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## **SEMINAL STUDY DEVISES EQUITY INDEX TO MEASURE THE PACE OF TRANSFORMATION IN SOUTH AFRICAN UNIVERSITIES**

Researchers from the University of KwaZulu-Natal in Durban South Africa have achieved an important breakthrough to measure equity and the connection of equity to high-level knowledge production of transformation at South African universities. Using the Euclidean distance formula, they devised an "Equity Index" and applied it to measure transformation in universities in the country.

For the first time, a new and innovative quantitative measure of transformation has been devised to complement the many qualitative, descriptive measures. Results of the seminal study, "Unpacking the effectiveness of transformation for South African universities", will be presented on 23 October 2013 at a parliamentary Portfolio Committee, shows that the pace of transformation in universities is not only 'far from ideal' but also that the 'university sector still has a long way to go in resolving the twin challenges of equity and high-level knowledge production transformation in South African universities.

The landmark study has significant contributions to guide, monitor and drive the overall transformation in this sector. The findings of the study are indeed quite revealing and statistically significant. This "Equity Index" should play a major role in the new Education White Paper, the six-year enrolment plan, the new funding framework based on funding equity-weighted research productivity, and monitoring graduate throughput rates, and staff and student profiles, say the researchers. Indeed, each university (or, in fact, any organization/company) can now set its own equity targets that can be monitored in a unified, comparative and transparent manner publicly. 'The advantage of this formula is that it is a simple and objective means of determining the equity profile of an organisation. More importantly, it punishes over-representation and under-representation of any group, thus forcing organisations to properly plan their equity targets.'

The study examined the demographic profile (race and gender) of the 23 universities in South Africa. The Equity Index measured the distance between organizational demographics and national demographics and the period, unique to each institution, to attain ideal and complete transformation. Researchers analysed the demographic profiles of students and staff based on the audited 2011 HEMIS data. The researchers also studied the Equity Indices of Senates and Councils in 20 universities in South Africa. The distance formula was used to calculate over 230 Equity Indices within the university sector. None of these Indices fell within the required tolerance of being within 5% of the national benchmarks! When the research of the institutions was weighted via equity, four groups of universities emerged: those with good equity indices and poor research productivity; those with poor equity indices and poor research productivity; those with poor equity indices and good research productivity; and, those with good equity indices and good research productivity.

The study shows that the previously advantaged institutions in South Africa, like Stellenbosch and UCT have poor equity indices; however, these universities score well as high-level knowledge producers. On the other hand, the universities of technology and some former disadvantaged institutions produce little research but have a good equity profile. It is argued that these poor knowledge producers, need to be treated differently, i.e., set them different high-level knowledge production targets or advise them to pursue different missions that add value to students and the sector in order to contribute to high-level knowledge production nationally (and hence national development); currently they do not. The researchers further noted that 'It does not help that these institutions take in the 'disadvantaged' and then do not add value to their skills and certification. Government must clearly act in this setting of human and talent wastage in the interest of society.

The study was conducted by applied mathematician, Professor Kesh Govinder who heads the School of Mathematics, Statistics and Computer Science at UKZN, Ms Nombuso Zondo, a master's student at UKZN and Professor Malegapuru Makgoba, Vice-Chancellor (UKZN) and Chairperson of the Ministerial Transformation Oversight Committee. "Until now, there has been no simple, unbiased, means of assessing individual institutions or holding institutions accountable for their democratic transformation. Our Equity Index provides an objective, and measurable, instrument to achieve these ends. Importantly, policy makers can now use this as a tool to steer the sector. The simplicity of the measure means that even a layperson can follow progress of Equity in a transparent and objective way," write the researchers in their major research paper to be published in the academic journal, the *South African Journal of Science* followed by an article in *THE* (UK) that will be published on 24 October 2013. Making reference to two national transformation-driving policy documents – the Education White Paper 3 (1997) and the Employment Equity Act the researchers commented that "it is remarkable that one simple numerical index can positively impact two pivotal national policy documents." The research also speaks directly to the equity aims of the Constitution of South Africa.

Since South Africa's democratic dispensation in 1994, an estimated R236 billion has been invested in higher education. This is indeed laudable. However, say the researchers, 'the equity returns need to be interrogated'. The study shows that it is 'difficult to transform "privilege", especially entrenched white "privilege" voluntarily and suggests that extraordinary measures are needed'. While the published study produced a snapshot of the current status of transformation in universities, subsequent analyses revealed the actual pace of transformation. The statistics produced paint a dismal picture of the 'painfully' and unacceptable 'slow rate of transformation'. The study reveals that it will take 43 years to transform the overall staff profile to represent national demographics and 40 years to transform the instructional/research staff profile in the sector. Many questions remain as to why progress has been lethargic. The researchers point out that 'the much-lauded autonomy afforded to this sector has clearly not been used to transform itself'.

The studies show that South Africa's higher education institutions have a long path to travel to embrace the country's demographic profile. For example the study has found that it will take decades for the top five research-led universities to reach an equity index of zero. To attain a zero index, in other words, to become a transformed

institution that reflects the demographics of SA, with respect to graduates and overall staff, it will take these universities up to 382 years! The breakdown is as follows (graduates; staff): UCT (50; 382) UKZN (12; 46); UP (30; 50); US (226; 261) and Wits (21; 41).

A comparison of the student enrolment figures versus graduation statistics is quite stark. It is evident from the study that many institutions have 'used the revolving door' tactic for some race groups, as graduation statistics do not reflect the enrolment figures 'Of particular concern is the efficiency of the sector in producing graduates in line with the equity profile of the enrolled students. The equity efficiency index clearly indicates that this is an area of great national concern', observed the researchers.

As the only merged institution in the top five, UKZN scores highly in its Senate (the highest academic decision-making body) profile (5<sup>th</sup> in the country) and Council (the custodians of governance, strategy and transformation) profile (1<sup>st</sup> in the country). It is also the top ranked university in the country with regards to equity-weighted research productivity reflecting its achievement of transformation with (and through) quality. Taking size into account, the University of Fort Hare comes out tops followed by UKZN and UWC. Several universities have also showed that Equity and High-level Knowledge production can be connected through quality during transformation.

## **SIGNIFICANT FINDINGS OF THE RESEARCH**

1. EIs can be objectively measured using the distance formula, within a variety of categories in the 23 universities.
2. Every institution analysed has a challenge with respect to some EI.
3. Student EIs are much better (lower) than staff EIs across all but six of the 23 universities.
4. High-level knowledge production and equity can be connected during transformation through quality.
5. The EI is the first quantitative measure that can be incorporated into an analysis of transformation.
6. The EI adds a new and improved dimension to the profile and differentiation of the South African higher education landscape.
7. The EI complies with and addresses two crucial nationally-derived policy documents in the development and transformation of South Africa: The six equity related goals in the Education White Paper 3, the Employment Equity Act (55/1998).

## **THE SIGNIFICANCE AND IMPLICATIONS OF THE FINDINGS?**

1. The EI is an important policy tool to measure and drive equity, high-level knowledge production, development and differentiation in universities.
2. The EI is a quantitative measure to determine equity profiles on an institutional basis and therefore allows comparison;

3. Our EI uses the idea of distance between two points – the institution's demographics and the national demographics (the benchmark);
4. The Index may become a useful universal measurement of transformation in higher education and other systems globally.
5. The findings show that no university in South Africa has reached the ideal Overall equity Index of zero or falls within a 5% tolerance of the national demographic data.
6. The finding that some universities have good equity while remaining high-level knowledge producers provides lessons and examples in the equity-quality tension.
7. The study has added a new dimension to differentiation, that of equity through quality.
8. The study provides a fresh look to support goals of the Constitution, Education White Paper 3 and Employment Equity Legislation.

As the **Way Forward** the researchers proposed the following five critical recommendations that they say should **be implemented immediately**.

- The current 6-year Enrollment planning must address Equity in Enrollment and Graduation;
- The planning for Instruction/Research staff over this cycle must also address Equity;
- Each institution must set realistic targets for high-level knowledge production linked to Equity against which it shall be measured;
- 20% of each institution's block grant must be reprioritised to address Equity transformation i.e. there is no cheap or 'mahala' transformation;
- Annual progress must be reported to DHET and be monitored through the Transformation Oversight Committee reporting to the Portfolio Committee.

Furthermore, they advise that the Minister must use the new Funding Framework and the White Paper to ensure that Equity Transformation is properly funded and achievable within the framework of the National Development Plan, i.e. by 2030.

Commenting on the study Professor Malegapuru Makgoba said: "This index has finally brought an equity dimension to existing indicators in the university sector. While the EI is not a silver bullet for transformation it has the potential to shape the future for this sector profoundly, and indeed, many other sectors in the country. It is important to recognise that same distance away from the ideal does not imply identity or identical paths to travel to reach the ideal destination'."

## **CHRONOLOGY OF CONSULTATION**

1. Early results and methodology were reported to the Hesa Transformation Manager's Forum Workshop on 7<sup>th</sup> May 2013 at UFS;
2. The full results of the research were presented to and discussed by the triple Management Meeting of DHET, 11<sup>th</sup> July 2013;
3. The results and new findings were reported and discussed with the Higher Education Branch of DHET, 12<sup>th</sup> August 2013;

4. The report was presented to key stakeholders (70) where it was debated, discussed and finally accepted on 29<sup>th</sup> August 2013;
5. A Commentary on the Methodology was published in the SAJS vol.109 (number 5/6) (May/June 2013) 6-7, 2013 and distributed to all VCs through Hesa;
6. The major research paper underpinning the report was submitted and peer reviewed and accepted for publication by the SAJS;
7. The research and report are fully endorsed by the Transformation Oversight Committee.

## **ENDS**

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