

6<sup>th</sup> International Conference on Competitive Manufacturing (COMA'16)  
Organised by the Department of Industrial Engineering, Stellenbosch University  
Theme: "Resource Efficiency for Global Competitiveness"  
Stellenbosch Institute for Advanced Study, 08:50, 27 January 2016  
**Welcoming remarks by SU Rector and Vice-Chancellor Prof Wim de Villiers**

Thank you, Prof [Eugene] Cloete [Vice-Rector: Research, Innovation and Postgraduate Studies, chair of the opening session]. Good morning, everyone. Distinguished guests:

- Colleagues from universities both local and abroad
- Representatives of government and industry
- Conference organisers, ladies & gentlemen ...

... it gives me great pleasure to welcome all of you to Stellenbosch for COMA'16, the International Conference on Competitive Manufacturing. This conference is an important event. Gathered here are leading scholars and practitioners in manufacturing and related fields, and policymakers in the public sector. It's an opportunity to catch up with recent developments, research results and industrial experience related to the improvement of competitiveness in the field of manufacturing.

So the discussions you have here matters. The theme of this conference is certainly most relevant: "Resource Efficiency for Global Competitiveness". This conference comes at a time of all kinds of pressures in the world economy – with the slowdown in China, the drop in the oil price, the carnage in emerging markets as investors withdraw, etc.

In this context, competitiveness becomes most important. With it, companies and countries flourish. Without it, they are bound to struggle.

Where does South Africa stand in terms of competitiveness? At No. 49 out of 140 economies evaluated by the World Economic Forum (WEF) in its Global Competitiveness Report 2016-2016<sup>1</sup>. So, not very good, really.

The WEF looks at 12 factors in their evaluation: from infrastructure and the labour market to innovation and technological readiness, and so forth. I will restrict myself to one of the factors considered crucial to competitiveness, and that is higher education and training. It is the foundation of everything. Without education and training, there is little – or only very slow – progress in any sector.

The WEF places South Africa at No. 49 out of 140 economies overall, but in terms of higher education and training, we come in at No. 83 – which is even worse. When you go into what makes up our score, it starts to get really interesting. Again, a range of factors are considered.

The aspect in which we do best, is our secondary school enrolment rate – 12<sup>th</sup> out of 140 countries. So, potentially lots of human resources coming into the system. But as we see when with the matric results each year, it's more complicated than that. Of the candidates who sat the exams last year, 70.7% passed – but the "real pass rate" is actually only 36% if one looks at the huge dropout of learners who enrol in Grade 1 but never make it to Grade 12. Not very efficient, to bring it back to the Conference theme.

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<sup>1</sup> <http://reports.weforum.org/global-competitiveness-report-2015-2016/>

Why this atrocious performance? Some of the WEF's other factors provide a clue. We come 119<sup>th</sup> out of 140 countries in terms of internet access in schools, 120<sup>th</sup> for overall quality of education, and stone dead last (140<sup>th</sup>) in terms of maths and science education.

One light point is the extent of staff training – where we come 19<sup>th</sup> out of 140 economies. That's the extent to which companies invest in training and employee development. But then again, they have to, because the people they employ don't arrive well equipped with the necessary knowledge and skills due to the problems in the education system.

So, that's something we have to get right as a country if we want improve our competitiveness – education and training.

At university level, we have a mixed bag. There are huge disparities in the system, with some institutions performing well, and others not at all. I am glad to count Stellenbosch University among the former. In the 2016 Times Higher Education ranking of universities in BRICS countries and Emerging Economies, we are now 11<sup>th</sup> out of 200 universities in 48 countries.

It is a priority for us to maintain and expand this level of excellence – not only at this institution, but to collaborate with others to improve higher education nationally in South Africa.

What are the prospects? Let's be frank ... there are dark clouds looming. In a very real sense we are facing the "perfect storm". A university education is seen as a way out of poverty – which is true if one looks at the figures that show how your chances of getting a good job improves with education. At the same time, youth unemployment is sky-high at 63% as opposed to 25% of the population overall. So there is a huge clamour to get into university, but there are only so many places, and of course funding is the big issue – as we have seen with the nationwide #FeesMustFall student protests.

We support the ideal of affordable higher education for all – and free, subsidised education for the poor – but for the time being, all universities are still reliant on student fees to cover some of their costs. South Africa is not Germany, which has the economic muscle to offer free undergraduate studies at public universities. But then again, it is also true that our spending on higher education as a percentage of GDP is less than 1%, which is considerably lower than the norm. And, of course, there is lots of wastage in our public expenditure that can be reprioritised. Hopefully the Presidential Commission of Inquiry into Higher Education Funding will come up with workable solutions.

What we cannot afford, is for our universities to be harmed as institutions in the drive for free education. We must work together to find solutions.

On that note, ladies and gentlemen, welcome again. May you have a good conference, may there be many fruitful collaborations arising out of this meeting, and I hope you will take the opportunity to experience some of what our town and region and country has to offer visitors.

Thank you.