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The potential of the University of the Free State QwaQwa campus to enable growth of the economy of QwaQwa

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Abstract

This article explores how universities can contribute to the economy of the area within which they are situated, focusing on the University of the Free State QwaQwa campus. This topic was investigated by analysing the local economy within which the QwaQwa campus is located, a spatial analysis of the campus itself, and interviews with local business owners. First, the article demonstrates how an analysis of the local economy could assist in aligning the university offerings with the dynamics of the local area. It specifically argues for a focus on agricultural and wider commerce-related course offerings. Secondly, an argument is made for leasing or developing the vacant land on campus for non-university-related functions such as middle-income housing or a low- to medium-fee private school. The purpose of such an initiative would be to cross-subsidize the development costs of expanding and improving the QwaQwa campus. Thirdly, through interviews with local business owners, various arguments are made for how the university could better engage with local businesses. These ranged from providing training, disseminating research, increased procurement, and making space for local businesses on campus. Through these arguments, a narrative shows that part of being an engaged university is being aware of, and responding to the needs of the economy within which a campus is located.

Keywords: Entrepreneurship, higher education, local economic development, third mission

DIE POTENSIAAL VAN DIE UNIVERSITEIT VAN DIE VRYSTAAT QWAQWA-KAMPUS OM DIE GROEI VAN DIE QWAQWA EKONOMIE AAN TE HELP

Hierdie studie ondersoek hoe universiteite tot die ekonomie van hul omliggende areas kan bydra, spesifiek die Universiteit van die Vrystaat se QwaQwa-kampus. Die kwessie is benader deur die analise van die plaaslike ekonomie van die QwaQwa-kampus, die ruimtelike analise van die kampus, asook onderhoude met plaaslike besigheidsbestuurders. Die artikel toon hoe analise van die plaaslike ekonomie kan help om die universiteit se aanbiedinge met die dinamika van die omliggende area te vereenselwig. Meer klem moet veral op landbou en handelskursusse gelê word. Tweedens, is daar gevind dat die verhuring van die vakante land op kampus vir universiteits-onverbonde funksies kan bydra tot die verbetering en ontwikkeling van QwaQwa. Voorbeelde van ontwikkelings is middelinkomste behuising of 'n lae- tot middelfoo private

skool. Derdens, deur onderhoude met plaaslike besigheidseienaars, is daar geleenthede geïdentifiseer vir verdere samewerking met die Universiteit. Dit sluit in die voorsiening van opleiding, verspreiding van navorsing, verhoogde verkope aan die Universiteit, en die stigting van plaaslike besighede op die kampus self. Die gevolgtrekkings toon dat 'n betrokke universiteit een is wat bewus is van, en kan reageer op die benodighede van sy omliggende gemeenskap.

Sleutelwoorde: Derde missie, entrepreneurskap, hoër onderwys, plaaslike ekonomiese ontwikkeling

BOKGONI BA YUNIVESITHI YA FREISTATA KHEMPASENG YA QWAQWA BA HO KGONTSHAHATSA KGOLO YA MORUO WA QWAQWA

Atikele ena e lekola hore diyunivesithi di ka nehela jwang moruone wa sebaka seo di leng ho sona, e tseparimisitse maikutlo Yunivesithing ya Freistata khempaseng ya Qwaqwa. Sehlooho sena se ile sa batlisiswa ka ho hlahloba moruo wa selehae moo khempase ya Qwaqwa e leng teng, le hlahloba ya sepakapaka sa khempase ka bo yona, le ho etsa diinthaviu ho beng ba dikgwebo tsa selehae. Taba ya pele, atikele e bontsha hore hlahloba ya moruo wa selehae e ka thusa jwang bakeng sa ho nyalanya kabelo kapa dinyehelo tsa yunivesithi le diphetoho tsa sebaka sa selehae. Ka ho qoolla, e buella tseparimiso ya maikutlo ho thuto ya tsa temo-thuo le dinyehelo tse itshetlehileng ho tsa kgwebo ka bobatsi. Ya bobedi, ngangisano e entswe bakeng sa ho hirisa kapa ho etsa lefatshe/sebaka se senang letho khempaseng bakeng sa mesebetsi e sa amaneng le yunivesithi, jwalo ka malapa a fumanang moputso o mahareng kapa sekolo sa poraefete se patadisang tefo e tlase ho ya ho e mahareng. Sepheo sa mohopolo o tjena e tla ba ho fokotsa (cross-subsidize) ditjeho tsa ntshetsopele ya ho eketsa le ho ntlafatsa khempase ya Qwaqwa. Ya boraro, ka ho etsa diinthaviu le beng ba dikgwebo tsa selehae, dingangisano tse mmalwa di ka etswa bakeng sa hore yunivesithi e ka sebedisana jwang hantle le dikgwebo tsa selehae. Tsena di tloha ho faneng ka thupello, ho phatlalatsa diphuphutso, ho eketsa tse

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ka fihlellwang, le ho etsetsa dikgebo tsa selehae sebaka khempaseng. Ka dingangisano tse, tlhaloso ya ditaba e bontsha hore karolo ya ho ba yunivesithi e nang le seabo ke ho ela hloko, le ho arabela dithoko tsa moruo moo khempase e leng teng.

1. INTRODUCTION

In 2016, the University of the Free State (UFS) received 48 970 applications, based on which 20 000 students were made offers, of which 8 045 students were registered as first entering undergraduates in 2016 (UFS, 2017). This situation is worsening. In 2019, 52 000 applications were made for only 8 900 first-year spaces (*The Citizen*, 2018). As such, the UFS is nearing the full extent of its ability to accept new students. The physical expansion of the campuses will alter this situation. It is also important to note that this is a reversal of past trends as, historically, enrolment numbers at the UFS were declining (UFS, 2016a).

In South Africa and abroad, researchers are increasingly considering the role universities should play in supporting the local and regional economy and society at large (Cloete, Bailey, Pillay, Bunting & Maassen, 2011; Pouris & Inglesi-Lotz, 2014). In addition, there is a growing concern regarding the financing of universities, and whether government grants, student fees and traditional academic research will provide an adequate capital basis for universities (Commission of Inquiry into Higher Education and Training, 2017). This joint question of diversifying funding and how better to engage with industry and society has resulted in a number of scholarly debates focusing on issues such as the 'third mission' of universities, the 'triple helix' of industry, government and universities, universities' 'social contract', and the notion of 'engaged scholarship' (Keeler, Chaplin-Kramer, Guerry, Addison *et al.*, 2017; Pinheiro, Langa & Pausits, 2015; Etzkowitz, 2002). Practically, issues such as cross-subsidization and a desire to expand the physical footprint of a campus

are possible through engagement with industry. Some of the costs of these expansions could be financed through leasing or selling off a portion of the campus land, without compromising the future ability of the university to expand its campus.

This article investigates the potential of the QwaQwa campus of the UFS to engage with the local and regional economy. The main argument and academic contribution of this article is to move the understanding of this concept beyond simpler models of industry and university collaborating commercially, or examining the role of universities in supporting community-development initiatives. This article investigates how the university can better align itself with local and regional economic trends; how the university can forge relationships with local businesses, and how under-utilised university land can be used as a means of diversifying university funding, while contributing to local economic development.

2. LITERATURE REVIEW

2.1 Universities and society

The notion of how universities should relate to society, and the economic value that they offer to the area and nation within which they are situated, can be traced back to the beginning of universities. Specifically, the earliest universities and similar institutions were founded with the goal of both educating professionals and developing scholarship (Dmitrishin, 2013). The approach of what type of students should be created, specifically whether the universities' role is to create students who can think but have limited vocational skills, or whether the focus should be on training professionals, has been heavily contested over the past few centuries. Despite this, it has always been the case that one of the core functions of a university is to produce graduates who can contribute to the local and regional economy (Martin, 2012). The educating of professionals is clearly of relevance to local and regional economic

development. This symbiotic relationship is extensively evident in academic literature (Bradley & Taylor, 1996; Gennaioli, La Porta, Lopez-de-Silanes & Shleifer, 2012). Since the 19th century, universities have always focused on creating knowledge that contributes towards addressing societal needs, either directly or indirectly (Martin, 2012).

2.2 New thoughts on the roles of universities in society

More recently, a growing body of scholarship is investigating the wider role that universities play in society. Trippi, Sinozic and Lawton-Smith (2015) classify this literature into four schools of thought. First, the entrepreneurial university is closely linked to the notion of universities adopting a 'third mission'. Mollas-Gallart, Salter, Patel, Scott and Duran (2002: 2) define the third mission as relating to activities that are "concerned with the generation, use, application and exploitation of knowledge and other university capabilities outside academic environments". Martin (2012) argues that the 'third mission' is not new; it has been a feature of universities since medieval times.

The second school of thought detailed by Trippi *et al.* (2015) is that of a regional innovation systems (RIS) approach. Doloreux and Parto (2004: 9) note that there is no clear definition of RIS. In general, it refers to "a set of interacting private and public interests, formal institutions and other organisations that function according to organisational and institutional arrangements and relationships conducive to the generation, use and dissemination of knowledge". Trippi *et al.* (2015) differentiate this from the entrepreneurial university by classifying this as a broader idea, encompassing the same activities referred to in the entrepreneurial university, but also including a wider set of knowledge transfer mechanisms, including providing graduates to the local workforce, and informal relations between the university and local institutions

and businesses. The most popular expression of the RIS model is the idea of the 'triple-helix', to which Etzkowitz (2002) refers as a system of regional innovation where industry, academia and the state collaborate to further mutual goals.

Trippi et al. (2015) refer to the third school of thought as that of the Mode 2 University Model. According to Gibbons (1997: 2), Mode 1 "refers to a form of knowledge production – a complex of ideas, methods, values, norms – that has grown up to control the diffusion of the Newtonian model to more and more fields of inquiry and ensure its compliance with what is considered sound scientific practice". By contrast, Mode 2, according to Gibbons (1997), focuses on knowledge production in universities that is useful to government, industry or society at large. Mode 2 knowledge emerges from a transdisciplinary process, which is a combination of interdisciplinarity and participatory action research. Of the schools of thought, this is probably the most aspirational, focusing on what 'should be' as opposed to what is already happening.

The final school of thought described by Trippi *et al.* (2015) is that of the engaged university model, described by some as 'engaged scholarship'. This is the broadest school of thought on the wider role that universities play in society, covering all of the above ideas and more. The Kellogg Commission (1999: 10) defines 'engagement' as referring to "institutions that have redesigned their teaching, research, and extension and service functions to become even more sympathetically and productively involved with their communities, however community may be defined". The Commission emphasises that this differs from the traditional one-way transfer of knowledge and focuses instead on partnerships and sharing. This school of thought has the greatest emphasis on the 'social contract' between universities and society. It is of greatest relevance to this article.

Drawing on these wider international debates, this article focuses on the dimensions of a university; local engagement has been considered far less in these broader academic debates. Specifically, using the example of the QwaQwa campus, the article will consider how the course offerings of universities can be brought into alignment with local economic dynamics in order to aid development. Secondly, the article considers how the specific nature of the university campus concerning land and buildings creates opportunities and constraints for local engagement with the university. Thirdly, the article investigates a number of simple actions regarding how universities can engage with and assist local businesses.

3. STUDY AREA

To understand the potential of the QwaQwa campus of the UFS to engage with the local and regional economy in QwaQwa, it is necessary to have an understanding of how this region came to be, and, in particular, the legacy of oppression it has experienced. The trajectory of QwaQwa from precolonial times to the present day sets the scene for understanding the current dynamics in the area.

3.1 Colonialism

According to the history books, the Basotho (also known as Makholokoe), led by Lephatoana Oetsi (otherwise known as Witsie), one of King Moshoeshoe's subordinates, made their way into the QwaQwa area. QwaQwa, sometimes represented as Qwa-Qwa, Qwaqwa and/or Qwa Qwa, is a San name meaning whiter-than-white (Ross, 1930). The Voortrekkers later settled in QwaQwa on the land surrounding Oetsi. The two lived peacefully side-by-side for some time, until the Boers started suspecting that Oetsi's people were responsible for stock theft (Ross, 1930).

The Second Orange Free State (OFS)-Basotho war started in 1856. The Basotho were defeated and subsequently lost two-thirds of their

land (Maylam, 1986). Among the affected Basotho was Chief Paulus Howell Mopeli who owned land in the territory that had to be surrendered to the OFS. Mopeli approached the OFS President J.H. Brand to request permission to reoccupy the land. Mopeli indicated to Brand that he wished to withdraw his people from Lesotho and re-settle in Witsieshoek. Mopeli's request was granted and an agreement of 1866 allowed him to resettle in QwaQwa with the following conditions (Theal, 1883):

- The land was not personal property and could only be used for occupation by his people.
- He had to recognise the Republic as Supreme.
- A superior was appointed to ensure he kept to the agreement.
- The Basotho were allowed to perform their cultural practices as long as they remained civilized.

As such, this established an early legacy of a 'homeland' dynamic, specifically a confining of Black South Africans to a smaller territory than they had previously occupied, and subjugating the area to White rule. It also established the region as being different to the White farms and towns, specifically that of being an enclave for the Basotho people.

3.2 Apartheid

The biggest impact of the apartheid government on the QwaQwa region was the policy of creating 'homelands'. This intensified the enclave dynamics started in the colonial era. By 1960, resettlement of the African urban population to self-governing homelands was central to the apartheid strategy of reducing the amount of African people. Industries were developed on the periphery of the homelands to restrict urbanisation and were designed to complement the White South African economies. This strategy saw the eviction of millions of people into the homelands (Durand-Lasserve & Royston, 2002: 165). This process led to QwaQwa becoming a self-governing territory for the Southern Sotho people, with approximately

176 000 people being relocated to this area between 1970 and 1980 (Muthien, 1991; Slater, 2001).

In the 1980s, the policies allowed more people to move to the cities, due to the demand for human capital. The restrictive policies were abolished, urbanisation declined and was lower than during the apartheid era (Todes, Kok, Wentzel, Van Zyl & Cross, 2010: 332).

3.3 Post-apartheid

By 1989, the relocation of Sotho individuals to QwaQwa had resulted in a population of 450 000 people. Furthermore, by 1990, only a few factories were still subsidized by the RIDP during the process of decentralisation, which saw the closure of others. The closure of factories went hand-in-hand with deregulation that resulted in an explosion of the informal sector (Slater, 2002).

In the 1970s, there was a clear divide between urban and rural patterns. By the 1990s, this became less evident, due to the socio-economic change of the town (Slater, 2002). From the early 1990s to 2000, the population of QwaQwa decreased, but started to increase again in 2001. MaP's (Maluti-a-Phofoung, municipality within which QwaQwa is located) total population stood at 400 000 people in 2001, with QwaQwa accounting for 81% of the total (Leripa, 2010).

Currently, MaP is the most poverty-stricken region of the Free State, with 60% of the households earning less than R1 633 per month. Furthermore, only 15% of the total population is employed, compared to the national rate of 25% (StatsSA, 2012).

3.4 The history and geography of the QwaQwa campus

The UniQwa university was established as part of the broader agenda of creating a self-governing nation state for the Sotho population, with the opening of the university occurring in 1982, albeit on a different site to the university's current location. The current university

campus was completed in 1988, by which time the university had 1 400 students. Notably, even in the 1980s, space was an issue, with 5 000 students applying in 1989, of which only 1 200 students were accepted, due to space issues. By 1995, 2 395 students were studying on the campus, with the majority of students enrolling in education programmes. Between 1995 and 2001, the university faced a number of protests and periods of unrest. In 2001, it was announced that UniQwa would amalgamate with the UFS, with the merger starting from the beginning of 2003. From 2003 to 2006, there was substantial uncertainty as to the future of the university (Moffett, 2013). In 2011, a revitalisation programme was announced, setting the university on a new course. As of 2015, the university accommodates 3 170 students, a figure more than double that of student registrations in 2003 (UFS, 2016b).

The geography of the campus is also important. The campus is currently located in a central location with easy access to Gauteng, the Free State and KwaZulu-Natal provinces.¹ While students will need to find residence in QwaQwa, this means that this campus is still relatively accessible to these three provinces, which cumulatively account for 49% of the country's population (StatsSA, 2012).

It must be noted that there are distinct advantages to having a university campus in a former homeland. It is much cheaper for students, due to their living in the township which is within walking distance of the university, with the cost of rental being a few hundred rand, as opposed to paying a few thousand rand if they studied in a formal town. This cost difference can mean the difference between being able to go to university or not. Having a university in a former homeland area also makes it easier for matriculants living in the area to access tertiary education. This will

equip them with the skills to work in the area and boost the local economy, or to move out of the area.

4. METHODOLOGY

This study uses a parallel convergent mixed methods design. A convergent parallel design entails that the researcher concurrently conducts the quantitative and the qualitative elements in the same phase of the research process, weighs the methods equally, analyses the two components independently, and interprets the results together (Creswell & Plano-Clark, 2011). This approach allowed the authors to bring together a series of separate datasets, including quantitative, qualitative and spatial data. Each dataset provided a different insight into the focus of this article, and together they provided a far richer picture than any one of the datasets would have been able to provide.

4.1 Data and sampling

Three main datasets were used. First, the quantitative component relies on secondary economic data, specifically estimates of the Municipal GVA as estimated by Quantec, a local economic data supplier in South Africa. Quantec and Global Insight are the only two sources of local economic data on GVA in South Africa. While the method whereby Quantec generates its estimates is not disclosed (De Klerk, 2012), the components of the dataset indicate that the estimates are generated based on employee compensation and tax data.

The one significant limitation that needs to be noted is that the lowest unit of analysis is the municipal scale. This means that economic analysis is of the entire MaP municipality, including QwaQwa, but also the rural land and other towns (such as Harrismith) that fall within this jurisdiction.

Secondly, the spatial component relied on a number of standardized datasets, including OpenStreet Map data for roads, Surveyor General

¹ For example, the QwaQwa campus is 3 hours 54 minutes, 3 hours 19 minutes, and 3 hours 24 minutes from Durban, Johannesburg and Bloemfontein, respectively.

data for cadastral boundaries, and standard datasets such as contours, powerlines, and so on from the Chief Directorate: National Geo-Spatial Information. Using these base datasets, certain new datasets were able to be created. For example, by using the Digital Elevation Model (DEM), the slope steepness was derived; by buffering the power lines, a power line buffer was created.

Thirdly, the qualitative component, which involved interviewing local business owners, was chosen using convenience sampling, using local connections that fieldworkers had to identify interviewees. Noting the risk of bias that occurs with this type of approach (Bhattacharjee, 2012), we attempted to counter this by interviewing business owners from a range of different types of businesses so as to get a diversity of views. In total, 34 interviews were undertaken. The majority of these interviews occurred in Sotho and were translated into English by the fieldworker.

4.2 Analysis and interpretation of findings

The quantitative data was analysed using two standard regional economic analysis techniques: shift-share analysis and location quotient. Shift-share is a standard model for regional analysis that attempts to determine how much of a region's growth can be attributed to national economic growth trends and how much can be attributed to unique regional growth factors (Goodwin, 2018: online). Location quotient provides an indication if a region is producing more or less than it needs for its own use (Meintjies, 2001).

These two techniques were chosen as they allow for comparison between the local economy and the national South African economy. This comparison allowed for identification of which sectors were performing better, worse or on equal level as the national South African economy.

In terms of the spatial data, using ArcMap (a geospatial processing

program), an estimation was made of the total vacant developable areas on the campus. Overlaying these layers allowed for a (simple) spatial multi-criteria decision analysis (see, for example, Brennan & Venigalla, 2016). In particular, this analysis took account of which portions of the site are difficult or hazardous to develop, due to steep slopes, falling within a power line servitude, or within the floodplain, and which portions of the site were already developed. Once these areas were identified, the remaining land portions were the areas of land that could, with ease, be developed.

In terms of the qualitative data analysis approach, open coding was used (Bhattacharjee, 2012). Each transcript was reviewed to identify how each interviewee perceived the level and nature of the UFS QwaQwa campus in engaging in the local economy, and how they believed this could be improved. Once these quotes had been identified, each was assigned a code, which resulted in five themes that universities should address in order to strengthen the local economy.

5. FINDINGS AND DISCUSSION

This section shows the findings from the analysis and interpretation of the data to understand the potential and possible future development options for the UFS QwaQwa campus to act as an agent of socio-economic change in QwaQwa. Table 1 shows the general information of the shift-share analysis on the wider QwaQwa economy used for the study. Figures 1 and 2 depict the spatial nature of the campus site.

Table 2 presents the data analysis from the report of interviews conducted with local businesses on the role universities can play in strengthening the QwaQwa economy.

5.1 The nature of the wider economy in the QwaQwa municipality

Table 1 provides a shift-share and location quotient analysis of the

municipal economy within which QwaQwa area falls. The shift-share analysis indicates three aspects. First, the performance of the local economy in comparison to the national economy (the national growth share). Secondly, whether growth in the municipality occurred in sectors that were, at a national level, lagging or growing (the industry mix share). Thirdly, the local shift – increase (or decrease) in employment in the local economy in a sector that is growing faster (or slower) than the same sector at a national level (the local share shift) (Smith, 2015). This is summarized by the shift-share formula: Actual Growth = National Growth + Industry Mix + Regional Shift (Goodwin, 2018: online).

Location quotient provides an index of comparative advantage, with a value of greater than one for a sector indicating that the local economy has a greater sectoral share of its economy being generated in that sector than in the wider economy. A value of less than one represents the opposite, a comparative disadvantage (Meintjies, 2001). The formula for location quotient is: Local quotient for a sector = (GVA for that sector in the regional economy / total local GVA) / (GVA for that sector in the national economy / total national GVA).

Table 1 shows the results of this shift-share analysis and location quotient analysis. The national growth share calculation estimated that the local economy would have increased by ZAR 5.33 billion if its growth had followed the same trends as the national growth. In fact, the local economy had increased by ZAR 3.62 billion. This indicates that from 1993 to 2015, the MaP municipality substantially underperformed in comparison to the national economy.

The industry mix share calculation estimated a score of 929, with the largest positive results occurring in the tertiary sectors. Notably, in the MaP economy, the largest value with a negative result was general government at -536. Equally telling was the sectoral

contribution of government services at 23.05%, which was only exceeded by wholesale and retail trade, catering and accommodation at 23.35% (this sector industry mix was also high at 376).

The dominance of these two sectors is cause for concern as this would be expected in an economy that is reliant on state intervention. Specifically, a retail sector with a high location quotient, without an equally high quotient for manufacturing and/or for the finance, insurance, real estate and business services sector, in an area of high poverty, could be driven by a high reliance on social grants. Similarly, when government contribution to the GVA has a high location quotient, this is a direct indicator of the economy relying on state intervention.

The local share shift is -2 632, showing that sectoral growth in the MaP economy was below that of the national sectoral growth. The two sectors that outperformed national sectoral growth were Agriculture, Forestry and Fisheries, and Mining, noting that the sectoral contribution of mining is small. This indicates that, despite these sectors having

a smaller role in terms of sectoral contribution to GVA, MaP still has a comparative advantage in these sectors. It should also be noted that, in terms of employment, Agriculture accounted for 5.3% of all formal employment opportunities in the municipality (MaP, 2012).

Given that the UFS has a substantial course offering in Agricultural Sciences that is only taught on the Bloemfontein campus, this might represent an area where the UFS can extend its course offerings on the QwaQwa campus, in order to respond to a local economic advantage. This could also include offering courses in Food Science in order to provide the region with graduates who are equipped to work in the agro-processing sector. This would link well with the recently proclaimed Special Economic Zone in Harrismith (± 46 km from the QwaQwa campus), which is specifically focusing on agro-processing industries (*The Weekly*, 2015).

A focus on agriculture would also tie in with the survival practices of the poor. Due to the history of the area, namely first becoming an enclave of Basotho culture, whose

traditional livelihoods are typically agricultural in nature, and secondly, due to the underdevelopment of the area, as a result of the apartheid homeland policy, a substantial number of poor households are involved in agriculture. Specifically, from Community Survey 2016 (StatsSA, 2016), we know that, in the wider municipality, 38% of the households are involved in some form of agricultural practice.

This emphasis on agriculture would also be in line with national strategies for job creation. While the agricultural sector has, in recent decades, shed a number of jobs, this trend appears to be reversing, with an overall trend of modest growth (albeit with significant volatility) between Q2 2011 and Q4 2018 (StatsSA, 2019). Furthermore, agriculture and agri-processing have each been identified as a key focus of national government for creating labour-intensive employment (Ramaphosa, 2019; DTI, 2018).

With regard to finance, insurance, real estate and business services, despite having a low location quotient, this is still the sector with the third highest sectoral contribution to the local economy in terms

Table 1: Shift-share analysis and location quotient of MaP – 1993 to 2015

Industry	Sectoral contribution 2015 (%)	Location quotient 2015	National growth share		Industry mix share		Local share	
			National growth rate (%)	Net	National industry growth rate – national growth rate (%)	Net	Local industry growth rate – national industry growth rate (%)	
Agriculture, forestry and fishing [QSIC 1]	2.69	1.05	92.22	101	-35.5	-39	75	82
Mining and quarrying [QSIC 2]	0.94	0.11		15	-91.0	-15	449	72
Manufacturing [QSIC 3]	8.33	0.61		563	-20.3	-124	-44	-266
Electricity, gas and water [QSIC 4]	3.24	1.35		253	-45.8	-125	-35	-96
Construction [QSIC 5]	3.68	0.94		236	100.3	257	-157	-403
Wholesale and retail trade, catering and accommodation [QSIC 6]	23.35	1.54		1 133	30.7	376	-44	-541
Transport, storage and communication [QSIC 7]	9.57	1.02		465	110.5	557	-124	-626
Finance, insurance, real estate and business services [QSIC 8]	16.38	0.75		574	85.9	534	-30	-189
General government [QSIC 91]	23.05	1.38		1 551	-31.9	-536	-31	-529
Community, social and personal services [QSIC 92-96, 99]	8.78	1.49		441	9.1	43	-29	-136
Total			5 330		929		-2 632	

Data: Quantec, 2016

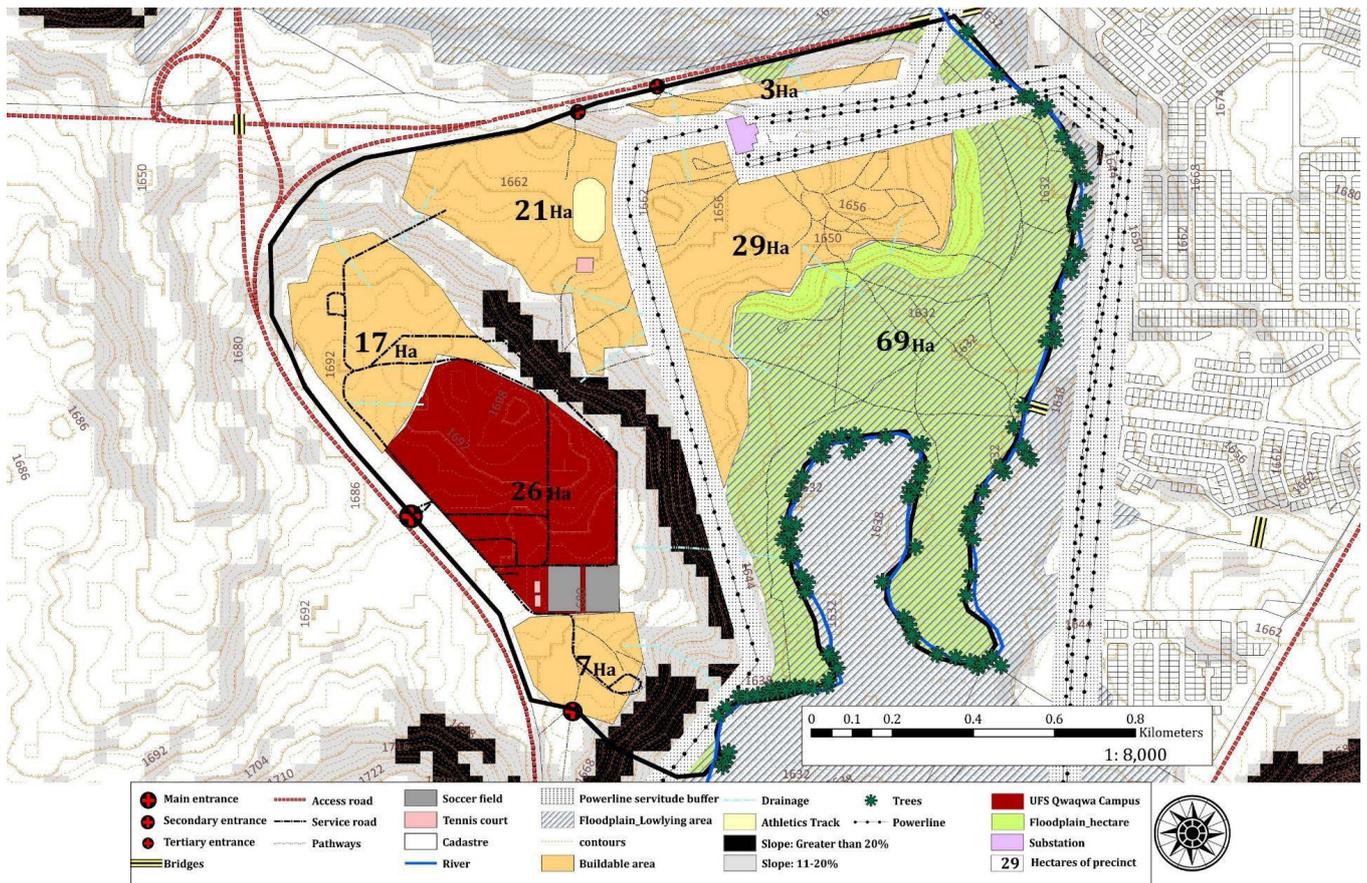


Figure 1: Site analysis of the QwaQwa campus

Note: floodplain is based on crude estimates; further modelling would be needed for exact determination



Figure 2: Google Earth image of the UFS QwaQwa campus (CNES/Airbus DigitalGlobe, 4,993m camera height, -28.48167, 28.8275)

of GVA (see Table 1), and 6.3% of all employment opportunities (MaP, 2012). At a national scale, this sector accounted for 16% of all jobs in 2018 (third largest sector), and is one of the sectors with the most substantial growth in employment (StatsSA, 2019). Given this, an argument could be made for extending UFS course offerings in commerce-related fields on the QwaQwa campus, given that at present only one commerce degree is being offered at the QwaQwa campus.

5.2 The physical nature of the QwaQwa campus site

Figures 1 and 2 depict the nature of the QwaQwa campus site. This site analysis clearly shows that there is considerable room for growth on this campus. Only approximately 13% of the campus site is developed at present, and a further 38% of the campus site is developable (approximately 77 hectares). This

means that there is more than enough land to permit the expansion of the campus and other possible land uses (for example, retail centre, housing, and so on). These other land uses could be used as a means to generate income for the university. This would be in line with existing UFS financial practices, given that the UFS is already using the lease of land and buildings as a means to generate income. In 2014, approximately R13 871 million in revenue was generated from the lease of investment property (UFS, 2014: 107). For the socio-economic development of QwaQwa, this represents an opportunity to introduce into the area amenities that may be lacking, such as low-fee private schools or middle-income housing.

As shown in Figures 1 and 2, the site lends itself towards this concept, with the steep slopes and floodplain dividing the site into three neat precincts, namely the campus site (precinct A), the lower plain developable area (precinct B), and the floodplain (precinct C). This means that the land in precinct B could be used for the development of land uses other than academic use (for example, middle-income housing or a low- to medium-fee private school), while the undeveloped land in precinct A (approximately 24 hectares) could be reserved for future expansion of the UFS campus.

While the floodplain land is not suitable for the development of buildings, it could, however, still be used for other land uses such as agricultural land or a nursery for plants used in traditional medicine. This is particularly relevant, given that the campus is located on land suitable for cultivation, and is large enough to support a viable agricultural enterprise. This might represent an opportunity for the university and the QwaQwa community to develop agricultural training on the campus.

5.3 Interview analysis on the UFS QwaQwa campus role in strengthening the QwaQwa economy

Nearly all the respondents highlighted that the presence of the University makes it more cost effective for students living in the area to study there, as they do not have to leave home. The importance of this statement should not be downplayed, given that the UFS QwaQwa campus is the only one of the top ten South African universities to have a campus in a former homeland area.

Most of the business owners also emphasized that the university brings revenue into QwaQwa via the students from outside the area who study at the university. These students shop in town, rent accommodation from local households, and use minibus taxis, all of which brings income into the town. To quote respondent BK in this regard: "The university lets people from outside to rent accommodation this side which helps the landlords to run their business, so those businesses benefited from university including shops, surgeries and taverns as students likes to party."

In addition, respondents also highlighted the jobs that the university creates by employing people from the local area, and by sourcing goods from the local area. For example, one of the respondents highlighted that they received a contract to produce t-shirts (respondent ECD); another highlighted a recent contract to supply the university with tyres and brake pads (respondent MT).

However, some respondents were critical of the level of engagement between the university and the local businesses. To quote respondent K: "We are still not sure which courses are being provided by the University, especially the ones that are relevant to our economy. That is the one thing, as soon as we get that then we can communicate properly and say this is what we want, but I do not know much about the courses that are being provided. I think the thing that would help is when

the University research is being discussed with local economists and local upcoming businesses and what can be done here."

Lastly, respondent L argued that the staff of the university are mostly outsiders who have hardly any interest in the area: "I feel that we are not connected to the University as the people of QwaQwa. Another thing is that the staff, admin, lecturers, students of the University are people that are not from QwaQwa most of them don't even speak the language of here. We are detached from the University and its staff, you find people from outside with PhDs who make QwaQwa attractive for them. People are just here for their jobs; they just take their salary and go." Some respondents also opined that the UFS staff primarily live in nearby Harrismith and commute into QwaQwa on a daily basis. This has further exacerbated the feeling of disconnection between the UFS and the surrounding area.

Based on these sentiments, local business leaders opined that the QwaQwa UFS should consider five themes in its role to strengthen the QwaQwa economy.

5.3.1 Training of businesspersons

One of the key areas identified where the UFS could provide support is to offer training to local businesses in entrepreneurship, financial management, and the like. This would assist local entrepreneurs to improve their ability to run and develop their business. As one respondent put it: "Even if you study business admin or management it's still a way of you becoming an employee, [rather] teach them [about] entrepreneurship. I am not saying do it as a course, you can get a certificate out of it. The other thing is financial literacy ... That's one thing we the people of QwaQwa lack, [and] that's why we have few rich people in QwaQwa."

5.3.2 Dissemination of research

A few respondents indicated a desire for the university to share research on QwaQwa with them, in addition to receiving business training. To quote respondent Z: "I discovered the thesis of Dr Khometsi [which] talks about the history of black education during apartheid. If they could open such theses to the public to be accessible and to go to one of the thesis lectures it could give us analysis of this, [and] create minds, [which are] lacking in society." This indicates a possible role of the UFS QwaQwa campus to open its door to the local community and to allow them to attend certain lectures and be able to access research done on the area, or on topics of interest to them.

5.3.3 Increasing procurement from local businesses

A few respondents mooted the idea of increasing the level of local procurement by the UFS. Respondent L put this eloquently when asked what the University could do to help local businesses: "to support and look for services offered by people in QwaQwa and not to source suppliers outside".

5.3.4 Providing space for businesses to sell to students on campus

At present, the university is located on a hill approximately 4km from the nearest business centre, making any trip into town by students only possible (without considerable effort) by taxi or car. In terms of on-campus shops, there are a few food outlets, a campus clothing store, and an academic bookstore. Noting this, some of the business owners indicated that they would like to be able to sell to students on-campus. Respondent TRP suggested that, instead of permanent on-campus premises, the university could build a market: "It help[s] a lot [if at] month ends the university can [provide] cubicles where small businesses can sell their products."

5.3.5 Providing guidance on how to unlock local opportunities

One of the more interesting insights was provided by respondent N regarding the ability of the university to assist in unlocking local developmental opportunities. He cited the example of the Basotho Cultural Village, which is a cultural tourism facility in the Golden Gate Park that provides a window into an 18th-century Basotho village. In respondent N's opinion, this facility is being underutilized, and the university could provide insight into how this facility could be better utilized with regard to generating income for SMMEs. This is a good example of a mutually beneficial opportunity, where the university can benefit from producing academic outputs based on participatory action research, and where the local community can benefit through increased access to economic opportunities.

6. DISCUSSION AND CONCLUSION

As argued in the literature review, the notion of universities as a space to equip graduates with the skills needed to work in industry, and as a space to create knowledge that is useful to industry, goes back to the early origins of universities (Martin, 2012). While these ideas have been contested, specifically the debate between pure and applied research, recent scholarship on the role of universities seems to be returning to an approach that views a university's primary role as a tool to meet society's needs.²

One of the key questions that remains relatively unanswered is how to shape a university to meet the needs of society. A simplistic approach splits the university into three missions. This tends to result in viewing industry-focused applications as a third set of responsibilities for universities. This kind of thinking does not, however, promote integration between the three

missions, but rather tends to create a silo mentality. With this approach, teaching happens in a classroom, research in a laboratory or office, and interactions with industry and society are either achieved through community development projects or through industry-funded research. Given this, this article rather used the 'engaged scholarship' (Kellogg Commission, 1999) model of universities, which views university-society interactions as being embedded in all types of university activities. Furthermore, engagement between university and society is regarded as a two-way interaction.

This article investigated how a university can engage with local dynamics to address the economic needs of the area. It showed how the spatial characteristics of a university can be matched with economic needs. In this case, it showed how a focus on agriculture and commerce at QwaQwa would be in line with both the strengths of the local economy and the spatial characteristics of the QwaQwa campus. Importantly, this was not a simple exercise of merely identifying which economic sectors were strongest, but also a sifting of the data to identify the underlying patterns. This showed that some of the strongest economic sectors such as the retail trade in QwaQwa were likely driven by state intervention. Hence, the emphasis on agriculture was in recognition of the above average (compared to national) growth in this sector in MaP, and also the sustainability of this sector compared to those directly or indirectly reliant on state subsidy. This could allow the university to gear its research and teaching to produce knowledge and graduates who can drive sustainable economic growth in the local area.

In analysing the space of the QwaQwa campus, this article examined the other end of the financial equation for universities. Given the considerable amount of open space available on the campus, funds could be generated through strategic lease or sale of university land to allow for the continued

² Note that pure research is still valuable, but not viewed as the core mandate of a university.

expansion of the university. This also recognizes that universities are part of a wider settlement structure, and through land release, the university can use this to help shape nearby land uses into functions that complement and assist the smooth functioning of the university.

Analysing the views of local businesspeople, after sharing how they would like the university to engage with them, allowed this article to go beyond simply examining the teaching of students. It recognizes that engaging with society can also be achieved by means of smaller interventions such as creating spaces on campus for local businesses to sell products, disseminating useful research, and offering shorter courses tailored to the needs of local businesses. This article could investigate the micro-scale of what an engaged university could be, demonstrating that the engaged university concept consists of large and small actions.

In summary, the essence of this article is a recognition of the key role that universities can play in a local region. This partly consists of the financial benefit of staff and student expenditure (Dyason, 2018), but also recognizing the importance of meeting the skills needs of the local region, and using the physical space of the university as a platform to foster local economic development. In recognizing this, it is possible to enhance and foster the symbiotic relationship between 'town and gown', which, as argued throughout this article, is a key element of creating an engaged university.

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