to establish TNE programs with British partner universities. The initiative is funded with £1 million (US $4 million) from CHED and £500,000 (US $698,000) from the British Council. Programs are slated to commence in the 2018/19 academic year."

Over the past 15+ years, the number of Filipino students enrolled in degree programs abroad alone almost tripled from 5,087 students in 1999 to 14,696 students in 2016 (UNESCO Institute of Statistics UIS). Given the population size of the Philippines, this is not an overly high

number when compared, for example, to Vietnam's 63,703 outbound degree students in 2016. The outbound mobility rate (number of outbound students among all students) in the Philippines is low and remains significantly below the outbound mobility rate of neighbouring countries like Malaysia, Vietnam or Indonesia.

Russian Federation: Foreign student quotas are seen as a measure of the effectiveness of higher education institutions, and the Russian government has, as part of its effort to boost the rankings of its universities, made it a priority to boost international enrolments. In 2015, Russia raised the international student quota at Russian universities by 33 percent. It also significantly increased the scholarship funds made available to foreign students. That same year, a number of top Russian universities included, in a newly founded Global Universities Association, to jointly recruit at least 15,000 international students to Russia annually. The measures are expected to enhance already strong growth in international enrolments. Reliable estimates of inbound students vary according to how such students are defined and counted, however Russia consistently ranks as one of the ten most popular destination countries for international students in the world. As for the precise numbers, data provided by the UNESCO Institute of Statistics (UIS) indicates that inbound students in Russia increased almost three-fold between 2004 and 2014, from 75,786 to 213,347 students.

As of 2017, Russia's government encourages Russian students to further their education abroad. In 2014, the government introduced a Global Education Program that seeks to facilitate human capital development in Russia, and remedy shortages of skilled professionals by funding Russian graduate students at 288 selected universities abroad. Some 72 are located in the United States. The program is intended to support up to 100,000 Russian citizens over a period of ten years, and targets master's and doctoral students in disciplines, such as engineering, basic sciences, medicine and education. It covers students' tuition costs and living expenses up to 2.763 million Rubel (US $48,372) annu-

ally. At the same time, the government is seeking to curtail outmigration. Grant recipients are required to return to Russia within three years to take up employment in a number of select positions, mostly in the public sector. As of recently, such scholarship programs appear to be bearing fruit. Between 2008 and 2015, UIS data indicates that the number of outbound Russian degree students increased by 22 percent, from 44,913 to 54,923. This increase in mobility has likely been influenced by the rising cost of education in Russia, as high tuition fees have spurred students' interest in the comparatively inexpensive universities of Central and Eastern Europe, for instance.

Compared to countries like China or the United Arab Emirates, Russia is not a major host of foreign universities or branch campuses. The global branch campus directory maintained by the Cross-Border Education Research Team (C-Bert) lists only one wholly foreign-owned provider in Russia: the U.S.-based Moscow University Touro. There are a number of other foreign institutions licensed to operate in Russia, such as the Stockholm School of Economics Russia, as well as transnational partnerships like the German-Russian Institute of Advanced Technologies, but the overall number of such ventures is still relatively small. On the other hand, Russia is a major player in transnational education (TNE) in post-Soviet countries, where Russian state universities currently operate 36 branch campuses, most of them located in Armenia, Kazakhstan, and Kyrgyzstan. Unlike in countries like Australia or the UK, where TNE is primarily driven by private providers, TNE in Russia is directed by the government and presently pursued vigorously. Despite charges by the previous Minister of Education in 2014 that education at cross-border campuses was of poor quality and should be suspended, President Vladimir Putin in 2015 instead vowed to strengthen TNE in CIS countries, where Russia is already the predominant TNE provider. One of the reasons the Russian government is pursuing TNE is that international education is major element in Russia's soft power strategy in the "near abroad" aimed at fostering economic, political and socio-

cultural integration in the post-Soviet space." This objective is formalized in the role of a government agency called Rossotrudnichestvo (Federal Agency for the CIS), which was set up to promote Russian higher education abroad, support Russian institutions located in foreign countries, and popularize Russian culture and improve the image of Russia in the CIS.

South Africa: South Africa is a historical destination for African students and has always had a positive net flow of students, but this flow has been increasing until 2010 and then started rapidly decreasing while remaining positive.

6.5 Funding Higher Education

6.5.1 Funding Techniques

In addition to state funding and student fees, modern public universities receive private funding from selling knowledge, having partnerships with industries.[67] However this model is not sustainable because scientific research costs increase more than the universities' ability to sell knowledge or attract sponsors. Therefore, money is generated by increasing tuition fees, which discourages students from going to some expensive universities.

Harvard University is a good example of a leading private institution. It receives 30 percent of its income from tuition, 10 percent from private donations and 60 percent from projects. Most of the projects are government projects allocated on a competitive basis. The university levies as high as 65 percent of each project as university income.

See on the next page a model of the funding model embraced by most private universities.[68]

[67] Josef C. Brada, Wojciech Bienkowski and Masaaki Kuboniwa, *International Perspectives on Financing Higher Education*, Palgrave: Macmillan, 2015.
[68] Ibid.

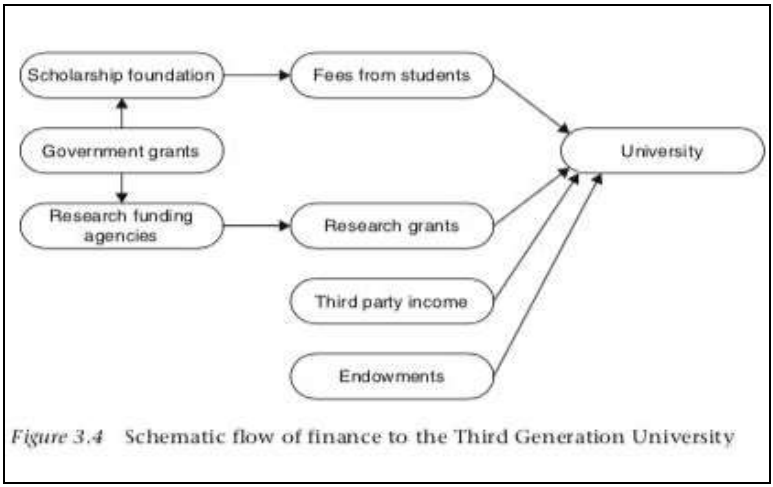

Figure 3.4 Schematic flow of finance to the Third Generation University

Public-Private Partnerships: In 2011, Education at a Glance reported that more than half of the 25 OECD countries with available information had, since 1995, undertaken system reforms of tuition fees and financial support for students, and most had introduced or increased students' contribution to the cost of their higher education (OECD, 2011). As a result, among OECD countries with trend data the public share of higher education expenditure has decreased from 78% in 1995 to 73% in 2009. There is an overall trend of shifting the cost burden to students and away from public subsidies through greater contributions by students and their families. Private resources have also been mobilised through the commercialisation of research and other private uses of institutional facilities and staff. Partners could be a private individual or a private foundation, a private corporation looking for R&D partners, a corporation aspiring to engage in social contribution, or social enterprises whose primary aims are contributing to society. There are of course other possible partners in the non-government sector such as non-profit organizations, religious organizations, NGOs or even political parties. On a general level, global spending on education is more than $2 trillion, or 5 percent, of world GDP (Moe, Bailey, and Lau 1999). The pri-

vate sector accounts for about 20 percent of this spending, often in the form of fees, donations, sponsorships, and loans and investments made by philanthropists, learners, parents, corporations, lending agencies, communities, NGOs, and cultural organizations.

Below, we analyse the different kinds of public-private-parnerships in education:

Donors Private capital is donated to institutions for higher education activities. Once again, such a donation can include an entire spectrum of implications. At one extreme, donors are not permitted to participate in the policymaking and operations of the institutions, as in the United States where, in return for tax benefits, donors are legally forbidden to interfere with institutional affairs. In many cases, donors enjoy privileges in the sales of their products, opportunities of free advertisements as well as priority admissions because of their donations. Some Chinese institutions have a menu of such privileges for donors. Such privileges may affect the academic autonomy in various degrees according to the respective codes of practices.[69] In other cases, donors have a say in the disbursement of the money donated. They may directly monitor research processes, like with membership in a steering committee; select recipients of scholarships, perhaps by sitting on the selection board; nominate professors for endowed positions; and so forth. At the other extreme, donors may participate in the governance of the institution because of the donation, generally by sitting on the board or council that oversees the institution.

Sponsorships: These are activities or projects that are initiated by the institutions but supported by the private sector. In a sponsorship, the sponsor normally shares the same objectives as the institutions in the respective activities or projects and is willing to provide resources so that those objectives are achieved. In the end, the result of such activities

[69] Svava Bjarnason; Kai-Ming Cheng; John Fielden; Maria-Jose Lemaitre; Daniel Levy and N. V. Varghese, *A New Dynamic: Private Higher Education*, , UNESCO 2009.

- an event, a report or a product - belongs to the institution, although the sponsor should also be duly acknowledged.[70]

Contracts: These are activities or projects that are often initiated by the private partner for its own ends. By providing the required resources for such activities or projects, the private partner purchases the expertise from the institutions, often by way of a contract. The end results of such activities or projects are often anticipated benefits for the commissioning party. In most cases, the output, be it a report or a product, often belongs to the commissioning party. There are also cases where the product is of public interest, like a scientific discovery, and would not emerge without private support because it is not the preferred direction of research[71]

6.5.2 Public Funding

Global: The price of higher education has increased. At the aggregate level, for the 25 OECD countries with trend data, the cost of higher education has risen from 1.3 to 1.5% of GDP between 1995 and 2009. Economic growth over the past two decades has been insufficient to sustain the rising costs of higher education resulting from massification in most countries across the globe. This mismatch has put increasing pressure on public budgets, especially in those countries with a strong tradition of public financing of higher education (e.g. most of Europe). Many countries have thus adopted new modes of financing over the past 15 years to foster cost-sharing. The allocation of public funding for tertiary education is increasingly characterised by greater targeting of resources, performance-based funding, and competitive procedures. The basis for allocating core funding to HEIs has become more output oriented. In a number of countries, formulas to allocate public funds to HEIs are now related to performance indicators such as graduation or completion rates. Research funding has also increasingly been allocated to specific projects through competitive processes rather than block

[70] Ibid.
[71] Ibid.

grants. A number of countries have also linked the allocation of research funds to assessments of research quality. A number of countries have expanded their student financial support systems. In some countries, loans have gained in importance relative to grants in overall financial aid packages. Repayable types of aid have also increased in some countries.

Since the 1980s, there has been a rise of New Public Management approaches to public services provision in many OECD countries which has put ever more emphasis on market mechanisms and principles borrowed from the private sector. In particular, leadership, incentives and competition among public sector agencies and private providers have been promoted to enhance the outcomes and cost-efficiency of public services. HEIs have indeed been under growing pressure to diversify their revenues over the past two decades, and market mechanisms have been introduced or reinforced with this specific goal in mind, e.g., through policies on tuition fee deregulation, policies on marketing institutional research, etc. public universities account in 2010 for 70% of students worldwide.

Let us focus here on four case countries: China, Philippines, Russia and South Africa:

China: Public universities, which receive government funding as well as tuition fees (introduced in the 1990s), are generally more affordable than their private counterparts. Institutions in the Chinese higher education sector are of radically differing quality, with an elite few at the top. This stratification is, in part, the result of government policy. In the mid-1990s, the Central government launched two significant initiatives and invested tens of billions of dollars to improve the quality and international competitiveness of top-tier higher education institutions in China. These initiatives include:

Project 211: The State Council, Department of Finance and the Ministry of Education of China co-issued the General Plan for Project 211 in 1995 to strengthen selected higher education institutions and key disciplines. The project started with 99 institutions. It currently includes 112

universities. Target areas of improvement are the overall infrastructure of institutions, key disciplines, and higher education public services system.

Project 985: The State Council and the Ministry of Education of China launched Project 985 in 1998 with the explicit aim of building world-class universities. Thirty-nine elite institutions received a large earmark of US40:4 billion (264:9billionCN 28.4 billion (186.3 billion CNY) from local government to enhance their research capacity.

Private funding has been allowed in China since the 1980s, but recent legislation has been encouraging and promoting it with light regulation. With the beginning of the economic reforms and the growth of the private sector, China introduced the 'two-track' system to public HEIs in the 1980s - one track where tuition and living quarters were free and a second track where tuition and accommodation fees were charged for students who failed to pass the competitive college entrance exams. The percentage of fee-paying students of HEIs, in Shanghai, increased from 8 percent in 1988 to 32 per cent in 1994, showing a jump in 'self-financing' students. From 1997 onwards, all students enrolled in public higher education had to pay fees and living expenses. As a result, the public budget now contributes to less than half of the costs of public institutions.

Philippines: There are three types of public tertiary education institutions in the Philippines as classified by CHED:

State universities and colleges or SUCs are defined as public institutions with independent governing boards and individual charters established by and - financed and maintained by the national government. In order to be classified as a university (as opposed to a college), institutions need to offer graduate programs in addition to a minimum number of bachelor programs in a range of disciplines. There are presently 112 SUCs in the Philippines.

Local colleges and universities are public institutions established and funded by local government units. There are presently 107 local universities and colleges.

Other government schools form a category that comprises specialized HEIs that provide training related to public services, such as the Philippine National Police Academy or the Philippine Military Academy, for example. There are presently 14 of these institutions.

A reported 45.8 percent of the country's 3.5 million tertiary students were enrolled in public institutions in the 2016/17 academic year. Just over 39 percent of students studied at state universities and colleges, 6.2 percent at local universities and colleges, and a small minority of 0.17 percent at other government schools. The largest university in the Philippines is presently the public Polytechnic University of the Philippines, which maintains branch campuses throughout the country.

The decision of President Duterte in 2017 to make education at state universities and colleges tuition-free may help to further boost enrolments, even though critics contend that the costly move will sap the public budget while providing few discernible social benefits. These critics maintain that tuition-free education will primarily benefit wealthier students since only 12 percent of students at state institutions come from low-income households.

Russian Federation: According to government data, federal spending on education decreased by 8.5 percent between 2014 and 2016, from 616.8 billion rubles to 564.3 billion rubles (USD 10 billion). In 2015/16, there were a total of 896 recognized tertiary education institutions in operation in the Russian Federation. Public institutions are categorized into:

Big multi-disciplinary universities;

Academies specialized in particular professions, such as medicine, education, architecture or agriculture;

Institutes that (typically) offer programs in singular disciplines, such as music or arts. There are 50 specially-funded and research-focused

National Research Universities and Universities of National Innovation, as well as nine Federal Universities, which were established to bundle regional education and research efforts, and focus on regional socioeconomic needs in more remote parts of Russia.

Finally, there are *National Universities*, the prestigious Lomonosov Moscow State University and Saint Petersburg State University. These well-funded elite institutions have special legal status and are under the direct control of the federal government, which appoints their rectors and approves university charters. Moscow State University is arguably Russia's most prestigious institution and currently enrols more than 47,000 students. Modelled after German universities, it was founded in 1755.

Between 2005 and 2013, overall Russian higher education spending as percentage of GDP increased from 2.7 percent in 2005 to 3.8 percent in 2013, but has decreased since In the tertiary sector, spending levels stayed mostly constant between 2005 and 2013, but because the number of students simultaneously declined, the amount spent per student actually rose by 32 percent to US$ 8,483. This number, however, is still low when compared to the average spending in countries at comparable levels of development, causing observers like the World Bank to recommend that Russia increase education spending and prioritize human capital development in order to ensure sustained and inclusive economic growth.

While higher education in Russia is predominantly state-funded, the percentage of private funding about 35 percent of all expenditures on tertiary educations institutions in 2013 is relatively high compared to most OECD countries. Governments at the federal and local level provide large parts of public university budgets and provide premises, dormitories and other properties. Recent legal changes have also allowed private universities to apply for state funding, if to a lesser extent. However, the share of university funding coming from tuition fees has increased over the past decades; between 1995 and 2005, for instance, the

percentage of students paying tuition fees increased from 13.1 to 57.5 percent. As a result, education has become more expensive for many students, even in the public sector. Students with high EGE scores are usually allowed to study for free; however, many students pay annual tuition fees averaging 120-140 thousand rubles (US$2,084 to $2,432) for a bachelor's degree and 220-250 thousand rubles (US$3,822 to $4,343) for a Specialist degree. Although students can take out low-interest loans, these costs are high considering Russian income levels. Inflation rates of more than 11 percent in 2014 caused many Russian universities to raise tuition fees by significant margins, while the average monthly income simultaneously dropped by 35 percent to US $558 in 2015.

South Africa: The biggest university in South Africa is public. In 2014 there were a total 26 public universities, including 14 traditional universities, 6 universities of technology and 6 comprehensive technologies. They account for 87% of the students in South Africa.

6.5.3 Private Funding

Global: "Several countries have extensively on private providers to meet the growing demand for higher education, resulting in a massive expansion of the number of private University. This trend has been most prevalent wherever there has not been a tradition of public funding of higher education, or resources have been limited to accommodate any additional demand through public higher education. The fastest-growing systems have also been those in which private provision has expanded most rapidly. For instance, the private sector in India, which accounted for just 15% of the seats of engineering colleges in 1960, rose to nearly 87% of seats by 2003 (Kapur and Crowley, 2008). In Latin America, the past two decades have also seen the growing privatisation of higher education to balance resources with the need to satisfy increasing demand."[72]

[72] Assessment of Higher Education Learning Outcomes, AHELO, Feasibility Study Report.

"In 2008, Guruz estimated that the private sector accounted for some 30% of enrolments worldwide (Guruz, 2008). (The private sector has 56,722,374 students. It thus accounts for 32.9% of the world's enrolment) However, this average reflects diverse country-specific realities. Within the OECD, Chile, Japan and Korea have the largest private university sectors with fewer than 30% of students enrolled in public universities. Mexico, Poland, Portugal and the United States also have sizeable private sectors operating with dominant private funding in the university sector, while Estonia, France, Norway and Switzerland have significant non-university private sectors. Outside the OECD, the largest private sectors are found in Asia (Indonesia, Philippines, Malaysia) and Latin America (Brazil), and to a lesser extent in some post-communist countries. Private enrolments are likely to expand further in the years to come given the large projected increases in higher education participation in China and India, and the reliance of these countries upon private providers to absorb excess demand."[73]

By sheer private enrolment size, two regions - Asia and Latin America - are much higher than the rest of the world. They hold over three quarters of global PHE, Asia alone more than half. Latin America's private enrolment, although much smaller than Asia's, is still nearly twice the size of Europe's or the US's. As starkly, three regions (Africa, Arab, and CANZ) individually fall short of having even 5% of global PHE.

[73] Ibid.

Table 4 Regional shares in global private and total higher education 2010

	Regional share of global private (%)	Regional share of global total (%)	Private share (%)	Regional private enrollment	Regional total enrollment
Global	100	100	32.9	56,722,374	172,546,175
Africa (sub-Saharan)	1.6	3.0	17.8	930,016	5,218,120
Arab States	2.5	4.8	17.4	1,423,630	8,201,861
Asia	56.9	44.4	42.1	32,267,911	76,568,246
CANZ (Canada, Australia, New Zealand)	0.6	1.8	10.1	318,033	3,162,889
Europe	9.7	21.5	14.9	5,526,851	37,177,470
Latin America and the Caribbean	18.8	12.6	48.8	10,638,863	21,789,880
USA	9.9	11.8	27.5	5,617,069	20,427,709

Source: PROPHE dataset (see http://www.prophe.org/en/global-phe/data-by-region-country-2010/)

Daniel C. Levy has agreed to share some of his unpublished data with Globethics.net for this publication: private enrolment was roughly five percent lower for 2000 than 2010 and for 2015 perhaps a percent or less under the 2010 share, with raw private growth continuing strong[74].

China: Many of the country's best and most generously funded universities are in Beijing, Shanghai, and the great cities of eastern China, and all of them are public. However, China has seen exponential growth in the number of private institutions of higher education (Minban) since the 1980s, when laws governing the sector began to be relaxed. More recently, China has come to see private institutions as a key mechanism for addressing the scale of demand. The 2002 Law on the Promotion of Privately-run Schools, for example, states explicitly that "private educational institutions are integral to the invigoration of the country through science, technology and education." In the fifteen years leading up to 2014, the number of private higher education institutions in operation rose from 39 to 727. The quality of these institutions is highly variable, say observers, and their status and future are hotly debated. Recent enrolments have declined steeply for some schools, largely because internationalization has heightened competition for qualified students. Programs offered by private institutions are generally more practice-

[74] Daniel C. Levy, *Global private higher education: an empirical prole of its size and geographical shape*, unpublished, 2018.

oriented than their counterparts in the public sector. Other differences between the two types of institution involve admission requirements, governance, and, particularly, funding models. Following the enactment in 2002 of the Law for the Facilitation of Private Education, the expansion of private providers continued and it is estimated that the private HEIs accounted for 10 percent of China's higher education enrolments in 2008.

Indonesia: In 2010, 58 percent of students were enrolled in private institutions of higher education: there were 460 universities, over 400 of which were private.

Kenya: The enrolment figures for 2014 show that there were 443,783 students enrolled at universities across Kenya, more than double the 2012 enrolment number. Approximately 215,000 of those students were enrolled at the 17 private universities, accounting for almost half the students.

Nigeria: The data is provided by the National Universities Commission. The National Universities Commission (NUC) is a parastatal under the Federal Ministry of Education (FME); one of its main purposes is to "grant approval for all academic programmes run in Nigerian universities". This basically means that the NUC is the institution that gives accreditations to private universities. In Nigeria the higher education system is divided between federal, state and private universities. In 1999, there were only 3 accredited private universities, in 2018 their number reached 75. The month of January 2019 saw the accreditation of 4 more universities. In 20 years, the number of accredited private universities increased by 2500%.

Philippines: The vast majority (88 percent) of HEIs in the Philippines are privately owned. There were 1,710 private HEIs in operation in the 2016/17 academic year, which include both religiously affiliated institutions (mostly Catholic schools) and non-sectarian institutions. Most of these institutions offer the same type of tertiary education programs as public institutions and are overseen by CHED. A Manual of

Regulations for Private Higher Education details specific guidelines for private providers. Many private HEIs in the Philippines are "demand-absorbing" institutions that fill a gap in supply created by the massification of education in the Philippines. Amidst limited capacities and low funding levels in the Philippine higher education system, these institutions offer those students who cannot get admitted into competitive public institutions access to tertiary education. It should be noted, however, that with the exception of top Catholic universities like Ateneo de Manila University, De La Salle University or the University of Santo Tomas, a majority of these institutions are smaller for-profit providers that enrol fewer than 1,000 students. The quality of education at many of these profit-driven institutions tends to be below the standards of prestigious public HEIs.

Private education account for 55% of the students in the Philippines. The number of HEIs with accredited education programs, which is not mandatory in the Philippines, increased by more than 40 percent between 2010 and 2016/17. The downturn in student numbers will affect HEIs and lead to declining revenues during the transition period (a fact that will primarily hurt private HEIs, since nearly all of their funding comes from tuition fees. As a result, CHED anticipates that approximately 25,000 staff, including faculty and administrators, will lose their jobs.

Russian Federation: After the legalization of private education in 1992, private HEI have grown steadily in Russia from 2000 to 2015, reaching the number of 366 accredited institutions (just over one third of HEI). "The number of students enrolled in these universities has also increased considerably: between 2000 and 2015 the number of students at private universities grew by 88 percent, from 470,600 to 884,700 students, but these are only 15 percent of all students - one third of HEI for 15 percent of students". Today, private universities tend to supplement public education with more specialized niche offerings, rather than compete directly with the bigger state-funded universities. However, the

Russian government presently does not prioritize the development of the private sector, funding more public projects. Private education is expected to primarily gain traction in the \sphere of non-formal and extra-system education.

South Africa: In 2014 there were 119 private higher education institutions, but they are way smaller than their public counterparts and are very specialized, they rarely provide multi-disciplinary teachings. In 2014, only 13% of students were enrolled in private universities. The Council on Higher Education and the South African Qualifications Authority are in charge of accreditations - private education should fit into an Accreditation Framework.

6.6 Ethical Impact

6.6.1 Diversity and Inclusiveness

Global: In 2015, global tertiary enrolments reached 213 million, however UN-ESCO estimates that 1 billion people need higher education but do not yet have access to it. In 14 years, the proportion of young adults entering undergraduate university programmes has increased by 25 percentage points, from 37% in 1995 to 62% in 2010. Meanwhile, rates for those entering more vocationally oriented programmes have remained stable, at 17%.[75]

Nowadays, higher education is a mass phenomenon, that goes hand in hand with other trends such as social mobility, growing female participation, as well as democratisation and urbanisation processes and independence movements in the developing world. The shift towards post-industrial economies has also affirmed that an educated workforce is essential for economic development and has heightened the demand for white-collar workers in the public sector and service industries[76]2.

[75] Assessment of Higher Education Learning Outcomes, AHELO, Feasibility Study Report, Volume 1, OECD, 2012.
[76] Ibid.

Women made up 41% of higher education enrolments worldwide in 1970. They achieved parity with men in 2005 at the global level (despite some world regions lagging behind), and now slightly outnumber them with about 51% of global enrolments. The latest data from the OECD's Education at a glance underlines that this trend is more marked within OECD countries, with significantly higher entry rates for women relative to men, both in undergraduate university programmes (69 vs. 55% on average) as well as vocationally-oriented programmes (19 vs. 16%). In 2010, women also reached parity with men with regard to access to advanced research programmes, at entry rates of 2.8% for both.[77]

Indonesia: In 2011, the gross enrolment ratio (GER) at the tertiary level (total tertiary enrolment as a percentage of the college-age population) was 25 percent (UNESCO, 2013). This is a lower percentage than all BRIC nations with the exception of India (20 percent), lower than the global average (31 percent) and lower also than most members of the Association of Southeast Asian Nations. Nonetheless, the number of graduates in the country doubled between 2005 and 2012, according to data from the British Council, while the GER has risen significantly from just 12 percent a decade earlier (2001). And the government is focused on increasing access further, setting a goal of enrolling one quarter of the Indonesian college-age population in an institution of higher education by 2020. This represents an approximately quarter million annual increase in students over the next decade.

Data from Indonesia's Directorate General of Higher Education shows that there is significant inequality in the distribution of institutions throughout the country, with poorer regions having the fewest institutions of higher education, and a number of provinces within these regions having no public institutions at all. As an archipelago of more than 18,000 islands, distributing educational opportunities evenly is a tough task, especially with an estimated 700 different languages spoken across the country.

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[77] Ibid.

Nigeria: Private accredited universities represent more than half (54%) of the higher education institutions in Nigeria, but they welcome only 6% of the student population. Most of these private universities have enrolment numbers below 2000 students. One of the reasons private universities are underpopulated is because their tuition fees are considered gigantic for the local population. All private universities in Nigeria are non-profit organisations and their goals are related to development, even if this seems to be in contradiction with the expensive tuition fees and lack of scholarships program that make it difficult to ensure equality in education. Some universities websites advertise student loans at somewhat advantageous interest rates. According to the statistics JAMB provides on its website, a total of 1,579,027 students sat for the UTME exam in 2016. 69.6 percent of university applications were made to federal universities, 27.5 percent to state universities, and less than 1 percent to private universities. The number of applicants currently exceeds the number of available university seats by a ratio of two to one. In 2015, only 415,500 out of 1,428,379 applicants were admitted to university, according to the data provided by JAMB. This admission ratio, low as it may be, is a significant improvement from 10 years ago when the ratio was closer to one in ten for university entry. But the admissions crisis continues to be one of Nigeria's biggest challenges in higher education, especially given the strong growth of its youth population. Nigeria's system of education presently leaves over a million qualified college Nigerians without access to postsecondary education on an annual basis.

Philippines: only 12 percent of students at state institutions come from low-income households.

South Africa: Black students are still underrepresented in the best universities and in graduate programs, although since the end of the apartheid South Africa has begun closing the educational attainment gap. The number of black students increased from 59% of all university enrolments in 2000 to 71% in 2015. The National Development plan for

2030 announced in 2011 wants to increase the proportion of black researchers from 28% in 2014 to 40% in 2018 and for women, from 36 to 50%.

6.7 Teachers and Corruption

Indonesia: Waste through corruption is considered a major issue within the Indonesian education system.

Kenya: Lecturer shortages continue to hinder growth in quality standards and lead to ever growing student to faculty ratios.

Nigeria: While corruption is a covert activity that is difficult to measure, Nigeria scores low on the global Corruption Perceptions Index published by the organization, Transparency International. The 2016 report ranks Nigeria at 136th place among 176 countries. Nigeria's education sector is particularly vulnerable to corruption. As corruption scholar Ararat Osipian noted in 2013, "[l]imited access to education [in Nigeria] has no doubt contributed to the use of bribes and personal connections to gain coveted places at universities, with some admissions officials reportedly working with agents to obtain bribes from students. Those who have no ability or willingness to resort to corruption face lost opportunities and unemployment." In 2013, Transparency International reported that about 30 percent of Nigerians surveyed said they had paid a bribe in the education sector. The NUC has, in recent years, closed a large number of illegal degree mills. In 2013, it shut down 41 such entities, and in 2014 the Council closed an additional 55-degree mills while investigating eight additional schools. For current information on degree mills, the NUC has started to publish a "list of illegal universities", most recently in 2016. Other government reforms and initiatives have sought to improve the Nigerian higher education system as well. These include the upgrade of some polytechnics and colleges of education to the status of degree-awarding institutions, the approval and accreditation of more private universities, and the dissemination of better education-related data. In 2016 alone, the federal government granted approval for the

establishment of eight new private universities. In 2013, the federal government announced plans to create six regional 'mega-universities' with the capacity to admit 150,000 to 200,000 students each. As of February 2017, however, there was no indication that this ambitious project would be realized in the near future.

Russian Federation: "Weak government institutions were a hallmark of the years immediately following the Soviet era. Many forms of systemic corruption went unchecked for years. As of 2017, Russia is ranked 131st out of 176 countries on the 2016 Transparency International Corruption Perceptions Index. In 2016, Russia's general prosecutor recorded 32,824 corruption crimes, and estimated that corruption deprived the government of revenues totalling US$ 1.3 billion in that year alone (likely a lowball estimation, given that officially reported cases only represent a fraction of all instances of corruption). The higher education system is particularly vulnerable to corruption: Instructors at poorly funded universities are routinely underpaid. Ambitious students seek academic advancement and, upon graduation, improved employment prospects; many are willing to pay instructors for better grades, revised transcripts, and more. Efforts to stem admissions-related and other forms of corruption are in place, but so far have had mixed results.

Prior to 2009, academic corruption challenges were particularly prevalent in university admissions. According to some reports, the total volume of bribes paid in connection to university admissions in Moscow in 2008 amounted to US $520 million, with individual students paying bribes as high as $5,000. The introduction of the EGE sought to take admissions decisions away from the universities and replace them with objective external criteria. Some experts reportedly claim that as many as 30 to 50 percent of doctoral degrees circulating in certain disciplines like law and medicine may either be fake or based on plagiarism, while other researchers assert that 20 to 30 percent of all Russian dissertations completed since the fall of the Soviet Union were purchased on the black market. The use of such suspect degrees is blatant, and not un-

common among politicians and higher-level civil servants. A 2015 study of the Dissernet Project, an organization dedicated to exposing academic fraud, found that one in nine politicians in the lower house of the Russian parliament had a plagiarized or fake academic degree".

6.6.3 Employability and Vocational Education

Global: In many countries, the massification process has led to the emergence of new types of institutions within higher education, as alternatives to traditional universities, who are more focused on employability. The growth of a strongly employer-oriented non-university sector, closely integrated with the labour market needs of each locality and region, is indeed one of the most significant structural changes in recent times for higher education systems. Within the OECD, this movement started in France in the mid-1960s with the creation of Instituts Universitaires de Technologie (IUTs) based on the model of some of the United States' vocationally-oriented junior and community colleges, followed in the early 1970s by Technical and Further Education Colleges (TAFE) in Australia, Fachhochschulen in Germany and Distriktshogskoler in Norway. In the late 1970s, Portugal set up Polytechnic Institutes while the Netherlands created its Hogescholen (HBO) in the late 1980s. The 1990s saw the emergence of the Polytechnic sector (AMK) in Finland, the Universidades Tecnologicas in Mexico and the Swiss Universities of Applied Sciences. Finally, the Universidades Politecnicas and Universidades Interculturales emerged over the past decade in Mexico.

These new institutions were often established to create training opportunities for mid-level professionals needed for post-industrial and increasingly knowledge-intensive economies. By offering shorter programmes, they were better able to meet growing demands at a manageable cost They were also able to respond to increasingly diverse needs of the labour market and regional development, and to accommodate the growing diversity of individual students' motivations, expectations and career plans. However, providing a quantitative estimate of their im-

portance is difficult as there is no exhaustive register of these institutions worldwide, new providers are being established almost on a weekly basis, and the non-university sector is far from being homogenous.

Indonesia: The Boston Consulting Group released a report in May 2013 suggesting that Indonesian companies will struggle to fill half of their entry-level positions with fully qualified candidates by the end of the decade due to low upper secondary and tertiary enrolment rates and substandard quality standards. The engineering field is expected to experience the worst shortages, with the shortfall of engineering graduates projected to increase to more than 70 percent in 2025 from a 40 percent shortage in 2013. And while the report suggests that shortages will not be as severe at senior levels, it says that many at that level will lack the global exposure and leadership skills needed to succeed. In light of the many challenges facing the tertiary sector, alongside the rapidly increasing demand for tertiary places and the unmet needs of the labour market, the Indonesian government is currently focused more on expanding vocational programs than it is traditional academic training. The government is working to establish 500 community colleges within the next four years. More than 30 have already been established with a similar number ready to open soon. These colleges are largely focused on training for jobs in manufacturing, nursing, automotive technology and other trades. The government is also supporting universities looking to establish a generation of technical colleges.

Nigeria: Half of these private universities are founded by religious groups, emphasizing ethical and value-driven education. Vocational training is part of most curricula, but at the same time, employability and is a main issue, as each university advertises its involvement in current global issues and its presence on the job market. High unemployment among university graduates is also a major problem but does not appear to be a deterrent to those seeking admission into institutions of higher learning. In 2016, the online magazine Quartz reported that a

staggering 47 percent of Nigerian university graduates were without employment, based on a survey of 90,000 Nigerians.

Philippines: 89 percent of students were matriculated in bachelor-level programs and another 4.8 percent in pre-bachelor programs in the 2016/17 academic year. Graduate level enrolments are still small: Only 5.2 percent of students were enrolled in master' s programs and less than one percent in doctoral programs. The most popular fields of study in 2016/17 were business administration, education, engineering and technology, information and technology and medical studies. Of the more than 2.2 million students enrolled in these subject areas, about 41 percent chose business administration and almost 33 percent pursued education studies. Engineering, information technology and medical studies accounted for 20 percent, 18 percent and 9 percent, respectively. Humanities are not on high demand.

Russian Federation: The popularity of basic vocational education declined rapidly after the collapse of the Soviet Union. The fact that employment was more or less mandatory during Soviet times meant that 98 percent of graduates from basic vocational programs were employed in the Soviet Union. Today, employment prospects are more precarious. The number of graduates from lower-level vocational programs has declined by 43 percent between 2000 and 2013 alone, from 762,800 to 436,000, as per the statistical data provided by the Russian government.

South Africa: South Africa has a very important issue of high youth unemployment rates, thus technical and vocational training (TVET) has become of strategic importance. In 2015 there were 1 million students enrolled in tertiary institutions and 800,000 in post-secondary vocational training. There were 50 public and 291 private TVET in 2015, but the private institutions only accounted for 11% of students. Public institutions are usually larger but provide the same certificates and qualifications as private ones. Development of the vocational and technical domain is a priority for the government that want to respond to the eco-

nomic need for skilled labour. Employability is a primary issue in South Africa.

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