

CHAPTER

The Role of Universities in Regional Development

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INTRODUCTION

In addition to the classic functions of research and teaching, universities worldwide are fulfilling additional functions within their communities. This activity is generally described as the so-called “third mission” of the university and reflects the transfer of knowledge through various forms of community engagement with a wide range of stakeholders.

The perspectives gained from working in the university and industry environment in Europe, the USA and Africa have sensitized me to the different approaches universities take in the global North and global South towards fulfilling their third mission. Amongst others, these approaches differ with respect to the stakeholders involved, as well as the respective impact on the curriculum and the research agenda.

This paper reflects on the differences in approach with respect to the third mission of universities in the global South and global North, and describes the advantages, benefits and risks for the universities and the associated stakeholders.

The terms often used so loosely — the Global South and by implication also the Global North — do not exclusively refer to location. They also relate to the broader context and history in which the particular academic institution is embedded.

In the Global South — characterized by a high birth rate — the demographic structure results in an enormous demand for higher education. Many students are disadvantaged by the structural legacy of the historically inequitable education system and hence face academic as well as financial barriers to higher education. The unfavourable staff-to-student ratio, the uncertain

academic career prospects and the general resourcing situation are, in general, not conducive to a vibrant, sustainable research environment. On average, for example, around 40% of South African university academics have a PhD qualification (Dell, 2010, p. 1). Student and staff mobility is in general restricted to incoming mobility. Despite this situation, there is an omnipresent consensus on the value and transformative power of education. University research in the global South is quite heterogeneous, as it needs to respond to the needs of a far broader set of stakeholders who do not have access to a sophisticated, differentiated research infrastructure.

The Global North, on the other hand, is characterized by an inverse demographic structure resulting from declining birth rates. In certain areas of Europe for instance, it is postulated that the student population will decline by 20% within the next 10 years (Sächsisches Staatsministerium für Wissenschaft und Kunst, personal communication, 9 April 2013). The education system of the Global North provides broad access to university education with student and staff mobility (at least theoretically) encouraged by the Bologna system and by targeted funding. In the Global North, university research tends to be focussed on basic, fundamental issues, with applied research being conducted in state research institutions and the industry.

Thus the Global South and the Global North differ fundamentally in their state of development, their demographic structure and the resulting demand for by higher education, the level of preparedness of the students, the mobility of students and staff, the resourcing of the institutions and the respective research foci — basic versus applied.

The Global South, in most cases, has an additional historic legacy of colonialism with consequences that still persist. The disempowerment and social dislocation resulting from colonialism, as well as the inability to respond to rapid, unexpected and unexplained change, are still very relevant in our contemporary world!

THE EVOLVING MISSION OF UNIVERSITIES

In addition to the classic functions of research and teaching, universities worldwide are increasingly fulfilling additional functions within their communities. This enhancing of the classical functions is described as the so-called third mission of the university (Laredo, 2007, p. 1 of 11).

In the broadest generic sense, the third mission encompasses the interrelationship between a university and its non-academic partners. Ideally, it should encompass more than the transfer of knowledge towards economic actors through patents, licences and spin-off companies. The complexity of the stakeholder involvement reflects the richness of the inter-linkage of the university with a society at large.

Universities are called upon to provide the knowledge and the appropriate responses for communities that are successively exposed to rapid, unexpected changes. Our communities are faced with globalization, climate change, economic uncertainty and rapid, disruptive technological advancement. In these circumstances, universities can empower communities to respond to these challenges.

In the light of these rapid societal changes, universities — especially those in the Global South — have an enhanced responsibility to their local communities. Universities need to put the issue of individual human rights and concerns for the environment at the centre of their enquiries. Universities need to provide the necessary facts and arguments for the articulation of a critical, public academic voice through, for example, active participation in policy formulation. In those societies still plagued by inequity, the academics should be those who never cease to question and criticize and speak out against past and present systems of structural exclusion in society.

In order to effectively exercise the third mission, universities need to actively engage and enter into alliances with a number of stakeholders: These stakeholders include — but are not limited to — schools, community organizations, local and national authorities, non-government organizations, industry and commerce, the media and, of course, other institutions of tertiary learning. Such alliances should (1) aim at establishing mechanisms to articulate the knowledge generated at universities into action and societal change and (2) serve as a sounding board for establishing the relevance of the research and teaching activities of the institution.

Most importantly, though, the effective implementation of the third mission requires a fundamental change of the mind-set by members of the university community. It requires a broad academic commitment towards a better future, an attitude that seeks, through knowledge, to realize the horizon of new possibilities. In the words of the German theologian Eberhard Jüngel — “we should aim at imagining and prioritizing the possible over the contemporary reality.” (Jüngel, 2000). This can only be realized if the sceptical, logical truth-seeking mind of the researcher enters into an uncomfortable but essential alliance with the (utopian) vision of “a better life — a better society” as articulated by Ernst Bloch in his book *Das Prinzip Hoffnung* (Bloch, 1985). The basis and prerequisite are a firm grounding in excellent, basic scientific disciplines, as well as a creative imagination that seeks practical solutions beyond the classical disciplinary boundaries.

Third mission of universities in the Global North

In the global industrialized North, the third mission of the universities is in general focused mainly on knowledge transfer to industry partners. This is

enabled by the embodiment of knowledge graduates and PhD students, through codified knowledge produced by the University in the form of intellectual property such as patents, licences or copyright or through coproduction of knowledge via contract research with industry. These aspects of the third mission most often result in mutual benefit —industry benefits in the form of innovation and universities benefit from additional funding sources.

Further aspects of the third mission focus on entrepreneurship with the university and regional authorities providing the required incubator function for spin-off companies. Expertise from universities is also required in the process of the shaping and/or implementation of policy.

Involvement in social and cultural life is restricted to the urban domain in which the university is located and mostly focuses on involvement with museums, orchestras, sports facilities, libraries and schools. An important aspect of this activity is the dissemination of knowledge with the general public through contribution to the public understanding of science through lectures, laboratory demonstrations or open days.

In many cases universities still operate in isolation from their socioeconomic and political environment. Articulating the third mission in a meaningful way with the classical functions of teaching and research is a continual challenge and source of tension within the university. Here the particular challenge is to balance the involvement with industry (as a well-paying partner) and the community at large.

In a recent article in the *New Yorker*, this risk was illustrated by posing the provocative question: is Stanford still a university? The article explores what it calls the unhealthy synergy between Stanford University and Silicon Valley start-up companies and concludes that: "...it seems like all the myriad identities are being subsumed in process of cooperation. Students can still study Chaucer, and there are still lovely palm trees. But the centre of gravity at the university appears to have shifted. The school now looks like a giant tech incubator with a football team." (Thompson, 2013, p. 1)

The challenge remains to find a meaningful engagement that enriches the community and simultaneously rejuvenates the key functions of teaching and research of the institution.

Third mission of universities in the Global South

In the Global (postcolonial) South, university communities are in general in a position of privilege and are often still associated with historical systems of structural exclusion. Thus their isolation from their socioeconomic and political environment is exacerbated. This situation places an added dimension of pressure on the institutions to meaningfully engage with and change their communities.

One useful framework for structuring this engagement is the Millennium Development Goals of the United Nations.

In September 2000, the General Assembly of the United Nations adopted a document — 55/2 United Nations Millennium Declaration (2000) — that described eight global development goals to be reached by 2015. These goals have become known as the so-called Millennium Development Goals (MDGs) and can be summarized as follows:

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality rates
- Improve maternal health
- Combat HIV/AIDS, malaria, and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

The MDGs represent a significant, global anti-poverty push. Governments, international organizations and civil society groups around the world have helped to cut in half the world's extreme poverty rate. More girls have been enrolled in school. Fewer children are dying of preventable diseases. The world continues to fight killer diseases, such as malaria, tuberculosis and AIDS.

The visibility of universities or global university alliances actively engaging with issues such as hunger, access to education, improved sanitation, maternal health and gender equality as part of their third mission activity has been disappointing. Nevertheless, some individual universities in the Global South — Notably the University of Cape Town and the University of Stellenbosch in South Africa — have taken up the challenge of addressing the Millennium Development Goals as part of their third mission and as an integrated part of their research and teaching activities. These universities have positioned themselves to harness their expertise to assist in those aspects of the Millennium Development Goals where a contribution could be made.

Examples of third mission university initiatives in the Global South

Ukwanda Rural Clinical School of the University of Stellenbosch

The Ukwanda Rural Clinical School of the University of Stellenbosch (Stellenbosch, 2012) — illustrates how community engagement and stakeholder involvement were structured to achieve the optimal impact of the university activity in the community.

The activity supports the achievement of the following Millennium Development Goals: reducing child mortality rates, improving maternal health and combating infectious and other diseases.

Ukwanda is a Xhosa word that can be translated as “to grow” and “develop” within the community; to make a positive difference. In keeping with its name, the Ukwanda Centre for Rural Health, established in 2001, has, central to its vision, a commitment to train healthcare professionals with applicable knowledge and hands-on experience of the health issues facing rural and underserved communities in South Africa (Stellenbosch, 2012, online).

The philosophy of the Centre is based on the following principles:

- “Teach where the patients are” to ensure relevant exposure to the burden of disease and practical experience
- Enable immersion within the community for better service orientation and the specific social, legal and economic contextualization of health problems
- Establish partnerships at a local level with the community via NGOs, the local Municipality and the provincial Department of Health
- Catalyse research in the context of the complex rural social structures
- Support multi-professional learning (physicians, nurses, teachers, lawyers, agriculturalists) to foster interdisciplinary solutions
- Make use of IT solutions and MOOCs to overcome geographic distances
- Promote a community orientated approach/community engagement/sense of social responsibility for a defined population

Ukwanda pursues an “immersion model” where students are exposed to the realities of working/caring in a resource-limited environment. Students work within the existing health care system and not alongside it, to provide assistance and support to health care personnel, while gaining valuable “real-life” experience at the same time. Currently 970 undergraduate students rotate to rural towns for periods of 2-6 weeks per year. Students are currently from the disciplines of Human Nutrition, Physiotherapy, Occupational therapy, Speech, hearing and language therapy, as well as medicine (MB ChB). An extension of the program to involve students from the disciplines of Education, Law and Agriculture is being planned.

Students are exposed to the full spectrum of health care services provided at these sites including primary health care platforms such as: community health centres, primary care clinics, mobile clinics and home visits, NGO encounters, as well as private sector exposure. The extended plans include a one-year clinical rotation for final-year medical students and trainee specialists. On a postgraduate level, the school will allow for additional registrars (medical specialists) to be trained in the rural environment, as well as provide opportunities for research for Masters and doctoral students. The selection criteria for students will be expanded to include those of rural origin. Selected medical students will complete their final year in one of the five participating

district hospitals. This integrated training at district and regional level is a new approach for undergraduate students.

The Centre is a good example of how structured community engagement has had an impact on the curriculum and research agenda of the entire Health Sciences Faculty, and the impact is also noticeable in the activities of other faculties. In this case, the third mission has not only provided community benefits but has also had a positive influence on the development of the key focus areas of the university, namely that of teaching and research.

African Climate & Development Initiative of the University of Cape Town

With the institutional strategic initiative — African Climate and Development Initiative (ACDI) — the University of Cape Town (UCT) is focussing on the MDG of ensuring environmental sustainability.

The African Climate and Development Initiative (ACDI) has been established to facilitate, stimulate and coordinate partnerships and knowledge across disciplines on climate and development issues. With a strong African and Global South perspective, the ACDI's work is focused on research, teaching at post-graduate level, public awareness and close interaction with policy-makers, business and civil society. Its interdisciplinary focus provides a multi-layered perspective on climate change and development, bringing interdisciplinary breadth and specialist depth to problems and solutions through research partnerships, graduate and professional training and community engagement (University of Cape Town, 2013, online).

In addition to cross-university activities, the ACDI supports innovative research in partnership with government, business and civil society. For example, the Climate Change Think Tank is a partnership between ACDI, the African Centre for Cities and the City of Cape Town, where researchers work with the city to develop better understanding of key mitigation and adaptation issues facing the City of Cape Town, and to incorporate research insights into city policy. The Wild Coast Living Laboratory is an alliance between UCT, several other universities, Eastern Cape Parks and a local community that undertakes research and community education to address the issues of climate, development and conservation in community-owned nature reserves.

ACDI convenes a one-year coursework Masters in Climate Change and Development, which provides students with interdisciplinary training in climate change and sustainable development, with a specific focus on the issues of relevance to African development. The Masters course includes core modules in Climate Science, Energy, Development Economics and Adaptation, and optional courses across a spectrum of disciplines, including Business Sustainability, Biodiversity, Climate Prediction and Environmental Law. Many of these modules can also be taken as professional short courses, and a number

of summer and winter courses for practitioners are also offered. ACDI supports Masters and PhD research through the ACDI Graduate Network, a forum for students from different departments to interact across disciplinary boundaries to explore innovative approaches to their research.

The Initiative engages with civil society and NGOs to enhance public understanding of climate change and to inspire community engagement in solutions to climate change. For example, the UCT branch of Engineers without Borders and the Environmental and Process Systems Engineering Research Group have worked with the Abilimi urban garden scheme in Khayelitsha, near Cape Town, to install a bio-digester. The digester provides a complete waste cycle, with organic waste used to produce valuable manure and cooking gas, and acts to show the wider community how the technology can provide a sound and easily implementable renewable energy solution.

According to Professor Mark New, Pro-VC for Climate Change and Director of ACDI at the University, “much of what needs to be done in Africa on the climate issue is political and economic...it is important that the research community works to provide the best evidence, appropriate to the African situation, for political and economic decision-makers. There are exciting research and education challenges in climate and development in Africa — and a responsibility to take them on.”

CONCLUSION AND SUMMARY

This paper has described the challenges, tensions, risks and opportunities associated with the so-called “third mission” where universities move beyond their classical roles of teaching and research to actively engage with their socioeconomic and political environment.

It has been demonstrated that universities in the Global North preferentially engage with industrial stakeholders, while universities in the Global South extend their engagement beyond industrial stakeholders to address pressing social problems.

The risk has been identified that an asymmetric focus on industrial engagement may lead to a shift of the centre of gravity away from teaching and fundamental research and may result in the degradation of the university to an extended, externalized research facility for industry.

Two examples cited from Africa demonstrate how the university community is using its community engagement activities to involve a significant number of relevant stakeholders in addressing the developmental issues of the continent. Here universities are providing the knowledge and the appropriate responses for communities that are exposed to rapid, unexpected changes such as epidemics and the consequences of climate change. In addition to providing relevant technological and policy solutions, they are also using these

activities to develop the curriculum and establish new transdisciplinary fields of research.

In conclusion, it should be noted that the tension between the three missions of the university should be carefully managed and that a key criteria for the success and relevance of the third mission is the way in which it contributes to the development and renewal of the curriculum and the research agenda.

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