UNCERTAIN TIMES: Re-imagining universities for new, sustainable futures

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Introduction

Universities operate in environments that are increasingly unstable, unpredictable and competitive. The COVID-19 pandemic is the latest in a series of disruptive forces that universities have experienced in the past several decades. Digital transformation, financial crises, demands for life-long learning and new forms of knowledge, skills and competences, are some of the major drivers that have made change and continuous re-invention inevitable in order for universities to remain relevant, competitive and sustainable. Digital transformation, captured by the phenomenon commonly referred to as the Fourth Industrial Revolution (4IR), represents profound advancements in science and technology and has important implications for society, governments, businesses, industry and higher education institutions. These advancements, their promises and perils, provide an overarching backdrop for re-imagining the on-going transformation of society, the future of work and professions, and the evolving role of universities as knowledge institutions.

Financial resources are among the most critical assets that universities depend on to accomplish their important roles and to thrive as effective and vibrant organisations. This makes it essential for universities to acquire and maintain resources, and sustain an overall healthy financial condition to achieve their goals. South African universities depend on three main sources of funding, namely, state funding, tuition fees and third stream income. Universities were already experiencing sustainability challenges pre-COVID-19, amongst them, declining state funding (in real terms), challenges associated with #FeesMustFall student protests, insourcing of services, government regulation of tuition fees, rising student debt, weak economic growth and a highly unstable currency. The COVID-19 pandemic has aggravated these challenges. Unlike in previous times when universities addressed resource dependence difficulties by, amongst others, diversifying their sources of revenue; essentially shifting resource dependence from unreliable sources to stable sources, the current circumstances are such that universities have to navigate fragmented funding streams as all funding sources will likely be impacted by the pandemic and the associated economic downturn. All university systems around the world are experiencing these challenges, to varying extents.

The unfolding of the COVID-19 pandemic in South Africa is interwoven into an existing socioeconomic context ridden with poverty and deep, unsustainable inequalities. Deep inequalities amongst institutions and within institutions continue unabated more than a quarter of a century since the democratic transition. The impact of apartheid-era underfunding and underdevelopment of those universities that were historically designed to serve the educational needs of black South Africans, continues to shape the institutional typologies within the higher education system. The impact of COVID-19 has stretched to breakpoint levels these inequality fault-lines. As we contemplate the future of higher education a priority has to be the emergence of a system that is designed and funded to effectively function as universities and in particular, to enhance the intellectual and social development of the students at those institutions.

A key characteristic of the disruptive forces confronting universities and society at large is profound uncertainty. The management of, and response to, this uncertainty, however, cannot be reduced to risk management procedures and protocols. Universities have to be innovative and proactive, they have to strengthen their capacity for sensing emerging developments and dealing with unknowns and, ultimately, orchestrating
new directions and pathways towards the emerging futures. The latter is the focus of this discussion paper, which has two main parts. The first part examines the various challenges confronting higher education institutions in South Africa, with a specific focus on economic challenges in the context of the COVID-19 pandemic and the second part explores various possible response trajectories to these challenges.

**Economically challenging times**

South Africa has over the past decade experienced weak economic growth and is currently in a recession. The realisation of revenue collection targets remains a challenge due to plummeting tax revenue. A tax revenue underperformance of R304.1 billion is expected in 2020/21 (National Treasury 2020a). At the same time, public debt has been soaring and corruption, both in the public and private sectors, has become endemic. Debt-service costs have been the fastest-growing area of spending, rising from 9.8 per cent of main budget revenue in 2010/11 to 15.2 per cent in 2019/20. The country’s gross loan debt is projected to rise to 81 per cent of GDP in the current fiscal year (National Treasury, 2020a). Government is now spending more revenue than it is collecting.

As a result of weak economic growth, the state has, over the past five years, increased taxes to reduce revenue deficit. The scope for further tax increases has, however, narrowed as typified by the decision not to raise additional revenue from tax proposals for 2020/21 (National Treasury, 2020b). In any case, South Africa does not have a big pool of high income earners and is already disproportionately dependent on a small group of tax payers - 125 000 high-income earners pay 20% of the income tax collected by the South African Revenue Services (SARS).

Many state-owned enterprises are performing dismally and will continue to be a drain on the fiscus for the foreseeable future. The public wage bill has grown unsustainably and currently averages 35.4 per cent of total consolidated expenditure. Meanwhile, unemployment has increased, reaching a record 30.1% in the first quarter of 2020. **Figure 1** shows the country’s GDP growth compared to unemployment growth.

*Figure 1: GDP growth and unemployment*

The rand has not been spared by the country’s economic challenges and remains a rather volatile currency compared to comparable developing-country currencies. In 2019 the rand’s exchange value fell by 1.9% in real terms (National Treasury, 2020b). The rand’s depreciation has several implications for universities. On the negative side, it increases the cost of library acquisitions and subscriptions and research equipment, most of which is imported. On the other hand, it might have a positive knock-on effect on recruitment of fee-paying international students due to increased affordability of South Africa’s higher education.

The country’s economic outlook has been made worse by the COVID-19 pandemic. The National Treasury (2020a) projects that the economy will contract by 7.2% in 2020.
The pandemic has triggered accelerated job losses, low economic activity, the collapse of many companies and businesses and a general state of uncertainty. In response to the devastation caused by COVID-19, government unveiled in April 2020 a R500 billion relief package which was to be funded partly by reprioritising R130 billions of expenditure from existing budgets, and borrowing from domestic and international lenders. The Supplementary Budget tabled on 24 June 2020, however, provides for a budget of R145 billion for COVID-19-related expenditure of which R109 billion will be funded through the suspension of baseline allocations and reprioritisations. The budget reduces planned expenditure by R230 billion over the next two years (2021/22 and 2022/23).

Budget allocations for higher education for 2020/21, as with many other allocations, were cut as a result of the reprioritisations: infrastructure allocation for universities was reduced by R500 million while the block grant was reduced by R382.59 million (1.07%) (Treasury, 2020a; DHET 2020). Equally, the budget for the Department of Science and Innovation (DSI) was decreased by 16%, which is drastic. This cut will affect universities directly. DSI plans to reduce the number of postgraduate bursaries from 9,300 to 6,000 and PhD grants from 3,100 to 2,000. The reduced funding will also affect allocations to research chairs and centres of excellence.¹

From the foregoing, it is clear that without faster economic growth, South Africa cannot raise the revenue needed to fund various, competing, public expenditure priorities, unless it continues to borrow. It is plausible to conclude that, with slow economic growth and borrowing reaching unsustainable levels, significant effort will be directed towards spending restraint as projected in the Supplementary Budget. Overall, South Africa’s economic outlook is dire. “Public finances are dangerously overstretched” (National Treasury, 2020a: 22). The country has essentially not recovered from the 2018 economic crisis and, thanks to COVID-19 and other factors, it is reasonable to predict that the persistent low growth (see Figure 1) will endure for at least another decade. This reality has significant implications for universities.

### Institutional vulnerability

Universities are susceptible to larger economic and societal trends; large shifts in subsidy levels and other government funding targeted at higher education institutions, increasing vulnerability of poor and working-class families and the challenges in raising third-stream income. Universities must navigate fragmented funding streams, weather economic fluctuations and contend with a variety of changes to traditional revenue sources. Unstable environments result in organisational turbulence. When resources are in a state of major flux financial sustainability is compromised and organisational stability is threatened. Organisational vulnerability occurs (Pfeffer & Salancik, 2003).

Given the country’s perilous economic situation, in the context of many competing demands on a depressed fiscus, a significant increase in public funding for universities, in the foreseeable future, is unlikely. Table 1 shows that South African universities have historically been underfunded in terms of per capita growth in real terms (block grant). It should, however, be noted that from 2016, following #FeesMustFall student protests, public funding for indigent students has increased, resulting in significant improvements in per student funding. This

spending improvement, while welcome, has resulted in fewer resources being made available to support university operations (block grant allocations) and enrolment expansion.

The trend captured in Table 1 suggests that, in the context of the economic challenges discussed in the previous section, future allocations will be characterised by potentially steeper real declines.

**Table 1: Block grant allocations to universities from 2004/5 to 2014/15**

<table>
<thead>
<tr>
<th>Year</th>
<th>Block grant for universities in nominal terms (R'million) (A)</th>
<th>Growth in nominal terms (%)</th>
<th>Inflation (CPI)*</th>
<th>Deflator (B)</th>
<th>Block grant for universities in real terms (R’million) [(C) = (A/B)]</th>
<th>Growth in real terms (%)</th>
<th>HEMIS Student FTEs (D)</th>
<th>Per capita in real terms using FTE students (Rand) (E)</th>
<th>Per capita growth in real terms (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/05</td>
<td>8 568</td>
<td>-</td>
<td>2.0%</td>
<td>1.00</td>
<td>8 568</td>
<td>-</td>
<td>505 473</td>
<td>16 950</td>
<td>-</td>
</tr>
<tr>
<td>2005/06</td>
<td>9 145</td>
<td>6.7%</td>
<td>3.6%</td>
<td>1.02</td>
<td>9 866</td>
<td>4.6%</td>
<td>500 931</td>
<td>17 899</td>
<td>5.6%</td>
</tr>
<tr>
<td>2006/07</td>
<td>9 956</td>
<td>8.9%</td>
<td>5.2%</td>
<td>1.06</td>
<td>9 421</td>
<td>5.1%</td>
<td>497 772</td>
<td>18 926</td>
<td>5.7%</td>
</tr>
<tr>
<td>2007/08</td>
<td>10 234</td>
<td>2.8%</td>
<td>8.1%</td>
<td>1.11</td>
<td>9 205</td>
<td>-2.3%</td>
<td>518 560</td>
<td>17 751</td>
<td>-6.2%</td>
</tr>
<tr>
<td>2008/09</td>
<td>11 550</td>
<td>12.9%</td>
<td>11.2%</td>
<td>1.20</td>
<td>9 614</td>
<td>4.4%</td>
<td>538 457</td>
<td>17 854</td>
<td>-0.6%</td>
</tr>
<tr>
<td>2009/10</td>
<td>12 701</td>
<td>10%</td>
<td>6.9%</td>
<td>1.34</td>
<td>9 511</td>
<td>-1.1%</td>
<td>569 708</td>
<td>16 694</td>
<td>-6.5%</td>
</tr>
<tr>
<td>2010/11</td>
<td>14 533</td>
<td>14.4%</td>
<td>3.8%</td>
<td>1.43</td>
<td>10 176</td>
<td>7.0%</td>
<td>600 002</td>
<td>16 960</td>
<td>1.6%</td>
</tr>
<tr>
<td>2011/12</td>
<td>16 387</td>
<td>12.8%</td>
<td>5.6%</td>
<td>1.48</td>
<td>11 051</td>
<td>8.6%</td>
<td>628 409</td>
<td>17 586</td>
<td>3.7%</td>
</tr>
<tr>
<td>2012/13</td>
<td>17 434</td>
<td>6.4%</td>
<td>5.6%</td>
<td>1.57</td>
<td>11 134</td>
<td>0.7%</td>
<td>634 548</td>
<td>17 546</td>
<td>-0.2%</td>
</tr>
<tr>
<td>2013/14</td>
<td>18 439</td>
<td>5.8%</td>
<td>5.8%</td>
<td>1.65</td>
<td>11 151</td>
<td>0.2%</td>
<td>665 856</td>
<td>16 747</td>
<td>-4.6%</td>
</tr>
<tr>
<td>2014/15</td>
<td>19 561</td>
<td>6.1%</td>
<td>5.6%</td>
<td>1.75</td>
<td>11 181</td>
<td>0.3%</td>
<td>668 705</td>
<td>16 721</td>
<td>-0.2%</td>
</tr>
</tbody>
</table>

Net % change in nominal terms in block grant from 2004/5 to 2014/15: 128.3%

Net real change in block grant: 30.5%

Per capita growth in real terms: -1.35%

Source: DHET (2015)

A convergence of recent developments has put the financial sustainability of South African universities to the test. This vulnerability was perhaps more pronounced in 2016 when the decision not to increase tuition fees resulted in a number of universities becoming financially distressed. An analysis by the Council on Higher Education (CHE, 2016) projected that 19 of the 26 universities could have become financially unstable by 2018 if the 0% increase of tuition fees was extended to 2017. The regulation of tuition fees, which started in 2016, brought to an end the non-interventionist policy environment with autonomy to set tuition fees, which universities hitherto enjoyed. In 2016 tuition fees were frozen (0% fee increase) and in 2017 and 2018, increases were capped at 8%, while in 2019 increases were capped at 5.3%.

COVID-19, in addition to its broader impact on the country’s and global economy, is similarly having an impact on many elements of universities’ funding, inter alia:

a) Costs related to on-line teaching (learning management systems, purchases of computers/devices for students and staff, data, etc.).

b) Expectation from students and parents that there will be a reduction in tuition fees and rebates for accommodation.

c) Fixed expenditure on student residences in the context of point (b) above.

d) Loss in revenue due to the cancellation of on-campus revenue-generating courses and programmes.
Ongoing financial hardship for families and loss of income as a result of retrenchments resulting in higher student debt levels - this is real in the context of stretched public finances and a battered economy. Financial hardship will require increased financial support.

Decline in third stream income due, inter alia, to dramatic declines in financial markets and plummeting economies. These will affect returns on investments and will impact on donors, including alumni, who will face financial challenges of their own.

Research funding from private or government sources may decline.

Enrolments, especially for international postgraduate students, may decline.

Costs related to mandatory screening and testing of students and staff.

Costs related to purchase of personal protective equipment (PPEs) – masks, gloves, sanitisers, etc.

Many universities are still grappling with the effects of insourcing and other developments resulting from the 2015/2016 student protests.

The R1.85 billion requested by universities from DHET as part of their COVID-19 campus readiness plans is indicative of the financial implications of the pandemic for the sector. DHET has already provided some COVID-19 relief funding which will go some way in alleviating the impact of the pandemic. This funding is, however, inadequate given the magnitude of the challenge. Further, the COVID-19 relief funding is not additional funding. It is derived from a reprioritisation of existing university allocations.

Possible scenarios

The foregoing analysis depicts a highly uncertain future for universities. As we have observed, the financial distress experienced by many universities following the various interventions triggered by the #FeesMustFall student protests suggest that many South African universities are financially vulnerable. The dire state of the economy, COVID-19 and possible future trajectories of both is likely to result in a number of possible scenarios.

**Scenario A – Cry South Africa Scenario**

The worst of these scenarios is one of economic collapse - the cry South Africa scenario - where, inter alia, the current economic recession deepens, the COVID-19 pandemic lasts longer with waves of infection lasting through 2021, the debt crisis and unemployment levels aggravate, the rand continues to weaken and some public-sector institutions collapse. The implications of this scenario for universities include a precipitous decline in state funding, freezing of tuition fees (0% fee increase), decline in enrolments, increased inequity/inequality in access and retention affecting mainly lower-income students due to increased financial and other constraints (for example, family obligations, unfavourable home circumstances, loss of support networks due to campus closures, etc.), a sharp increase in student debt and continuation of remote emergency online teaching and learning in 2021. Large-scale retrenchments may have to be carried out and some universities may become financially insolvent. This scenario is underpinned by stasis, decline and even despondency. It does not guarantee the continued existence of universities as vibrant knowledge institutions contributing to the transformation of society.
Scenario B – Jive South Africa Scenario

The other extreme scenario is one of unrealistic optimism – the jive South Africa scenario – whereby the pandemic subsides quickly and the economy experiences an upswing in 2021. In this scenario, state funding for universities is expected to increase in real terms, tuition fees can be increased in real terms (inflation plus), and third stream funding is expected to increase.

Scenario C – the Passing Cloud Scenario

The third scenario can be characterised as the passing cloud scenario whereby the current economic challenges and the impact of the COVID-19 pandemic are short-lived. The impact of the latter will be exacerbated by economic and other challenges that pre-date COVID-19. Those affected the most by the pandemic, mainly small and medium size enterprises and low-to middle-income families, will struggle to recover. In this scenario, government funding of universities is expected to drop, demand for funding from the National Student Financial Aid Scheme (NSFAS) will increase, student debt will also increase due to reduced family incomes, and tuition fees are likely to remain flat due to pressure against increases. The transition to emergency remote teaching and learning is expected to be short-lived but will require modifications to instructional operations and assessment modalities. The implication of this scenario is that things may quickly return to the pre-COVID-19 era except for expenses generated to address the various impacts of the pandemic.

Scenario D – the Light Bulb Scenario

The fourth scenario is a pragmatic and realistically optimistic one - the light bulb scenario - characterised by a decline in COVID-19 infections and deaths, adoption of both short-term and long-term economic reforms, modest economic recovery and an end to the jobs bloodbath. In this scenario, public funding and third stream income are expected to decline, but not to the extent that large-scale retrenchments are required to save costs. Managing the financial challenges will require prudent management of financial resources that combines careful cost management and strategies to find new revenue sources: cost reduction and replacement, revenue diversification and entrepreneurialism. This scenario is underpinned by innovation in terms of managing the current short-term challenges, but also imagining new, transformative and resilient, futures. Universities may need to rethink their current, conventional models, academic and administrative structures, and assess their financial health. It is also a scenario that would allow the university system to re-imagine a new future that addresses inequity and inequality that are legacies of both the past and the present.
Charting a new future

As open systems, universities interact with their environments and are affected by developments in these environments. To secure long-term success and vitality, universities must adjust to the changes in their organisational environment. Some of the changes and challenges are short term, but some require a re-thinking of various key elements of the higher education enterprise. Insularity is not an option. Research shows that turbulence – for example the student protests in 2015 and 2016 and COVID-19 – and its resultant uncertainty on individuals and organisations may lead to feelings of crisis, anxiety and stress, which may negatively affect performance (Cameron, Kim & Whetten, 1987). Universities, like other organisations, abhor turbulence and uncertainty. Uncertain and disruptive times call for strategic and innovative responses, both short-term and long-term, to ensure institutional stability, sustainability and vitality.

The sections that follow identify, in broad overview, possible response trajectories.

Re-imagining higher education in South Africa

Universities throughout history have been shaped by major developments in society, amongst them, colonialism, world wars, apartheid, scientific and technological innovations, internationalisation and globalisation. These phenomena, and their particular historical moments, have had a significant impact on various aspects of universities; including, their design, curricula, models of teaching and research, societal roles and their relationship with the state, society and communities. The current model of higher education in South Africa comes from a particular history and its evolution through various epochs, mainly colonialism, apartheid and the post-1994 changes. One of the critiques of the university in South Africa, especially in the recent debates on decolonisation, is that the post-1994 university naturalised its colonial and apartheid design, which to some observers, renders it ill-suited and unresponsive to its contemporary conjuncture.

The #FeesMustFall and other ‘Fallist’ student protests brought into sharp relief the need to continuously re-imagine the country’s higher education and proactively align it with evolving societal realities. In retrospect, the sector’s response to concerns regarding tuition fee levels, prior to the 2015/2016 student protests, could be described as defensive, insular and out of step with the broader socio-economic contexts in which South African universities are located. Following the then Department of Education’s proposal to regulate tuition fees in 2007, universities responded by maintaining the status quo (HESA, 2008). Tuition fee levels continued to rise but were not matched by a concomitant increase in financial aid and household incomes, leading to a political and regulatory response.

The scale and scope of the economic crisis facing the country and universities, the worsening of existing challenges by the COVID-19 pandemic and the various disruptive trends circumscribing universities, demand that we re-imagine the university system, pursue bold responses to enhance our sustainability, relevance and contribution to the country’s socio-economic advancement. The idea is not to prescribe possible interventions, but to explore alternative futures; explore other horizons of possibility and possible interventions towards these different futures.

COVID-19 has many negative implications for higher education which will reverberate long after the pandemic has been contained.
Equally, the pandemic has silver linings. It can serve as a springboard for re-thinking the future of higher education and strengthen the pact between universities, the state, business, society and communities. Many universities are involved in COVID-19 research; inter alia, vaccine development, drug development, transmission, epidemiology of the disease and its socio-economic impact. This research presents an opportunity for universities to restore and strengthen trust in research and expertise and mobilise funding support, which has been declining. It is also an opportunity for universities to demonstrate that they are responsive to the contexts in which they are embedded, are interconnected with society and are alive to their critical role of contributing to the well-being and advancement of South Africa, Africa and the world, by pursuing research that makes a positive impact on areas of great societal need.

The pandemic has also emphasised the value of collaboration and partnership: international collaboration, transdisciplinary collaboration, inter-university collaboration and collaboration between universities, government, industry, business and communities. Collaboration is not antithetical to competitiveness, institutional autonomy or differentiation. It is essential for post-pandemic reconstruction, research excellence (as demonstrated by ongoing collaborative research to understand and defeat the virus), pedagogical innovations, effective responsiveness to the various disruptive trends impacting higher education and communities and navigating the complex, ever-evolving and, at times, contradictory relationship between higher education and its key publics.

The concept of ‘public good’ has become a key lexicon in contemporary higher education debates. Arguments about higher education for the, and as a, public good make reference to the role of higher education in enabling lives of dignity and purpose, achieving dimensions that are central to creating a just and humane society, and the fulfilment of human beings and their communities (Leibowitz, 2012; Locatelli; 2018). The loss of jobs and general workplace insecurity and closure of universities, amongst other COVID-19-related developments, is a strong reminder of the crucial role of higher education to society, communities and individual lives. When universities closed, many students had to leave their campus residences. These residences are essentially home to especially indigent students and students from unstable family environments. For many students, campus facilities are their primary sources of meals, health care and support services, including academic and mental health counselling. Campus life generally provides experiences that support students’ academic commitments. Universities are thus called upon to strengthen their commitment to serve the public good; act as a bulwark against inequality by expanding access and eliminating differential success and graduation rates based on race, gender and class, and supporting post-COVID reconstruction by, amongst others, expanding opportunities for skills development and lifelong learning.

Universities, however, should be supported to strengthen their public good commitments. As discussed in previous sections, state funding of universities has not kept pace with both enrolment growth and the rising costs of higher education. The financial outlook of universities is generally negative and has been made worse by COVID-19. At the same time, family incomes, public funding, tuition fees and income from non-governmental sources are expected to fall. This reality will weaken universities and undermine their public good role. Inequalities in access and retention are likely to increase, affecting mostly students from marginalised communities.
This context calls for a re-investment in higher education and justifies the need for stimulus funding for universities, without which some universities may face an existential threat. It is probably unrealistic for universities to bet on a stimulus package given the country’s weak economy, tight fiscal constraints and the increasingly unsustainable debt burden. Given this context, there is a need to explore other options.

The main finding of the Presidential Commission of Inquiry into Higher Education and Training (also referred to as the Fees Commission), which was established in January 2016 and completed its work in mid-2017 was that: "... [T]here is insufficient financial capacity in the state to provide totally free higher education and training to all who are unable to finance their own education, let alone to all students, whether in need or not...". Nevertheless, the government implemented fee-free education for students from poor and working class families beginning 2018. The National Student Financial Aid Scheme (NSFAS), which hitherto provided bursaries and income-contingent loans, became a bursary scheme for students from families with an annual income under R 350 000. It is estimated that about 90% of university students are eligible for fee-free higher education (World Bank, 2019). Several analyses have shown that fee-free higher education will result in unsustainable pressures on the country’s public finances, especially as enrolments grow. A report by the World Bank (2019) shows that fee-free higher education will result in funding for higher education to increase from 1.3% of GDP in 2017/2018 to 2.3% in 2021/22.

The high levels of inequality in the country and the high number of students from poor and working class families call for a student funding model that does not create an affordability crisis, both for students and the state (public finances). It is probably an opportune moment to revisit the recommendations of the Presidential Commission of Inquiry into Higher Education and Training and revamp the financing of higher education to guarantee access, affordability and sustainability.

**Remediing historical disadvantage**

Before the demise of apartheid in 1994, South Africa’s higher education landscape was characterised by institutions which were differentiated along the lines of race and ethnicity. These institutions, usually referred to as historically advantaged (white) institutions (HAIs) and historically disadvantaged (black) institutions (HDIs), were profoundly shaped by apartheid planning and by the respective functions assigned to them in relation to the reproduction of the apartheid social order (Badat, 2004, CHE, 2004). In terms of this differentiation, HAIs were advantaged relative to HDIs (University of Fort Hare, Limpopo, Venda, Western Cape, Zululand, Walter Sisulu University, Mangosuthu University of Technology and Sefako Makgatho Health Sciences University) with regards to financial resources that were made available to each institution. Against this context, the post-1994 higher education landscape can be characterised as a collection of broadly two sets of universities: relatively well-resourced universities that are located mainly in major urban areas and under-resourced universities located in marginalised areas, in other words, a ‘system’ of entrenched historical inequalities. The majority of HDIs remain underdeveloped relative to HAUs and continue to experience financial difficulties.

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The Report of the Ministerial Committee for the Review of the Funding of Universities (DHET, 2013) provides a detailed account of the challenges faced by HDIs. These include, a history of underfunding, location in isolated and poor rural areas, poor state of financial health, a general lack of physical infrastructure, laboratories, lecture theatres, libraries and student housing, and governance challenges. The location of these institutions in marginalised areas has a number of implications, amongst them, higher costs of procuring supplies and services, insufficient and unreliable municipal services and constrains possibilities for generating third stream income. Some of these challenges also apply, to various extents, to institutions that were merged with an HDI or incorporated an HDI campus. These institutions essentially have historically disadvantaged campuses. The unique needs of these campuses pose a number of challenges with a bearing on sustainability.

It is critical that the funding of universities addresses the plight of HDIs to ensure that they provide an excellent education to the many students from disadvantaged socio-economic backgrounds who attend these institutions. The Ministerial Committee referred to above made several useful recommendations for addressing the financial challenges confronting HDIs, some of which, for example, the introduction of an HDI Development Grant, are being implemented. However, funding is only a necessary but not sufficient requirement for resolving the challenges confronting HDIs. There are many lessons that can be learned from international experience regarding enhancing the quality and sustainability of universities located in peripheral areas, inter alia, land grant universities in the United States of America (USA), civic universities in Germany and England and successful regional universities in various parts of the world.

From emergency remote learning to the promise of online education and blended learning

After it became clear that universities would remain closed for an extended period of time following the declaration of a national state of emergency and a lockdown model consisting of different risk levels, universities had no option but to make plans for the continuation of academic programmes through emergency remote learning. Given that the majority of South Africa’s 26 public universities are contact institutions, many of them do not have established capabilities for online education, the preferred model for emergency remote learning. The country’s only dedicated distance education university – University of South Africa (UNISA) – has not fared better either. A common lamentation by many universities concerned the absence of an effective model in the country against which they could fashion their online provisioning. However, some universities have been developing or experimenting with a hybrid or blended learning model whereby contact sessions in traditional lectures, seminars, laboratories and practicals are supplemented with online learning platforms, in which additional activities, notes and other learning resources are provided online. This model has served these institutions well with the transition to emergency remote learning.

The migration to emergency remote learning has sharpened existing socio-economic fault lines in South Africa’s higher education and society at large, mainly due to existing differential institutional resources in the sector and students’ socio-economic circumstances which hamper their experience of the benefits of online education. A number of universities are struggling with this transition mainly due to lack of the requisite information technology infrastructure, inadequate expertise for online pedagogies and inability to provide computers and data to their students.
students. The historical resource differentials in the sector have significant implications: they accentuate existing equity challenges, impair the ability of under-resourced universities to provide excellent education and undermine their public good role. These challenges have festered over time and the need for the sector and government to fashion interventions to mitigate this situation cannot be overemphasised. There is a real possibility that some institutions will be permanently left behind.

**Blended learning**

Notwithstanding the challenges with the migration to emergency remote teaching and learning, there is room for a hybrid or blended education strategy that is aligned with the South African reality. The idea is not to pursue online education as an alternative to contact higher education or as an antidote to the sector’s resource challenges, but to optimise the affordances of multiple delivery modes. COVID-19 has thus presented an opportunity for the sector to build on the current momentum and develop online education further, embrace it as a delivery mode (quality is not intrinsically linked to the delivery mode. What is required is a pedagogy that leads to excellence) and utilise it to expand access as envisaged by the National Development Plan (NDP) and the White Paper for Post-School Education and Training, which set an enrolment target of 1.6 million for South African universities by 2030, and make higher education affordable for many South Africans.

In addition, the hybrid or blended model with a well-developed online dimension provides opportunities for South Africa to tap into the burgeoning re-skilling and life-long learning markets, and enhance its international footprint. The impact of the pandemic on international student mobility will likely be pronounced and protracted. There are many uncertainties regarding, for example, the return of students from their home countries after the pandemic, the possible imposition of exacting travel and visa regulations that may negatively affect free travel of people and extended border closures and travel restrictions that some countries have implemented in response to the pandemic. The high cost of international education in the major recipient countries (for example USA, Australia and Britain), in the context of the economic devastation wrought by the pandemic, may cause price-sensitive students to explore high quality and affordable alternatives such as those offered by South Africa.

We propose a hybrid or blended teaching and learning strategy that is underpinned by differentiation whereby institutions build their strategy around their existing institutional strengths. Patterns of differentiation in higher education are shaped by expansion (including expansion in the number of higher education providers, in this case online education providers), the need to provide access to diverse student populations, the need for institutions to perform functions in their areas of strength so as to engender excellence and the need to optimise resources. Perhaps the most important driver of differentiation is the need to address heterogeneous societal needs such as providing access to different kinds of students and production of a wide range of skills. In this scenario, all the 25 contact universities would remain predominantly contact, but may offer some programmes, for example, postgraduate professional programmes, through online platforms.

All universities should consider adopting and scaling up blended learning because of its quality enhancing potential, expansion of access and other benefits related to managing costs. The various blended learning models – rotation, flipped classroom
and flex – provide multiple possibilities for innovation. For example, the rotation model where students alternate between contact classes and online learning could lead to cost reduction, especially for commuter students and also reduce demand for university accommodation. The flex model, where the majority of instruction takes place online with contact sessions as needed, is ideal for working students who can only study on a part-time basis with contact sessions being organised in block sessions. The various blended learning models have implications for tuition fees and subsidy. The funding framework, however, provides wide latitude for universities to adopt various blended learning models. For subsidy purposes, a contact programme (undergraduate programmes and honours) can have up to 70% of its credits derived from non-contact face-to-face sessions.

As mentioned earlier, the transition to remote emergency online teaching and learning has revealed infrastructure shortfalls and other challenges. We argue that addressing these infrastructure challenges – access to digital devices, stable and reliable access to internet connectivity, access to and affordability of mobile data bundles - requires a sector-wide strategy, as opposed to fragmented, individual, institutional interventions. An important strategy in this regard should include the development of a clear national strategy for hybrid or blended education and the mobilisation of a collaborative tripartite effort involving telecommunications companies, relevant government entities and universities to develop the requisite infrastructure that can be used by all universities and ensure affordable access to the internet by universities and other educational institutions. Another area of collaboration is the development of teaching and learning materials within the broader context of the Open Education Resource (OER) movement.

Similarly, there is a need for a sector-wide strategy on the development of the new generation of digital technologies such as cloud computing, machine learning, virtual reality and augmented reality. Through these technologies, immersive and personalised education can be provided online at scale. These will not only improve the student experience, quality of education and the online experience, but also lower the costs of higher education provision. Related is the use of virtual reality technologies to develop virtual laboratories, which can be shared by various universities. These technologies are cost-effective compared to the development of physical laboratories; they eliminate space constraints and can be used to complement existing physical laboratories or as stand-alones. Virtual laboratories are even more appropriate for ensuring research continuity during disruptions such as those occasioned by the COVID-19 pandemic.

**Collaborative alliances**

Collaborative alliances are inter-organisational dependencies. Their formation is a strategy that organisations use to cope with the turbulence and complexity of their environments. Collaborative alliances are usually employed in situations where unilateral organisational action may not fix the problem or will not yield optimal returns (Gray & Wood, 1991). Collaborative alliances have several advantages, including gaining access to new markets, sharing of research and development, learning new skills, bolstering capacity and long-term sustainability.

Examples of collaborative alliances in South Africa’s higher education include the South African Technology Network (SATN)/Technological HE Network South Africa (THENSA), the Cape Higher Education Consortium (CHEC), Tertiary Education and Research Network of South Africa (TENET),
Gauteng Research Triangle and partnerships which a number of universities have with Higher Ed Partners South Africa (HEPSA), an online programme manager (OPM), which universities have contracted with to manage their online programmes. The company markets these programmes and recruits students for universities in return for a share of the tuition fees paid by students. The partnerships with HEPSA show that the scope for collaborative alliances is broad. However, the idea of a private company sharing a portion of the tuition fees paid by students, while being responsible for student recruitment, might be viewed as problematic. Given the incentive to maximise earnings by recruiting many students, there is a possibility that the company’s recruiters may misrepresent programmes to entice many students to enrol. Universities, therefore, have to guard against developing dependencies that permit private, for-profit entities to wield any influence on academic decisions or compromise the integrity of academic programmes.

Related to collaborative alliances are shared services. All universities run a number of business functions which are critical for their operational efficiency. These activities are generally identical across all the universities. Many of them do no accrue any distinctiveness or special advantage to individual universities. These activities are expensive and can draw resources away from the core academic focus of universities. There is considerable scope for shared services (for example IT services) across the higher education sector in South Africa, at the system level, between institutions within close proximity, within institutions and with third parties, to control costs, access scarce expertise and advanced technology, and gain benefits of scale.

A number of academic programmes offered by universities can be described as unsustainable. Enrolments in these programmes have declined and neither can their postgraduate and research programmes be described as robust. Several, similar, unsustainable programmes can be found across various universities, some of which are in close proximity. Whilst universities are autonomous and operate in a competitive environment, the possibility of voluntarily merging these programmes, building scale and turning them into centres of excellence, is worth considering. The challenge of unsustainable programmes can also be approached in the context of differentiation where universities focus on their strengths instead of spreading themselves thin, especially in fields in which they cannot claim excellence.

**Dynamic institutional capabilities**

As mentioned in the introduction section, universities are experiencing dramatic changes in their external environment. These changes are compounded by equally complex internal challenges, amongst them, obsolete organisational structures, lack of skilled personnel, violent student protests, aggressive trade unions, unsustainable demands for salary increases and increasing penetration of party politics into student politics and trade unions, often leading to party rivalries on university campuses, with the potential to cause instability. In this context, for universities to survive, thrive, remain sustainable and maintain a competitive edge, they have to adapt themselves rather rapidly and flexibly. To this end, continuous innovation, resources and key institutional capabilities are necessary. In other words, as pointed out by Navarro & Gallardo (2003), when universities are in circumstances of vulnerability, when the environment is undergoing rapid changes; they must have corresponding capabilities in order to remain as effective organisations. Capacity is the very essence of strategy.
Strong dynamic institutional capabilities are key enablers of adaptive and successful institutional responses when inflection points emerge. Organisations that possess strong dynamic capabilities are characterised by, amongst others, robust organisational designs, highly effective and entrepreneurial management teams, capacity to sense ‘unknown futures’ and innovate and adapt to change (Teece, Peteraf & Leih, 2016). Dynamic capabilities are important for setting priorities and enabling coherence between strategy, structure and the broader organisational environment; they enable organisational change, consistent with evolving economic, social and technological environments. One of the defining features of the higher education sector in South Africa is marked differentials in institutional capabilities. This unevenness is a feature of the unresolved inequalities between institutions arising from the country’s apartheid legacy and unresolved challenges post-1994. Seven universities have been placed under administration since 2011. Inadequate institutional capabilities, coupled with limited resource support, are a recipe for institutional dysfunction.

Effective institutional leadership is a critical underpinning of organisational transformation and stability, effective responsiveness to dramatic changes, accountability, institutional efficiency and sustainability. Clark (1998) identifies institutional leadership, which he characterises as strengthened steering core, as one of the critical pathways for becoming an entrepreneurial university. Individual university leaders, their leadership acumen and their relationship with the groups that they lead and governance structures, matter. So are organisational structures and processes and the competencies of individuals who manage various functions. They influence the success of the organisation, its stability, agency and accountability. South African universities have experienced leadership challenges which have manifested at various institutions in multiple ways, amongst them, misuse of funds, mismanagement, corruption and other unethical practices. These leadership challenges are documented in reports of independent assessors and administrators and also in forensic reports.
**Recommendations for USAf**

The resource challenges confronting South African universities are unprecedented. Whilst universities have to respond to these challenges in the context of their specific circumstances, the overarching nature of the challenges call for sector-wide strategies to, amongst others, explore the various ways in which universities can respond effectively both individually and collectively as a sector. To this end we make the following proposals for USAf to consider:

(a) Commission a study to quantify the financial impact of COVID-19 on universities and, broadly, their financial sustainability.

(b) Following the study in (a) above, USAf should develop a proposal for stimulus funding for universities to reduce the impact of COVID-19 and also develop proposals for long-term interventions to the financial challenges experienced by historically disadvantaged universities. The proposal should form the basis of engagement with DHET and Treasury.

(c) Investigate the development of new income streams and facilitative ecosystems to support them.

(d) Develop a discussion paper on the future of higher education in South Africa.

(e) Establish a task team on the future of the various modes of teaching and learning beyond the current pre-COVID-19 contact mode.

(f) Explore the establishment of a national shared services platform to serve the higher education sector.

The following are some principles or propositions that should underpin a re-imagined higher education sector:

1. Public higher education should advance the public good and contribute to re-imagining a new society and its sustainability.

2. A re-imagined higher education system should be responsive to the diverse and multiple needs of the economy and society and tackle the technological, environmental and social disruptions of the 21st century.

3. Historical legacies and current inequities and inequalities in the higher education sector should be eradicated to level the playing field and create a genuine higher education system with differentiated institutions.

4. A re-imagined higher education system should be underpinned by a funding regime that guarantees affordability, engenders teaching and research excellence, supports excellent infrastructure, and addresses historical institutional inequalities and sustainability.

5. A higher education system that significantly reduces and ultimately eliminates differential student success and graduation rates based on race, gender, class and other critical variables.

6. A re-imagined higher education system that is articulated with training and vocational colleges to enable life-long learning and democratisation of access to higher education.
7. A public higher education system that guarantees equitable access, delivery of transformed curricula, embraces blended learning methodologies, promotes the mental health and well-being of students and staff, and provides excellent integrated services to students over the full student lifecycle.

8. A public higher education system that is characterised by a vibrant research and innovation system that generates high quality and impactful knowledge and is responsive to local, regional, national, continental and global challenges.

9. A re-imagined higher education system should pursue substantive transformation strategies that lead to demographic diversity and new institutional cultures co-created to address toxic cultures including, but not limited to, all forms of gender-based violence, racism and sexism.

10. A re-imagined higher education system should promote partnerships and collaborations, within the system, across the continent and globally, that are mutually beneficial and change/disrupt current relationships that largely privilege the interests of the Global North.

11. A re-imagined higher education system should enable the mobility of students across the continent and attract international students globally.

This paper was presented by Professor Gerald Wangenge-Ouma, Director: Institutional Planning at the University of Pretoria, and Professor Tawana Kupe, Vice-Chancellor and Principal of the University of Pretoria, at a Special Meeting of the USAf Board on 24 July 2020.

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