



Investment works

Portfolio learning

Insight

Impact Study: 011

Published: 22 June 2020

CDC leads:

Katharina Neureiter and
Rob Jordan

kneureiter@cdcgroupp.com
rjordan@cdcgroupp.com



What's the impact of online higher education in Africa?

Practical thinking on investing for development

Insight is a series of practical and digestible lessons on the issues of private sector investment and development. They're based on our experiences, knowledge and research and are aimed at investors, businesses, development professionals, and anyone with an interest in private sector development.

To view the rest of our Insight series visit:

► cdcgroupp.com/insight

Overview

At one point during the global COVID-19 pandemic, 1.6 billion children and youth in 161 countries were out of school and university – close to 80 per cent of the world’s enrolled students.¹ Could online education become part of the solution to make education systems of the future more resilient?

This report, written before the coronavirus outbreak, addresses the role of online higher education within the ongoing challenges of providing quality, affordable education to students in Africa. Africa has the world’s fastest-growing youth population. Secondary enrolment and completion rates have gone up, resulting in a strong demand for higher education. University enrolment rates across the continent are set to triple by 2040. Yet, there is a stark undersupply of quality, affordable higher education across the continent.

The positive impact of higher education for individuals, the economy and society at large is well established. However, few methodologies assess the impact of investing in educational institutions in a rigorous way. For this reason, in 2019 CDC Group published an Education Impact Framework, offering practical guidance for companies and investors seeking to measure impact.

In this report, we first look at the trends in higher education in Africa, and the importance of online education. We then explore the impact of UNICAF, Africa’s largest online higher education company and one of our portfolio companies. We analysed internal data and asked over 1,000 students about their backgrounds, learning progression, their motivations for studying for an online degree and some of the life outcomes their degree may bring in terms of increased earnings and confidence.

Key insights from our study include:

On higher education in Africa:

- Africa suffers from a significant undersupply of higher education and demand is set to increase even further over the next decade.
- More high-quality universities are needed throughout the continent.
- Employers are looking for skills that traditional higher education is not providing.
- Higher education in Africa is still out of reach for far too many.
- Private sector institutions and investors have an important role to play.

On online higher education in Africa:

- Online higher education is still an under-developed market, but it is expanding fast – both globally and in Africa.
- Online and blended learning² models are rising due to their increased flexibility and reduced cost.
- Offering degrees accredited by institutions based in the US or UK can help gain initial acceptance with students and employers. However, local accreditation and a reputation for quality will be crucial to scale.
- Demonstrating learning outcomes and improved career advancement is paramount to industry growth.
- Pricing and affordability are critical, as many students still struggle to afford degrees.

¹ Saavedra Jamie 2020, Educational challenges and opportunities of the Coronavirus (COVID-19) pandemic, World Bank Blog

² Blended learning is a mix of in-person teaching and online learning

Contents

Overview	2
01. Higher education in Africa	4
02. The future of online higher education	6
03. UNICAF – enabling African students to get quality degrees at more affordable prices	9
04. Opportunities and challenges	12

Authors

Katharina Neureiter, CDC Group
Rob Jordan, CDC Group
Matthew Grollnek, Open Capital Advisors

Acknowledgements

We would like to thank Kevin Andrews, Andreas Michail, Savvas Theodorou, George E. Kyriacou, Christos Toulouras, Nicos Nicolaou, Vassias Vassiliades (UNICAF) and Nick Kind (Tyton Partners) for their collaboration with the report. We also thank Julia Tobias (CDC Group) and Aman Choda (OCA) for their inputs.

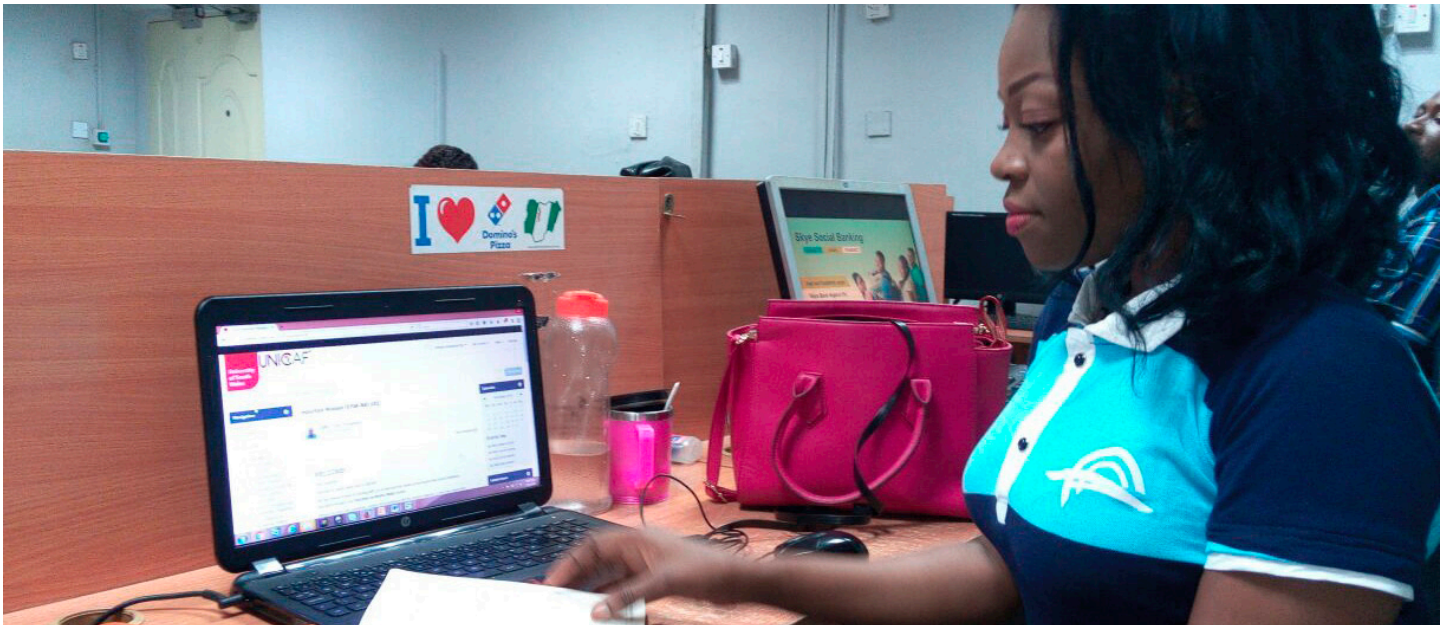
This report was supported by CDC Plus, which is funded by UK Aid from the UK government.

For questions please contact
kneureiter@cdcgroup.com
rjordan@cdcgroup.com

On UNICAF's impact:

- UNICAF is fast-becoming one of Africa's largest higher education institutions and educational platforms.
- Its online model is genuinely pan-African, and is serving students in some of Africa's most challenging countries.
- The model helps it target harder to reach groups.
- Its degree programmes are explicitly designed to allow people to keep working while studying.
- A large part of its diverse student base is older students returning to education, and 47 per cent of all students are female.
- Students pay on average \$4,000 for their degree, and pay module by module.
- Students report high satisfaction rates with their learning.
- Affordability, career progression and convenience are the top three reasons why students chose UNICAF.
- The evidence around UNICAF's impact on student income is not clear.

The report finishes by looking at opportunities for UNICAF to continue to increase its impact in the future.



01

Higher education in Africa

Africa suffers from a significant undersupply of higher education. Current tertiary enrolment rates across Africa stand at roughly 8 per cent – well below the global average of 32 per cent.³ This contributes to low wages and a shortage of skills and talent. In most African countries there are not enough student places to satisfy demand; in Zambia, for example, there are 3.6 times as many applicants as spaces available.⁴

Demand is set to increase even further over the next decade. Enrolments in Africa are expected to increase from 7.4 million in 2015 to 8.8 million by 2030 and 21.7 million by 2040.⁵ About three-quarters of the expected global growth for the population aged 18-23 is expected to be concentrated in ten countries: Angola, Democratic Republic of the Congo, Egypt, Ethiopia, Kenya, Niger, Nigeria, Pakistan, Uganda, and Tanzania.⁶

Africa has the world's fastest-growing youth population, with rising education levels. Over the past 40 years, secondary enrolment rates have gone up and completion rates have more than doubled from 22 per cent to 44 per cent.⁷ Many 22-40-year-old Africans are also now in an economic position to seek further education, which means mature students are competing with fresh graduates for limited tertiary seats. By 2035, countries from sub-Saharan Africa are likely to become the sunrise markets for higher education.⁸

8%

Enrolment in tertiary education in Africa is roughly 8 per cent.

3 UNESCO: Welcome to UIS.Stat and Our World In Data: Tertiary Education

4 Caesar 2017: The Business of Education in Africa

5 Calderon 2018: The massification of higher education revisited, RMI University Melbourne

6 Calderon 2018

7 World Bank Data on School Enrolment

8 Calderon 2018

More high-quality universities are needed throughout the continent. Good quality public universities often cater to less than 5 per cent of the student population and are mostly located in capital cities. Further, the 2020 QS World University Rankings, which rate the world's best 1,000 universities, features only 13 African universities, of which eight are in South Africa.⁹ Quality assurance mechanisms at private universities, including their compliance with local regulations designed to uphold quality, are often weak.¹⁰

Employers are looking for skills that traditional higher education is not providing. Over 70 per cent of graduates in Africa study humanities and social science disciplines, yet more data scientists, managers and science, technology, engineering and mathematics (STEM) graduates are needed.¹¹ In addition, many of the STEM skills currently being taught in African higher learning institutions lag behind the technical needs of the job market. This means the graduate unemployment rate is high, while the lack of talent is restricting business growth. Reacting to job market demands, prospective students are looking for more innovative universities with multi-disciplinary, job relevant, technology-focused content and better quality teaching. Traditional campus-based higher education will still be a large part of the solution, and is expected to show growth, but online and blended higher education is best-positioned to fill the growing needs arising from these economic, technological and demographic trends.

Higher education in Africa is still out of reach for too many. The majority of students in sub-Saharan Africa will continue to struggle to afford Bachelors, Masters and PhD degrees. Universities will therefore have to adapt to make more affordable and relevant education available, as well as develop innovative student financing arrangements, such as income share agreements,¹² to ensure equitable access for the brightest minds.

Private sector institutions and investors have an important role to play. Currently, the private sector provides around 30 per cent of higher education seats.¹³ According to the World Bank, private universities can help create more opportunities for students from disadvantaged backgrounds to access tertiary education.¹⁴ There is strong pressure to increase higher education capacity, but at lower price points. This opens up opportunities for technology-based delivery models, including hybrid/blended learning and full online models that drive efficiency and scale to help meet these rising demands.

Impact of higher education on ...

- 1. ... individuals:** Over a person's life, each additional year of schooling typically results in a 8–10 per cent boost in earnings.¹⁵ There is deep and extensive evidence that adult learning fosters a greater level of wellbeing, especially in older adults; an increase in life satisfaction and positive changes in mental wellbeing.¹⁶ Returns are especially high for tertiary education, and even higher for students from disadvantaged backgrounds in Africa.¹⁷
- 2. ... the economy:** a higher share of education may translate into higher rates of innovation, higher overall productivity through firms' ability to introduce new and better production methods, and faster introduction of new technology.¹⁸ Lifelong learning is key for pushing out the industry profitability frontier, gains in national output, employment levels and tax revenue.¹⁹
- 3. ... society:** a more educated society is associated with lower rates of crime,²⁰ better population health²¹ and lower rates of societal conflict.²² These benefits are often transmitted across generations.²³

9 Top Universities in Africa

10 World Bank 2007: Higher Education Quality Assurance in Sub-Saharan Africa : Status, Challenges, Opportunities, and Promising Practices

11 Caesar 2017

12 Income share agreements (or ISAs) are financial structures in which the organisation provides the degree (often for free) and allows the student to pay back by deducting a percentage of their future income for a fixed number of years

13 Caerus 2017

14 World Bank 2017: Sharing Higher Education's Promise Beyond the Few in Sub-Saharan Africa

15 Montenegro, C. and Patrinos, H. 2013: Returns to Schooling around the World. Background paper for the World Development Report

16 Schuller, T. 2017: What are the wider benefits of learning across the life course? Foresight, UK Government Office of Science

17 World Bank 2017: Sharing Higher Education's Promise

18 UNESCO 2005: Education for all Annual Report

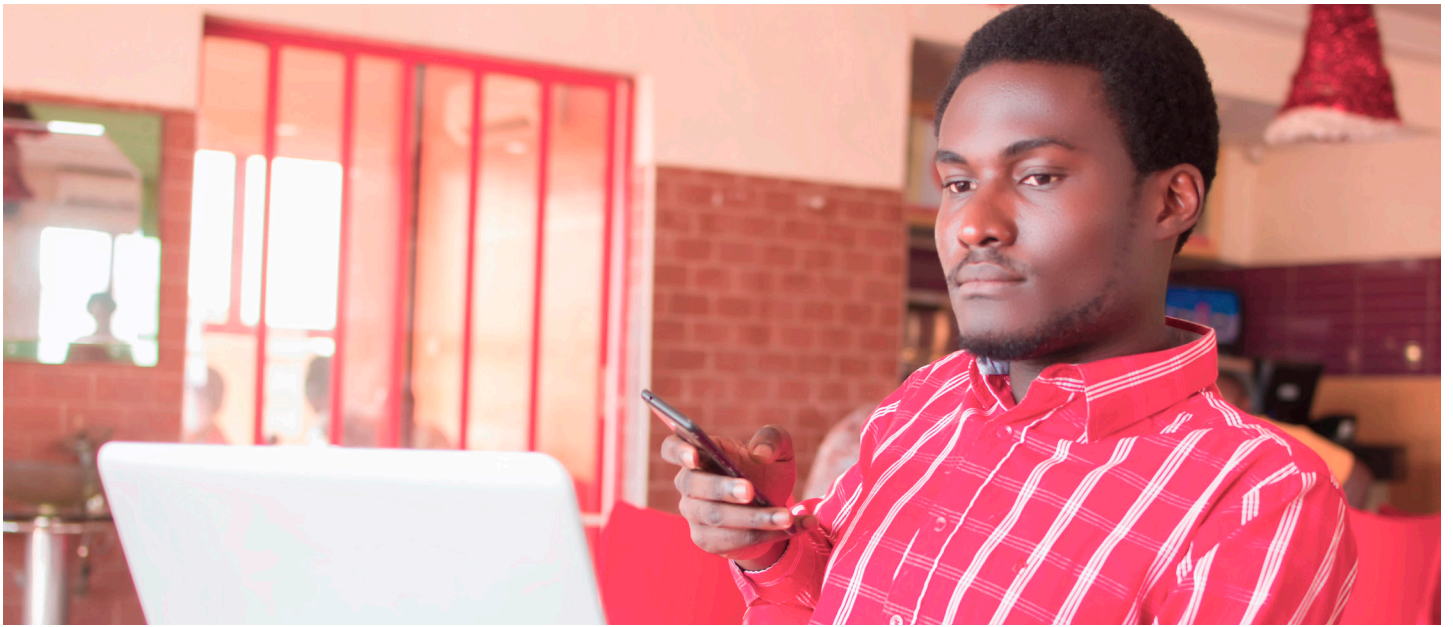
19 Stiglitz, J. 2015: Inequality and Economic Growth. The Political Quarterly 86:172–190

20 Machin, S., Marie, O. and Vujic, S. 2011: The Crime Reducing Effect of Education. The Economic Journal, 121(552):463–484

21 Jamison, D. and Schäferhoff, M. 2016: Estimating the Economic Returns of Education from a Health Perspective. Berlin: SEEK Development

22 Agbor, J. 2011: Does School Education Reduce the Likelihood of Societal Conflict in Africa? Department of Economics, University of the Western Cape

23 Solon, G. 1999: Intergenerational Mobility in the Labor Market. Handbook of Labor Economics, 3 (Part A 1999):1761–1800



02

The future of online higher education

Online higher education is still an under-developed market. Globally, a few start-ups are trying to bring a more innovative, technologically-led, remote studying alternative to students. Yet, the annual costs of most of these options is still too steep for many. In some African countries, distance learning has already picked up. Estimates suggest that 60 per cent of Zambian students practice some form of distance learning. Nigeria's Open University enrolls some 160,000 students, making it the country's largest tertiary provider.²⁴ Yet, in general Africa has far fewer options in terms of quality online higher education. As such, there is an opportunity for start-up founders and investors. Conversely, being an early mover can also be costly: investment is needed to build the market and gain the trust of students.

Offering Western-accredited degrees can help gain initial acceptance with students and employers. However, local accreditation and a reputation for quality will be crucial to scale. Many students are risk averse when choosing a degree and are looking for degrees and institutions that are accepted by prospective employers. Accreditation from universities in the UK and US are important in these early days. It helps to signal quality and legitimacy at a time when local accreditation requirements are still geared towards 'bricks and mortar' delivery. Over time, degrees with local accreditation should become a larger part of the market. Some local universities, such as the University of Nairobi, are already offering online courses. In a post-COVID world, the trend of traditional universities putting courses online may be accelerated with local universities leveraging existing accreditation and a strong local reputation. However, as UNICAF CEO Nicos Nicolaou recently remarked, remote learning and well-crafted online learning are not the same.²⁵ As such, there may be a blurring of the line between online and campus education as campus schools go more online and online schools develop more campuses and in-person learning experiences. Partnerships with large reputable firms – such as Microsoft, McKinsey and Google – and shorter job-relevant course offerings can also help establish the reputation of online learning.

²⁴ Caerus 2017

²⁵ Nicolaou Nicos 2020: The new normal for Higher Education post-COVID-19

Demonstrating learning outcomes and improved career advancement is paramount to industry growth. To attract students, online education providers will also need to differentiate themselves by outcomes, such as improved career progression for graduates. To achieve this, universities need strong academic governance sitting alongside, but independent of, the commercial imperative. Quality online education requires high-touch support from the faculty and between students. In addition, to support job placement and career advancement, universities will need local partnerships with employers and active in-country alumni networks. As a result, online universities in Africa, including foreign ones, will need to invest in their local presence in their respective markets to remain competitive. It also requires a focus on relevance, including dialogue with the job market, offering vocational degrees, workplace readiness training, career coaching and guidance, and developing a methodology for assessing and improving student career outcomes.

Pricing and affordability are critical, as many students still struggle to afford degrees. The price for online higher education is usually lower than campus-based options, and helps individuals to keep working while studying. This dramatically changes the affordability equation, opening up higher education to an income group who otherwise would not have been able to afford it. For example, an engineering degree in India costs \$7,000–14,000, whereas an online degree costs \$250–300.²⁶ The share of the market across Africa that can pay high prices for a master's degree, even while continuing to work, is small. On the plus side, costs for internet-enabled devices and data are decreasing, and network quality is improving. The average price of one gigabyte of data throughout Africa decreased from 13.2 per cent of monthly GDP per capita in 2016 to just 6.8 per cent in 2018, and this trend is expected to continue.²⁷ Student loans, and, in particular income share agreements, will be an important part of education take-up in Africa, whether for new or existing universities.²⁸

Operators need to invest in new technologies and develop smart business models to keep costs down. Advanced technologies have the potential to keep costs down for operators. Artificial intelligence, for example, can reduce the costs of marketing and enrolment by using automated assistants and chat bots, as well as for content delivery, including personalised teaching and auto-grading assignments. New market entrants, however, may find it difficult to keep degrees affordable, as investing in these technologies – as well as investing in the marketing needed to build their market – can present a considerable up-front cost.

Online higher education is expanding fast globally and will do the same in Africa. These trends present opportunities for an organisation like UNICAF. Uptake of online learning programs will continue at a moderate pace as many companies are yet to figure out affordability, acceptance, relevance and accreditation of short and degree courses, though this pace could be accelerated by the COVID-19 pandemic. To further increase acceptance, there is a clear need for each new provider to build their reputation by demonstrating the value proposition of online and blended learning to students. There is very little research on the effectiveness of online and blended learning, especially in emerging markets, and even less research on life outcomes and tangible improvements of the careers and net income of learners. This report helps contribute to the knowledge base and highlights how students at Africa's largest online university currently value these aspects in their education.



Demonstrating learning outcomes and improved career advancement is paramount to industry growth.

²⁶ KPMG 2017: A study of online education in India: 2021

²⁷ GSMA 2019: The State of Mobile Internet Connectivity

²⁸ Income share agreements (or ISAs) are financial structures in which the organisation provides the degree (often for free) and allows the student to pay back by deducting a percentage of their future income for a fixed number of years.



03

UNICAF – enabling African students to get quality degrees at more affordable prices

UNICAF is an online and blended higher education organisation. It has offered Bachelor, Master's and PhD degrees to approximately 30,000 students across every country in Africa. Students can get affordable degrees accredited from globally recognised British, American, European, and African universities. UNICAF also has campuses and degree licenses in Zambia, Zimbabwe and Malawi. UNICAF University which is also part of UNICAF has also been accredited by the British Accreditation Council, making it possible for students to earn an African degree with British accreditation.

This section summarises findings from analysing UNICAF's own student database – covering applications, enrolment and studies, as well as interviews with 1,913 students²⁹ to understand how they perceive their online higher education and how studying at UNICAF impacts their lives. The surveys were collected by Open Capital Advisors over the summer of 2019.

~30,000

Almost 30,000 students across Africa have studied with UNICAF.

²⁹ This includes a comparison group of 200 students who have enrolled but not completed a module in nine months, as well as students who have been admitted but never completed enrolment.

UNICAF is fast-becoming one of Africa's largest higher education institutions and educational platforms. As of May 2020, UNICAF has 19,433 active students. The vast majority are enrolled in graduate-level courses, particularly MBAs, which make up about half of the student body. There is a new but growing range of undergraduate course offerings. About 10 per cent enrolled in a blended learning programme taking advantage of UNICAF's campuses in Malawi and Zambia. The student body is diverse across geographies, age, gender, income segments and professions. It is growing fast, adding between 600-1,000 students every month.

19,433

As of May 2020, UNICAF has 19,433 active students.

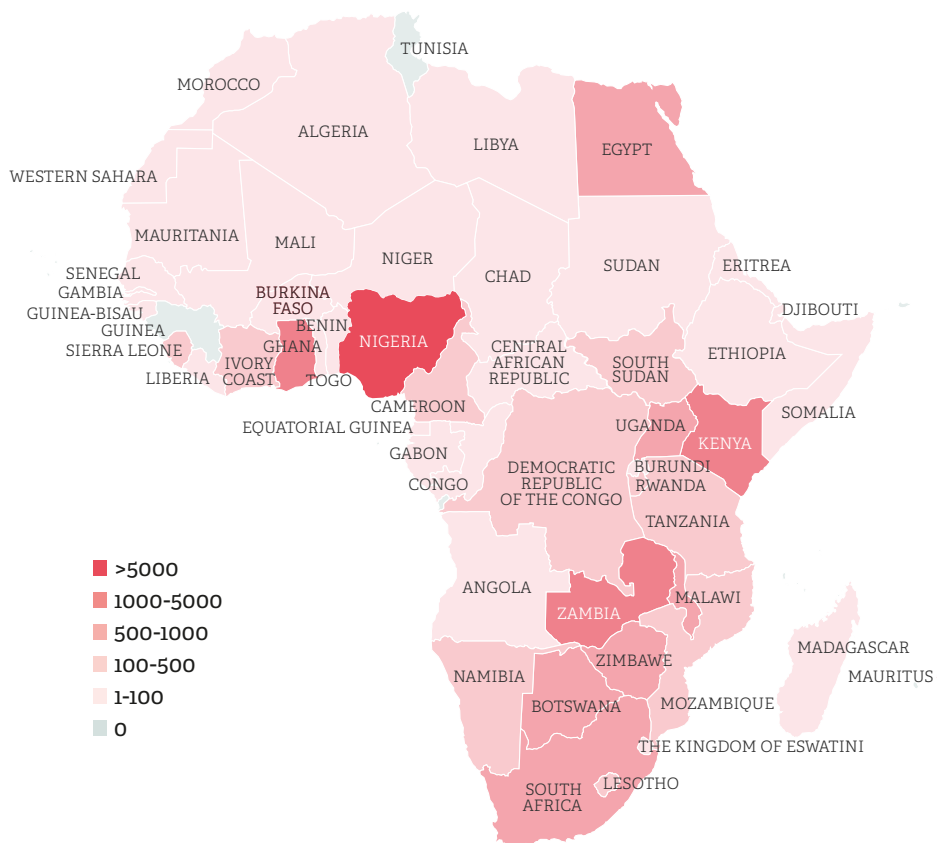


Figure 1: Number of active UNICAF students across Africa (Source: UNICAF, Date: May 2020)

UNICAF's online model is genuinely pan-African, and is serving students in some of Africa's most challenging countries, including Somalia, Liberia and Chad, where quality education is scarce and going to university can be dangerous. UNICAF has students in almost every country in Africa. Nigeria is the largest market with over 6,000 students enrolled, followed by Zambia, Ghana and Kenya. Despite not advertising significantly outside Africa, 20 per cent of UNICAF's student population comes from other parts of the world, with Jamaica the largest country represented outside Africa.

UNICAF's model helps it target harder to reach groups. UNICAF's female enrolment ratio has increased from 23 per cent in 2013 to 47 per cent in 2018 – this is in line with female enrolment in its larger markets.³⁰ Of the two per cent of students that reported themselves as disadvantaged, 0.8 per cent were physically disabled, 0.7 per cent were refugees and 0.5 per cent reported some form of learning disability. The majority of students (60 per cent) reported having dependants.

³⁰ Based on World Bank data of Egypt, Botswana, Zimbabwe, Kenya and Ghana.

UNICAF's degrees programmes are explicitly designed to allow people to keep working while studying. Of the students surveyed, 86 per cent worked while studying. A large part of UNICAF's student base is older students returning to education. A total of 65 per cent of UNICAF students are between 25 and 39 years old, seven per cent are younger than 25 and five per cent are older than 50. Students come predominantly from the public sector, but there is significant variation by country.

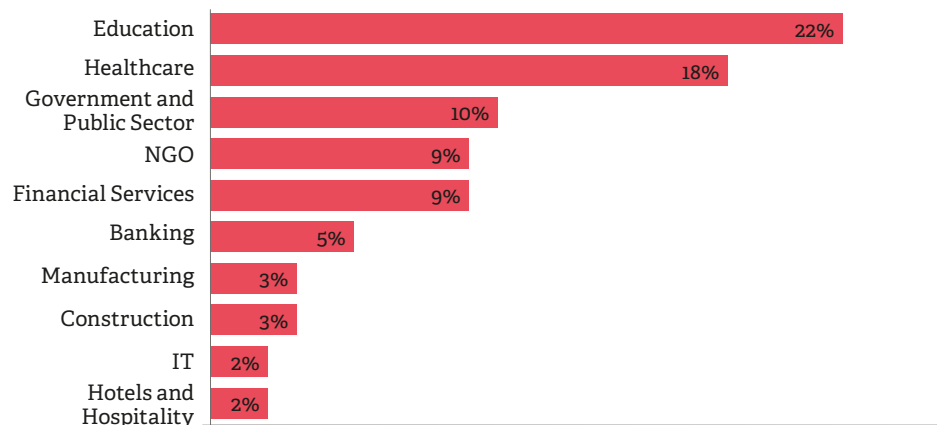


Figure 2: Employment sectors of UNICAF students

UNICAF students pay \$4,000 on average for a postgraduate degree, in small monthly payments. We compared UNICAF's MBA degree price with the standard MBA price at universities in select countries and found that UNICAF's degrees are significantly cheaper in some countries, particularly Nigeria and Kenya.³¹ Our analysis suggests students in most countries are likely to experience substantial cost savings from UNICAF degrees, particularly when factoring in their savings on full on-campus living costs and their ability to continue their jobs while completing the degrees. According to the survey, many students, especially in Nigeria, Ghana and Kenya, said they have not considered applying at any other university. For those that considered other options, the main competitor universities were from the UK, US and other African universities.

The ability to study online while continuing to work helps to open up higher education to lower income households. The median annual income of UNICAF students across countries is \$6,000–\$12,000, whereas 37 per cent of students earn \$6,000 per year or less.³² In many countries, UNICAF students are in the top 50 per cent of earners. However, in countries including South Africa, Namibia and Kenya, the majority of students come from lower income groups.³³

65%

65 per cent of UNICAF students are 25-39 years old.

<\$6,000p/a

37 per cent of UNICAF students earn \$6,000 per year or less.

³¹ UNICAF degrees were slightly cheaper in South Africa, and slightly more expensive in Ghana and Zambia compared with local alternatives.

³² Self-reported data through the survey. This differed slightly across the different degree segments.

³³ Based on World Bank Data. See Figure 3

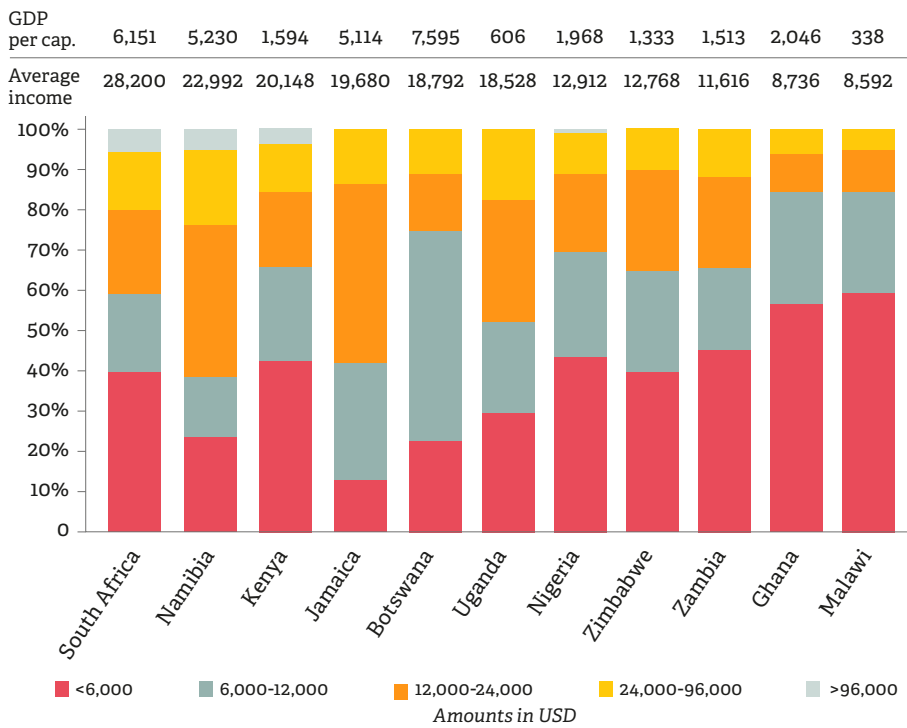


Figure 3: Pre-enrolment income level (USD) of UNICAF students by country³⁴

Given the time it takes to complete a degree, it will take some time to show a conclusive trend in completion rates for UNICAF online degrees.

Students report high satisfaction rates with their learning at UNICAF. UNICAF's net promoter score³⁵ is consistently high at 60 out of a possible 100. This was also confirmed in the survey, with 93 per cent satisfied or very satisfied with their course, results that hold true across different programmes. Students were happy with core parts of the learning experience such as quality of staff, workload and overall course quality.

Affordability, career progression and convenience are the top three reasons people chose UNICAF. The findings held consistent across most countries. There was no significant variation in motivation by gender. Among admitted students who decided not to enrol with UNICAF, the most common reasons for rejections were due to a change in personal income situations and the cost of the degree.

Evidence around impact of a UNICAF degree on income is unclear. When alumni were asked to compare their salary before and after completing their UNICAF degrees:

- 12 per cent of alumni reported a salary gain of more than 40 per cent
- 15 per cent reported a salary increase of 20-40 per cent
- 15 per cent reported a salary increase of 0-20 per cent
- 54 per cent reported no change
- 4 per cent reported a fall in salary

The extent of salary gains were generally correlated with economic conditions in each country.

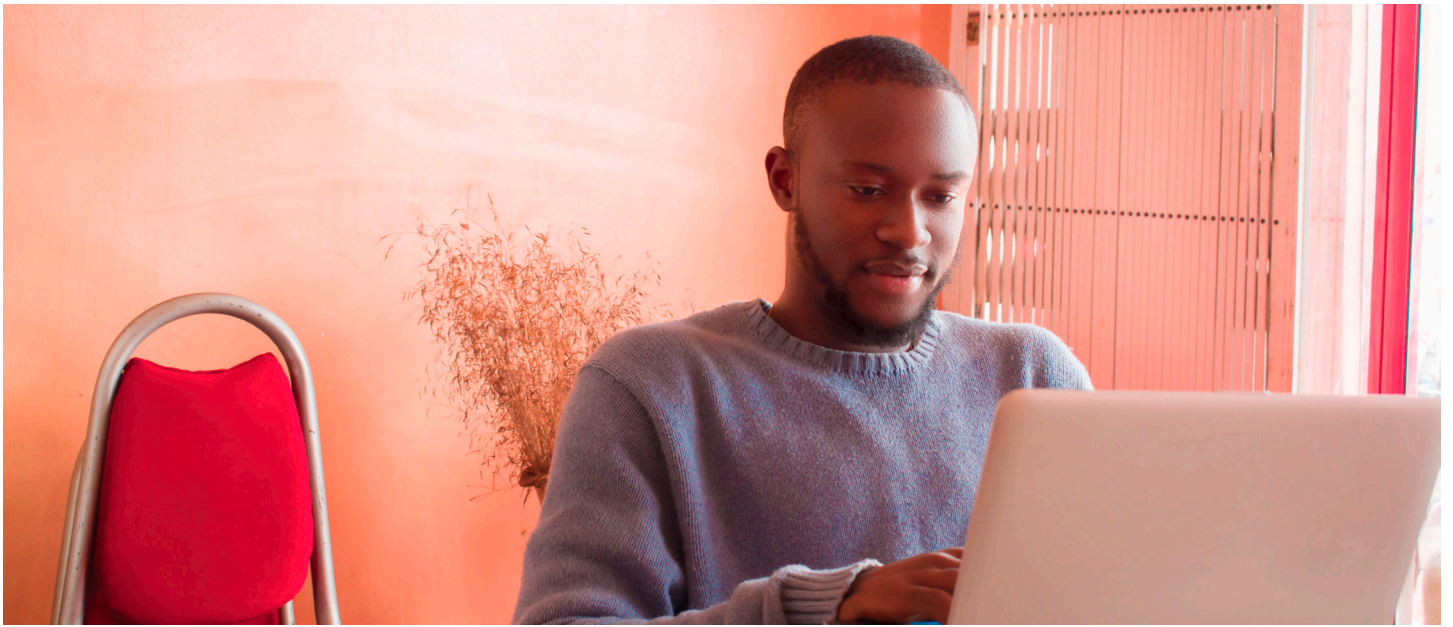
93%

93 per cent of UNICAF students are satisfied or very satisfied with their course.

» **Affordability, career progression and convenience are the top three reasons students chose UNICAF.**

³⁴ UNICAF online survey, World Bank Group

³⁵ Net promoter score or NPS is a customer satisfaction benchmark that measures how likely customers are to recommend a business to a friend.



04

Opportunities and challenges

Online and blended higher education will grow significantly over the next decade, potentially opening up higher education to a cadre of students that are currently prevented from further studying due to social or economic reasons. UNICAF has the opportunity to be at the front of this wave by significantly increasing the number of students it is serving, and by demonstrating how to offer high quality higher education at an affordable price to others in the market.

In order to remove access barriers to higher education and also respond to recent global developments, such as the COVID-19 pandemic, there is a need for African universities (public and private) to develop online offerings. UNICAF's recent partnerships in Zimbabwe and Rwanda underline its commitment to helping take public institutions online. Public/private partnerships can significantly increase UNICAF's reach, and therefore the number of students that will benefit from online education.

Moreover, a broader mix of degrees through more partnerships – including foreign degrees as well as locally accredited degrees that may be more relevant to some students – will present students with greater choice, both in terms of course offerings and price points.

One common challenge of online models is student inactivity, with students either stopping or slowing down the pace at which they take modules. In our survey, the primary reason students reported for pausing their studies was a change in financial circumstances. UNICAF is actively looking for ways to help students complete their degrees on time, for example by working with student loan providers. Income share agreements and other innovations in the student loan space reduce student inactivity, which could go a long way in helping to solve the continued access problem in African higher education and significantly increase impact.

Ultimately, what matters most from an impact perspective, is the effect that further education has on a student's life and career. In general, this is hard to measure. Placement rates and salaries after exit are often used as proxies to determine impact. At UNICAF, over 86 per cent of students study part-time while they are working. As such, placement rates in this case are not a meaningful indicator. Similarly, isolating the 'UNICAF effect' of a salary increase is not straightforward, as it is expected that salaries increase over the three to four years it takes students to complete their degrees. Nonetheless, this is extremely important to evidence impact and also deliver a learning experience that leads to tangible results for students. Establishing a robust methodology for measuring impact on student's careers, and following through on data capture, is therefore critical for UNICAF.

UNICAF is positioned at the vocational end of the market – focused on degree courses that are relevant to people's careers. UNICAF has the opportunity to take this further and help define what 'relevance' means across different markets in Africa. For example, what type of jobs do African governments want to create over the next decade? What jobs do young people aspire to do? What knowledge, skills and aptitudes are African employers looking for today, and – taking into consideration technological and societal shifts – how will this change over the next decade?

As part of this positioning, UNICAF has the opportunity to evaluate what it can realistically offer over time in order to amplify its own relevance to students' lives and careers. New ideas are needed around add-on modules that speak to 'excelling in the workplace', career coaching and guidance, and placement with employers. There is a lot to learn from global best practice in these areas.

There have been significant developments in technology and the global approach to teaching in the last five years, many of which are not yet being used at scale in Africa. UNICAF should embrace cutting-edge thinking to deliver learning more efficiently and effectively. This can include: synchronous and asynchronous collaborative and project-based learning, mobile-friendly learning platforms, adaptive and personalised learning, formative, summative and automated assessment methodologies and technologies, particularly those that include the assessment of job-relevance towards skills. Lastly, UNICAF should also continue to engage with the continent's forward-thinking employers to make its learning experience transparent and attractive to employers and gain their continued support for its students.

86%

Over 86 per cent of UNICAF students study part-time while they are working.

Other reports in CDC's Insight series:

What we've learnt about the affordability of food: evidence from Zambia

How can our investments make a difference to people living in poverty?

What is the impact of investing in financial systems?

What is the impact of investing in connectivity?

What is the impact of investing in power?

How innovation in off-grid refrigeration impacts lives in Kenya

Understanding the impact of solar home systems in Nigeria

How does an online supermarket in India impact farmers?

To view the rest of our Insight series visit:

cdcgroup.com/insight

For further information:

▶ **CDC Group:**

Katharina Neureiter
kneureiter@cdcgroup.com

Rob Jordan
rjordan@cdcgroup.com

cdcgroup.com/insight

