



The Dynamics of University Transformation: A Case Study in the Eastern Cape Province of South Africa

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Abstract

This article sheds light on the dynamics of the recently created Nelson Mandela Metropolitan University (NMMU) as a result of a merger between three separate institutions. A particular focus is given to NMMU's role in the further development of the Eastern Cape Province, one of South Africa's poorest regions. The article discusses the impact of the amalgamation process on the university's institutional profile, strategic platform, structural features, and scope and nature of activities. The article draws upon key insights from the institutional theory of organisations and the concepts of academic core, extended periphery and structural coupling. Taking institutionalisation as a conceptual frame of reference, it points to a number of tensions and critical success factors with respect to the university's ability to respond to external demands for a stronger engagement with surrounding society. Path-dependencies, local champions, and support by leadership structures were found to be major enablers. The lack of a strong and balanced academic core and the absence of structural linkages or tight coupling were identified as major challenges.

Résumé

Cet article analyse la dynamique interne d'une nouvelle université, la Nelson Mandela Metropolitan University (NMMU), créée récemment en Afrique du Sud par la fusion de trois établissements. Il met l'accent sur le rôle de la NMMU dans la poursuite du développement de la province de l'Eastern

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Cape, une des régions les plus pauvres du pays. Il décrit l'impact de la fusion sur les caractéristiques institutionnelles de l'université, sur son programme stratégique, sa structure et sur la nature et la portée de ses activités. Il s'appuie sur les acquis principaux de la théorie institutionnelle des organisations et sur les concepts de cœur d'activité universitaire, de périphérie étendue et de couplage structurel. En se référant au concept d'institutionnalisation cet article souligne un certain nombre de facteurs de tension et de succès quant à la capacité de l'université à répondre à la demande externe d'une implication plus grande dans son environnement social et régional. Les principaux facteurs favorables se révèlent être la dépendance à la trajectoire historique, l'existence de fortes figures locales et le soutien des équipes de direction. Les principaux freins identifiés sont la faiblesse et le déséquilibre du cœur d'activité académique des institutions et l'absence ou l'insuffisance des liens entre les différentes structures internes.

Introduction

The gradual rise of a knowledge-based economy has led to increasing policy interest regarding the role of knowledge structures, in general, and higher education (HE) systems in particular, in processes of social development and economic competitiveness at local, national and supra-national levels (OECD 2007; Pillay 2010; Pinheiro 2012a). In Europe, universities, and the outputs they create, i.e. knowledge and skilled professionals, are seen as the cornerstones for the 'Europe of Knowledge' (Maassen 2009). Across the region, a number of recent reform initiatives have been undertaken in order to make universities more responsive to the needs of society (Maassen and Olsen 2007), with a privileged focus attributed to the so-called 'knowledge triangle' composed of education, research and innovation (Maassen and Stensaker 2011). On a national level, one such government-led initiative pertains to institutional amalgamations or mergers amongst existing HE institutions (Goedegebuure 2011; Harman and Meek 2002). Mergers have profound implications for the identity and institutional profile of HE institutions, amongst other aspects. Early evidence across national contexts suggests that the outcome of amalgamation processes tend to be more successful when these are undertaken on a voluntary basis rather than being forced upon by government (Skodvin 1999:76). There is a general lack of systematic data and analysis on similar developments beyond the so-called 'developed or industrialised economies' (Europe, the U.S., Australia, and

Japan). By focusing on the impact of the recent government-led mergers at one South African university, the article aims to address this knowledge gap.

The starting point for the discussion lies in the environmental conditions under which South African universities operate. This is followed by a brief analysis of the specific regional context being investigated, namely, the Eastern Cape Province. University dimensions are addressed in the second part of the article. Empirical evidence is drawn from a five-year comparative study on the role of universities in regional development (Pinheiro 2012a, b) and a large comparative project (HERANA) on the role of HE across Africa (Cloete et al. 2011). Following a qualitative research-design, a total of thirty-six semi-structured face-to-face interviews based on a purposive sample composed of internal (senior academics and administrators) and external (local government and industry representatives) stakeholders were administered. Particular attention is paid to the impact of the merger process on university structures and activities in the context of the university's regional development mandate or mission (c.f. Pinheiro 2012a; Pinheiro et al. 2012). The account provided here is a response to recent calls for a better understanding of the 'black-box' of university dynamics (Maassen and Stensaker 2005), and the need to shed light on the relationship between processes of external engagement and internal transformation across different national and sub-national settings (Perry and Harloe 2007). The discussion and analysis are particularly relevant for policy makers, institution managers, and academic audiences interested in the third mission of universities in general, and the role of the HE sector in aiding local development processes in particular.

Theoretical Backdrop

Universities have traditionally been conceived as rather distinct organizational entities. Their core technologies, teaching and research (Clark 1983), are characterized by increasing complexity and ambiguity (Musselin 2007). Their multiplicity of tasks or functions (Kerr 2001) are, more often than not, at odds with one another (Castells 2001). Authority is delegated to the lowest organizational levels (Tapper and Palfreyman 2010), and broad participation in internal affairs is a major legitimizing factor (Luescher-Mamashela 2010). As is the case with other types of organisations (Thompson 2007), universities go to great lengths to protect their core technologies from the pervasive effects of the environment and/or stakeholder agendas, for example, by resorting to structural decoupling (Bastedo 2007). However, as open systems (Scott 2008), universities' internal structures and activities are a reflection of the external conditions in which they operate (Hölttä 2000).

Compliance with the demands and expectations of various stakeholder groups (government agencies, professional groups, and local communities) is essential in order to secure external support for university goals and operations (Jongbloed et al. 2008), thus leveraging external legitimacy (Deephouse and Suchman 2008). Internally, the notion of HE/the university as a relatively autonomous (world) institution (Meyer et al. 2007), i.e. as a collection of rules and standard operating procedures determining the behavioural postures of internal actors (Olsen 2007), also means that attention needs to be given to the norms, values, aspirations and identities of academic audiences, what Bourdieu (1984) famously referred to as the *habitus* of academe.

Conceptually speaking, one way of shedding light on the ‘black-box’ of university behaviour (see Pinheiro et al. 2012) pertains to making a distinction between those structures and types of activities located in the immediate vicinity of its primary tasks or academic core, i.e. teaching (degree programs) and strategic research (basic and/or applied), from those placed along what Clark (1998) terms the extended developmental periphery. In the context of the direct/indirect role of the university in processes of local socio-economic development, it is pertinent to investigate the extent through which the so called ‘regional mission’ (Pinheiro 2012b) has become an integral component of the academic core, and, consequently, the degree of coupling (Orton and Weick 1990) between the latter and formalized arrangements throughout the extended developmental periphery. In other words, to what extent is the regional mission institutionalized,¹ fully or partly, across the university?

Environmental Conditions

As open systems (Scott 2008), university operations are intrinsically related to the characteristics and dynamics of the external environments in which they operate (c.f. Kehm and Stensaker 2009). The literature makes a distinction between technical and institutional features of the environment (Greenwood et al. 2008), although in reality the two are tightly intertwined (Pinheiro 2012a). The former relates to the daily operations and performance of universities, such as increasing competition (Marginson 2004) and the need to secure sustainable pools of funding (Jongbloed 2004), whereas the latter is associated with the normative, regulative and cultural-cognitive pillars of organisations (Scott 2008) providing meaning to social actors and a legitimate basis for action (Scott and Christensen 1995; Olsen 2010). In this section, particular attention is paid to the technical and institutional drivers facing South African HE institutions in general and the newly established

Nelson Mandela Metropolitan University (NMMU)² in particular. Three key macro-level aspects are discussed, namely: the national policy context; the organizational field or domestic HE sector; and the regional context.

The National Policy Context

In South Africa, the transition from an apartheid state to a post-apartheid society was accompanied with an overarching policy of transformation across all spheres of society. In HE, the main concern was the dismantling of the apartheid landscape characterised mainly by racial and ethnic segregation, fragmentation, and poor coordination (DoE 1997; Hall et al. 2004). As pointed out by Jansen (2003:31), during apartheid, all public HE institutions were created on the basis of race, ethnicity and language. Prior to the fall of the apartheid regime in 1994, the domestic HE system was characterised by six white Afrikaans-medium universities and four white English-medium universities; four centrally controlled universities for ‘Africans’; one each for ‘Indians’ and ‘Coloureds’ and four universities located in the former ‘independent homelands’ for African students. In addition, there were seven historically white technikons (also divided by language) and seven historically black ones, one distance education technikon, and a large distance education university.

Given the racial and ethnic foundations of HE under apartheid, the distribution of institutions was, as described by Jansen (2003:31), ‘highly inefficient and even illogical, with similar institutions sharing fences (...) or expensive institutions located in close proximity to each other (...)’. This context, coupled with instability and crisis at several universities and technikons, dramatic declines in student numbers in especially black universities (Cloete et al. 2006), provided the impetus for the restructuring of HE, mainly through mergers. Overall, mergers and other HE reform initiatives were prescribed by the South African government as part of an explicit agenda of transformation, redress and equity in the sector. As such, they represented an attempt to create a single, coordinated system of HE without racial inequalities (Asmal and Hadland, 2011; DoE 1997; Cloete et al. 2006; Jansen 2003). In other words, the chief purpose of the recent mergers was not to increase student enrolments (access to HE) *per se*. Rather, in addition to creating a more clearly differentiated university system, the policy rationale for the mergers was, first and foremost, related to the need to move away from the racially-defined university system that characterized the apartheid era. By the late 1990s, the then Minister of Education, Professor Sibusiso Bengu stated the following:

The higher education system must be transformed to redress past inequalities, to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities (DoE 1997:3).

In addition to addressing existing inequalities, the last couple of years were marked by the prevalence of two key items in the national policy agenda for HE, namely, institutional differentiation and system-wide integration (Cloete et al. 2011). During 2003/4, the government promoted a series of non-voluntary mergers aimed at the creation of an HE sector composed of three distinct types of institutions: research-intensive universities; universities of technology; and comprehensive universities. The most idiosyncratic feature of the new system lies on the creation of the new 'comprehensive' sub-sector (Oosthuizen 2009). On the basis of mergers between former universities and technikons, South Africa's comprehensive universities bring together a wide range of educational qualifications from diploma level to doctoral degrees. From a policy perspective, this initiative was driven by the central government's desire for, *inter alia*, fostering responsiveness to regional social and economic needs (Cloete et al. 2004).

The Organisational Field of Higher Education

Up to 2005, South Africa's HE system comprised a total of thirty-six institutions, namely twenty-one universities and fifteen technikons. As described earlier, the situation changed dramatically after the government-mandated mergers that directly affected a total of twenty institutions and resulted in nine new institutions (Bunting et al. 2010:7). Today, in addition to eleven traditional universities offering discipline-based degrees and six universities of technology focusing on career-oriented and professional programmes, there are six comprehensive or dual universities combining both roles. In 2009, close to 840,000 students were enrolled across the public HE sector, which employed about 118,000 individuals, 37 per cent as academics (CHET). The system is dominated by undergraduate enrolments (82% of the total), a figure that has remained relatively stable in the last couple of years. As for the major fields of studies, 43 per cent of all HE students, in 2008, enrolled in a programme within the fields of education and the humanities, followed by business and management, and science and technology, with about 30 per cent each.

Turning now to the regional HE landscape, the Eastern Cape Province hosts four public universities, namely: Rhodes University (established in 1904), the University of Fort Hare (1916), Nelson Mandela Metropolitan Univer-

sity (2005), and Walter Sisulu University (2005). Whereas Rhodes University can be characterised as traditional and/or belonging to the group of 'classic' or research-intensive universities, the remaining three are part of the newly established comprehensive sub-sector emerging out of the government-led mergers. A total of 54,400 full time equivalent (FTE) students enrolled in HE studies across the Eastern Cape region in 2009 (CHET).³ The analysis of regional providers identifies two main groups or categories as regards the size of the institutions: mid-size, mass universities enrolling more than 17,000 students (NMMU and Walter Sisulu); and relatively small institutions (Rhodes and Fort Hare) enrolling less than 9,000 students. Universities like Walter Sisulu and NMMU are primarily first-cycle institutions with more than 80 per cent of total enrolments at the undergraduate level. Across the Eastern Cape, education and the humanities are the most popular study fields with more than half of total enrolments, followed by studies in the fields of business and economics, and science and engineering. With the exception of Rhodes, where 43 per cent of students are White and originate from outside the province, the bulk of the regional student population is composed of African or black students, the majority of whom originate from within the Eastern Cape.

The Regional Context

The Eastern Cape is the second largest province in the country, covering an area of about 169,000 square kilometres and hosting close to seven million inhabitants, the equivalent of 14 per cent of South Africa's population. The region has, in recent years, been targeted as a key area for economic growth and development, including policy efforts aimed at fostering cooperation in the realm of post-secondary education (Pillay and Cloete 2002). In 2003, the province's share of the country's gross domestic product (GDP) amounted to 8 per cent, with its economic profile dominated by the agricultural sector. Industrial urban centres revolve around the manufacturing, coastal cities of Port Elizabeth (PE) and East London. In the last half of the 20th century, the area had established itself as a major manufacturing hub for the global automobile sector. At the turn of the new millennium, changes in the municipal landscape led to the creation of the Nelson Mandela Metropolitan Area or Metro, composed of the cities of PE, Uitenhage and Deispatch. With about one million people, the Metro is the sixth largest economy in South Africa, contributing to 40 per cent of the economic activity across the province. Even though its major urban centres are relatively affluent, the province ranks amongst the country's poorest with close to half of its population be-

low the poverty line. In 2007, more than a quarter of all households reported a monthly income of Rand 400 or less (Makiwane and Chimere-Dan 2010: 131). By the middle of 2010, the rate of unemployment across the province was close to 28 per cent (Makiwane and Chimere-Dan 2010:127). Empirical evidence suggests that, as is often the case elsewhere, access to wage-earning opportunities and rates of employment amongst the citizenry are intrinsically linked to educational attainments (Louw et al. 2006; Pillay 2011). Educational achievement across the Eastern Cape ranks amongst the lowest in the country. In 2009, 8.6 per cent of all the population aged twenty or more did not possess any type of formal education (Makiwane and Chimere-Dan 2010:177).

Going forward, in addition to tackling governance-related problems, a major future priority for the region lies in the diversification of the economy in order to reduce its dependence on the agricultural and manufacturing sectors. Tourism (game reserves and natural parks) is considered to be one of the region's greatest potential. At the Metro level, the regional program (Vision 2020) encompasses sustained investments in sectors close to the knowledge economy, such as the creative industries, tourism and information and communications technology. A major industrial project (*Coega*) is currently underway, but the recent global financial crisis, combined with the worsening of South Africa's public finances, has resulted in a loss of momentum. The automobile cluster, composed of major global players (Volkswagen and General Motors) and close to 200 local suppliers, has been particularly affected, hence reiterating the need for diversification of the economy. In addition to tourism, the strategic sectors identified as key for the region's future include mechatronics engineering, agro-processing, petrochemical, general manufacturing, business process outsourcing/off shoring, and energy.

University Dynamics: Nelson Mandela Metropolitan University

The vast literature on HE points to the importance attributed to historical trajectories or path-dependencies whilst investigating processes of organizational adaptation and/or change (Jongbloed et al. 1999; Krücken 2003). Inquiries shedding light on the developmental role of universities in the context of their regional surroundings highlight the need to pay attention to key features such as resource dependencies (Arbo and Eskelinen 2003), core capabilities (Pinheiro 2012a), and a sense of collective identity (Stensaker and Norgård 2001). More recently, scholars have identified ongoing processes of rationalization aimed at transforming the university into an organi-

zational actor (Krücken and Meyer 2006; Ramirez 2010). Amongst other aspects, such internal dynamics are substantiated in the form of strategic planning (Zechlin 2010) and organizational design (Vorley and Nelles 2008) as a means of reducing the perceived gap between environment and organization (Chatterton and Goddard 2000; OECD 2007). Each one of these key aspects is briefly explored below as they pertain to the role of NMMU as regards the future socio-economic development of the Eastern Cape province.

Origins and Path Dependencies

NMMU is the result of the merger, in 2005, between three previously distinct HE institutions: the Port Elizabeth Technikon (PET), the University of Port Elizabeth (UPE), and the Port Elizabeth campus of the Vista University (Vista PE). PET has its roots in the country's oldest art school, founded in 1882. Over the years, it developed a strong vocational orientation substantiated around the professional training of a student population primarily composed of white (Afrikaans) students. At the time of the merger, PET enrolled close to 10,000 students. Founded in 1964, UPE was the country's first, dual-medium residential university. With strong links to the former apartheid political regime, its profile was characterised as a 'whites-only' academic establishment. Even though its original mission was that of acting as a 'real' or classic university in the Humboldtian sense, i.e. direct involvement with teaching and research activities (Nybom 2003), in reality, UPE's primary task gradually became the training of professionals for the public and private sectors as well as the socialisation of local economic and political elites (c.f. Castells 2001). Before the merger, UPE enrolled around 14,000 students, a third of whom undertook distance education. As for Vista University, founded in 1982 and composed of seven decentralised campus, its PE-based unit (Vista PE) originally consisted of a small, prefabricated building located at the edge of Zwide township, opening up access to mostly black students from socially – and financially – disadvantaged backgrounds. Initially focused on the upgrading of teachers for the region, Vista PE enlarged its mandate over the years, producing graduates across a wide variety of subject areas including business, law, science and the humanities. One year prior to the merger leading to the creation of NMMU, Vista PE was amalgamated with UPE. At that time it enrolled close to 2,000 students.

The distinct profiles of the merged institutions mirror their historical levels of engagement with the region and its various stakeholders. Whereas PET and Vista PE were characterised as possessing a strong regional – or

engagement – ‘ethos’ (Pinheiro 2012a), the latter through community outreach and the former via strong interactions with regional industry across sectors of the local economy such as agriculture, manufacturing and tourism, UPE, on the other hand, had traditionally been characterised by weak levels of local engagement partly given its strong connections with the former political regime and also since it conceived of its primary role that of addressing the needs of the nation as a whole. Having said that, the situation at the former UPE started to change prior to the merger as a consequence of the reforms set in motion by the new democratic political regime. The arrival, in 2002, of a new central leadership led by Vice Chancellor (VC) Stumpf, who would later become NMMU’s first VC/CEO (2005-2008) and the main architect responsible for executing the structural changes around the merger, brought a new strategic agenda to the fore. At the heart of the strategy was the notion of ‘local engagement’ with the ultimate goal of forging a new ‘social pact’ between UPE and its immediate geographic surroundings (Pinheiro 2010).

Institutional Profile

NMMU’s core activities are organised around seven faculties, twenty schools, and sixty five disciplinary-based departments, spread across six campuses; five within the Metro and one in the Southern Cape city of George. In 2008, the university employed a total staff (permanent and temporary) of 4,160, half of whom were females (NMMU). The largest ethnic groups were Whites (54%) and African (31%), followed by Coloured (9%) and Indian (3%). About a third of NMMU academics possess a doctoral degree, the average amongst South African HE institutions (Bailey et al. 2011:71). The ethnic profile amongst permanent academic staff changed slightly during the period 2005-2010. Whereas in 2005, 81.5 per cent of academics were Whites, by 2010 this figure had declined to 76.1 per cent (NMMU). This was accompanied by an increase of 3 per cent and 2.3 per cent in the relative number of permanent academic staff of Coloured and African descents, respectively. The percentage of those with an Indian ethnic background has remained stable. As for its student population, in 2010, NMMU enrolled 26,119 individuals, the bulk of which (more than 85%) were contact (on-campus) students at the undergraduate level. Student enrolments rose by 8 per cent since 2005. However, students’ ethnic profiles remained relatively unchanged during this period, marked by a minor decline of 1.6 per cent in the number of Whites and a correspondent increase in the relative number of students with a Coloured ethnic background.

By 2010, the bulk of NMMU's student population, close to 60 per cent, was composed of Africans, followed by Whites with a quarter of all enrolments, and Coloured (14%). Indians corresponded to about 2 per cent of all students. In 2008, 87 per cent of student enrolments were at the undergraduate level, 54 per cent were female, 77 per cent of students originated from the Eastern Cape, and close to 9 per cent came from overseas, mostly from Africa (NMMU). The most significant change in the period 2005-2010 was a notable rise in the 'student to academic staff ratio', from 31:1 to 46:1, respectively. The policy target-figure for South African HE is about 20:1 (Bailey et al. 2011:69), which indicates the various challenges facing NMMU as an organisation.

In 2009, the largest internal academic unit was the faculty of Business and Economic Sciences with a third of all student enrolments. It was followed by the faculties of Engineering, the Built Environment and Information Technology (21%), Education (14%) and the *Arts* (13%). The smallest academic unit was the faculty of Law with 4 per cent of enrolments. The separate campus at George contributed about 4 per cent of total enrolments.

NMMU's research infrastructure is composed of three institutes, four specialised centres and seventeen dedicated units spread across its seven faculties and six campuses. The ratio of research publication units to permanent academic staff in 2009 was 0.4, the same as in 2005, yet this figure rose to 0.9 when weighted by total research outputs (Bailey et al. 2011). Of the 574 permanent academics employed by NMMU in 2010, about 10 per cent were actively involved with scientific efforts of an international nature. During 2008, a total of 156 scientific articles were produced, with the faculties of Science and the Arts leading the way with close to half of all publications combined. NMMU produces about 35 doctoral graduates on an annual basis. In recent years, a number of research strengths have been identified. These range from thematic areas like environment and ecology, marine and estuary studies, optic fibres and electron microscopy, mathematics and science education, nursing and community health, architecture and the built environment, and engineering technology (Pinheiro 2012a).

Strategic Platform

As far as strategic efforts by NMMU's central steering core (Clark 1998) are concerned, two main phases can be identified. The first phase (2005-2008), driven by the former administration, was characterised by an urge to consolidate, structurally speaking, the amalgamation between the three institutions, with little attention paid to long-term strategic matters. According

to key actors directly involved with the process of internal transformation, a decision regarding NMMU's formal structure was already taken prior to any strategic considerations being discussed. The mandate of the previous central administration was clear, i.e. to exercise the merger as soon as possible. When asked about the process, in retrospect, NMMU's former VC/CEO promptly replied that he wished the process had taken less time than it actually did. The second phase (2009-ongoing) is characterised by the change in central leadership structures and the consolidation, structurally and culturally, of the merger process. In contrast to the first phase primarily focused on formal structures, tacit dimensions such as a shared sense of identity/culture (Stensaker 2004) and long-term strategic decisions around NMMU's institutional profile (mission and vision) were brought to the fore. During the second phase, considerable attention was paid to instituting a process of wide consultation across the various sub-units composing NMMU's academic heartland (Clark 1998). The university's current mission statement highlights the importance attributed to its direct contributions to social development at a variety of levels, namely:

To offer a diverse range of quality educational opportunities that will make a critical and constructive contribution to regional, national and global sustainability (NMMU).

Regarding NMMU's regional role or mission, the data shows that internal stakeholders, senior academics and administrators alike, conceive of 'the region' as a multi-layered entity encompassing a wide variety of levels; presented here in order of strategic importance. The first layer pertains to the immediate local environment, that of the Metro. The second layer is that of the Eastern Cape Province and the Southern Cape region, including geographic areas where other regional HE institutions are also present. The third layer is composed of the entire country. And the fourth and final layer encompasses the African continent as a whole. This multifaceted strategic orientation is reflected in NMMU's research, technology and innovation strategy that, amongst other aspects, highlights 'the need to address societal challenges in terms of wealth creation and improving quality of life' through 'developing research and innovation themes that address national, regional and local imperatives.' (NMMU 2007:3) There is evidence suggesting that NMMU's geographic locus of operation is a function of three distinct, but nonetheless inter-related factors: (a) the geographic origins of its student population, the bulk of which comes from the Eastern Cape (undergraduates) and neighbouring countries (postgraduates); (b) its historical presence

across the region and its scope of operations (core vs. peripheral tasks), with an anchoring in the vicinity of the Metro and the cities of PE and George; and (c) resource dependencies, with an increasing focus being paid to international dimensions across teaching (student recruitment) and research (third stream funding).

Organizational Design

NMMU's operational template is based on a multi-campus model with academic units spread across seven locations. In recent years, a series of strategic decisions were taken to locate certain operations in the immediate vicinity of specific external constituencies or target groups such as local townships. Examples include an off-campus farm hosting agricultural students specialising in game management; the recently created Business School and its various outreach units; a Law Clinic; a Community Development Unit; an Institute for Sustainable Government and Development; and a Sustainability Research Unit. The campuses at Missionvale (PE township) and George (Southern Cape) are run as quasi-independent units with their own managerial structures, distinct missions, and academic profiles. A particular emphasis is given to the needs of the surrounding communities. Whereas at Missionvale the model adopted is that of a multi-academic programme (science, technology and education) with a particular focus on societal goals like poverty eradication and sustainable development, at George the strategic priority lies in promoting social and ecological sustainable development through teaching, research and community engagement, including close ties with local industry. In contrast to Missionvale, which primarily attracts black students from within the township, close to half of the students at George are white and originate from the Western Cape.

Primary Activities

NMMU's teaching and research activities can be grouped along two distinct types of activities or structures: those undertaken along its academic core versus that of its extended periphery. Whereas the latter pertain to those tasks specifically targeting the immediate and/or future needs of external actors within and beyond the region, the former are composed of degree programmes (undergraduate and graduate levels) and strategic research efforts, basic and/or applied (see Pinheiro 2012a).

With respect to curriculum structures, there is a rather strong alignment between NMMU's overarching strategic framework and structural and programmatic features at the sub-unit level, particularly so regarding internal

responses to environmental demands. The data shows that, across the board, a number of internal units are currently revamping their programmatic offers in order to reduce the existing gap between these and external (e.g. labour market) requirements. One such example is the creation of extended programs addressing the shortcomings associated with ill-prepared students originating from the struggling secondary school system across the Eastern Cape. Another priority area is the involvement of undergraduate students with 'work-integrated-learning', where they are expected to obtain a period of hands-on experience. The combination of 'hard' and 'soft' skills in the curriculum is also being enhanced. For example, in the area of business and management studies, a special focus is put on training students in practical-related matters so as to make them more capable of managing their own business ventures.

Structurally speaking, the impact of regional dynamics at the unit level can be illustrated in the creation, in 2005, of a multi-disciplinary school dedicated to economics, development studies and tourism. Its mission is that of contributing to the broader development of the Eastern Cape and the African continent as a whole, through relevant and innovative education and research. Another example is the decision to relocate the recently created Graduate School of Business, the first ever in the municipality, to the inner city of PE, in light of local government plans to modernise the area. Internal responses to external events are not limited to local dimensions per se, but also take into consideration matters of national priority, as exemplified by the creation of undergraduate programmes in the fields of chartered accounting and financial planning, out of an ongoing dialogue with professional associations. In recent years, an important strategic measure undertaken by various faculties pertains to the active involvement of various external constituencies (industry, alumni, other HE institutions, etc.) in internal decision-making processes. The data shows that, across NMMU, the ability to respond to and positively influence external dynamics lies at the heart of the strategic agenda of many internal units.

When it comes to the impact of external dimensions in NMMU's strategic research agenda, there is a strong willingness by various internal units to produce knowledge which is both of direct benefit to local actors (industry, civil society, government agencies, etc.) and likely to have a positive impact on the broader development (economic, social, political, cultural) of the region and the country as a whole. One area in which this aspect comes to the fore is through the academic work of postgraduate (Masters and PhD) students who often choose to address a particular area of importance to the

regional surroundings in their final dissertations, as pointed out by respondents associated with the faculties of business/economics and the arts. In this respect, there is an increasing effort to make such knowledge goods available to a broader public. This can take a number of forms: a public presentation of major findings, a policy report and/or scientific publications. Yet, major limitations remain partly as a result of time constraints associated with heavy workloads (teaching) and also given the absence of adequate incentive systems. From a structural perspective, NMMU's central administration has been supporting the creation of a set of interdisciplinary Centres of Excellence focusing on research themes considered to be of regional, national, and international (African) importance; renewable energy, telecommunications, conservation ecology, democracy, schooling, etc.

With respect to peripheral structures and activities targeting the specific needs of external constituencies, the merger has created an unprecedented opportunity to leverage existing synergies in light of NMMU's regional mission. At the level of the central administration, the Higher Education Access and Development Services unit (HEADS) plays a key role in assisting academic units with the establishment of short-term courses targeting non-traditional student audiences. Collaborative partnerships with external stakeholders are under the responsibility of the Centre for Academic Engagement and Collaboration (CAEC) whose mission is to serve as the interface between internal and external constituencies. The unit plays a critical role in processes of institutionalisation (Olsen 2007), particularly insofar as formalisation, i.e. devising rules and standardised operational procedures regulating (shaping) the behaviour of individual actors at the sub-unit level. CAEC has not only identified members of the academic staff who are actively involved with externally sponsored projects of any kind, but it has also devised an electronic database system for cataloguing both the nature and scope of outreach-based endeavours in an attempt to better 'manage' external engagement. The latter unit is also involved with the formalisation of agreements with strategic partners.

Technology transfers in the context of innovation (Etzkowitz and Leydesdorff 2000) have been the target of national policy agendas in recent years. Within NMMU, such tasks are under the auspices of the Innovation Support and Technology Transfer Office. Created in 2007 with the financial support from the Department of Science and Technology (DST), the unit's official mandate is that of supporting academics in recognising and exploring commercialization efforts and to provide a 'one-stop shop' for information and support on a number of strategic issues like external-grants and

contracts. Its tasks also include the management of intellectual property rights and start-up ventures. According to internal sources, the primary motivation behind such efforts is not revenue generation *per se*, but instead the willingness to address external expectations as regards the transfer of university-generated knowledge to the outside.

Community outreach is at the forefront of NMMU's external engagement agenda. In many instances, such efforts preceded the formal merger, with various academics from the former institutions directly involved with non-core (peripheral) activities targeting the local community in/around the Metro. The faculty of business and economics is a good example. The graduate business school's Small Business Unit is actively involved with providing business development services and feasibility studies to local entrepreneurs. Such initiatives are externally funded by national government and the private sector alike. Another compelling example can be found at the faculty of arts via the work of the Raymond Mhlaba Research Unit for Public Administration and Leadership, an outreach unit involved with research, consultation and training services aimed at improving the effectiveness and efficiency of the national, provincial, and local public administrations. The unit is also involved at the grassroots level, providing training to community members where a strong emphasis is given to raising individuals' sense of economic and social empowerment in the context of social emancipation and democratic transformation.

A significant development with respect to core and peripheral structures pertains to a general willingness to embrace a new organisational paradigm. Contrary to what has been the case in the past, there is now an internal conception of NMMU's primary tasks (teaching, research and service) as being integrated with one another rather than being structurally decoupled (Orton and Weick 1990). This attitude is visible both at the level of the central administration as well as across the various units.

I would like to see the teaching/learning, research and the [regional] engagement [functions] as being seen as integrated, not seen as three separate. So that community engagement is part of teaching or informs teaching or seen as one does research as part of one's community engagement. (Senior Administrator, Faculty of Arts)

An example of such developments is NMMU's Law Clinic, a peripheral unit hosted by the Institute for Sustainable Governance and Development (ISGAD) based at the faculty of law. As such, a mandatory requirement is in place stating that senior (final year) undergraduate students from the

faculty of law shall contribute a minimum of 90 minutes per week to the clinic's outreach-based activities. In essence, ISGAD is used as a socialization arena for future lawyers, inculcating them with values such as community service and local engagement. Similarly, the Advanced Mechatronic Technology Centre (AMTC) hosted by the faculty of engineering, the built environment and IT is not only actively involved in direct support to local industry, particularly small businesses, but it also contributes to the faculty's teaching activities by providing an important basis for novel degree programmes, for example in the emerging field of mechatronics.

Notwithstanding this, there are a number of circumstances across fields and sub-units where a clear structural demarcation or de-coupling between core and peripheral arrangements exists. Perhaps the best example pertains to the limited involvement of non-academic, full-time staff employed by peripheral units in core, teaching activities leading to a formal degree. On aggregate, the data shows that, at the sub-unit level, the levels of formalisation and/or integration between types of activities are a direct function of two key factors: the degree of involvement of tenured academic staff in peripheral endeavours, and the presence of resource and/or incentive structures.

Key Findings

Given the limited scope of this article, two key aspects are worth reflecting upon. Firstly, the effects of the environmental dynamics across the university, in light of the notion of organizations as open systems (Scott 2008; see also Pinheiro 2012a, b). Secondly, the degrees of integration or coupling (Orton and Weick 1990; Oliver 1997) between distinct levels or types of activities, in this case as regards the interplay between core and peripheral arrangements.

Environmental Conditions and Internal Dynamics

The data sheds light on the direct and indirect effects of the (macro-level) institutional context in which NMMU operates. The structural and cultural changes brought by the merger resulted from national government imperatives, particularly with respect to addressing critical issues such as equity/access, efficiency/performance and institutional differentiation/profiling. The establishment of new organizational forms (comprehensive universities) brings, nonetheless, new challenges and dilemmas. Path dependencies are not unimportant in this regard. Institutionalising an internal ethos of local engagement across the board implies reversing past traditions and academic

postures with respect to the traditional role, or the lack thereof, of the university in the context of the region. Yet, historical legacies can also be of relevance in aiding processes of de-institutionalisation (abandonment of existing arrangements) and re-institutionalisation or the devising of new rules/structures (c.f. Olsen 2010). A case in point pertains to the experiences and (external) legitimacy brought by staff associated with the previously engaged universities. The role of local champions or academic entrepreneurs (Bercovitz and Feldman 2008) in forging internal synergies amongst academic groups/units and in establishing bridges (networks) with regional actors is of primordial importance, confirming earlier findings with respect to the critical role of the academic heartland during processes of internal change and transformation (Clark 1998). Having said that, the NMMU story also reveals that, as a process, university adaptation and change is most sustainable when ad hoc efforts by individual academics are supported by a wide range of strategic initiatives, both within sub-units (faculties) as well at the highest levels of hierarchy (central administration). The data is categorical in supporting the assumption, by 'old' institutional perspectives (Selznick 1984, 1996), that leadership structures across the board, what Clark (1983) has termed the 'middle structure', play a vital role in mediating between external demands (within and beyond the region) and internal goals and aspirations at the level of the understructure or 'academic heartland' (Clark 1998). In other words, NMMU's case sheds new light on the dynamic and complex interplay between macro-level structure and micro-level agency (Leca et al. 2008), reiterating the assumption in the literature regarding the active role of individuals within organisations operating in highly institutionalised environments (Powell and Colyvas 2008; Scott and Christensen 1995), as is the case with HE systems (Clark 1983; Olsen 2007; Pinheiro et al. 2012). In doing so, this case also casts fresh evidence on the relationship between external engagement and internal transformations (Perry and Harloe 2007; Pinheiro 2012c), both insofar the structural (Clark 1983, 1998) as well as the cultural (Stensaker 2004) side of universities.

NMMU's case also points to the importance attributed to institutional profile and identity (Stensaker and Norgård 2001) emanating from its new ('forced') status as a comprehensive or 'dual' university (Garrod and Macfarlane 2009). On the one hand, as shown above, NMMU has voluntarily adopted a number of formal and informal features associated with the traditional stylised model of the 'research-intensive university' (Pinheiro 2012a, b, c), a process known as mimetic isomorphism (Powell and DiMaggio 1991). Such a strategic posture (see Oliver 1991) aims, first and foremost, to ad-

dress the legacies of the past when it comes to the lack of internal competences and a favourable external reputation in the realm of research activities. This process is geared towards enhancing NMMU's internal legitimacy (Deephouse and Suchman 2008) vis-à-vis the institutions of science (Drori 2003) and HE (Meyer et al. 2007) on the one hand, and the (domestic/international) organisational field of HE (Powell and DiMaggio 1991; Pinheiro 2012a), on the other, thus shedding light on the institutional fabric of the modern university (Scott and Christensen 1995; Maassen and Olsen 2007). Having said that, on the other hand, this case also provides unequivocal evidence of the search for a distinct organisational form or design (Galbraith 1977) and a meaningful cultural identity (Stensaker 2004) in light of the unique regional (Eastern Cape), national (South Africa), and international (Africa) contextual circumstances in which NMMU operates. In other words, both isomorphic or the need to be like others (Powell and DiMaggio 1991) and polymorphic, i.e. the quest for differentiation, behaviours (Fleming and Lee 2009) are clearly identified (see also Fumasoli et al. 2012).

Structural Coupling

The data shows that, given the importance attributed to undergraduate education at the expense of graduate and postgraduate instruction and high-level research, NMMU's academic core is rather unbalanced (Pinheiro 2010, 2012a; Cloete et al. 2011). This aspect is intrinsically linked to institutional legacies or 'path dependencies' (Krücken 2003). When it comes to its 'extended developmental periphery' (Clark 1998), the existing formalised arrangements at NMMU tend to privilege traditional outreach functions such as community service (Soska and Butterfield 2004) or outreach to the detriment of knowledge-based third stream activities like technology transfers and innovation (Etzkowitz and Leydesdorff 2000). This is, to a great degree, a reflection of two distinct but nonetheless interrelated aspects, namely the lack of high level scientific competence within the fields of science and technology, and the absence of knowledge and research intensive industries within the region. This situation resembles a kind of vicious circle. Over time, the lack of scientific competence by local academics has resulted, indirectly, in a rather low absorptive capacity (Vang and Asheim 2006) amongst regional actors, public and private sectors alike, throughout the Eastern Cape. One direct consequence pertains to the absence of a vibrant regional innovation system (Nilsson 2006) capable of catapulting the province to play a major role in the global, knowledge-based economy.

Finally, in terms of the degree of coupling between core and peripheral activities, the data suggest a gradual move from 'loosely-coupled' (Orton and Weick 1990) and/or 'decoupled' (Bastedo 2007) arrangements towards a stronger structural integration at the level of the academic core, as suggested earlier by some (Vorley and Nelles 2008) and empirically observed by others (Pinheiro 2012a, b). Strategically speaking (c.f. Zechlin 2010), the institutionalization of the 'third mission' of regional development (Pinheiro et al. 2012) in/around NMMU's academic core is expected to contribute to three key aspects, namely: (a) strengthening the university's institutional profile; (b) enhancing the ability to tap into additional sources of external funding; and (c) aiding the gradual development of a distinct organisational culture and identity.

Concluding Remarks

The recent creation of a comprehensive university sub-sector in South Africa is part and parcel of a growing trend where the HE sector as a whole is expected to respond more adequately to the demands emanating from its external environment. In the specific case of NMMU, the merger process has created an unprecedented opportunity for forging a number of structural and programmatic innovations aimed at connecting or 'bridging' the university with the outside world, including its immediate geographic surroundings. A number of key developments were identified: first, the adaptation of the university's institutional profile and strategic platform in light of its local and global aspirations; second, a series of structural and programmatic innovations (core and peripheral levels) aimed at leveraging the internal capability for addressing or responding to emerging external demands, with a particular focus on dynamics (current/future) across the Eastern Cape; and third, attempts at improving the integration or coupling between core (teaching and research) and peripheral or 'third-stream' tasks.

Finally, when it comes to the capacity of NMMU to respond to and contribute towards external developments and dynamics, it is clear that the university's ability to impact on the further development of the Eastern Cape province, South Africa and the African continent as a whole is intrinsically dependent on its scientific capabilities or the strength of its academic core (see also Cloete et al. 2011). Not only is a strong academic core the foundation for a relevant and robust extended periphery addressing the needs of external actors, but equally important, the sustainability of NMMU's regional mission is directly dependent upon the institutionalisation of regional dimensions (see Pinheiro 2012a, b; Pinheiro et al. 2012) in/around core ac-

tivities as well as the degree of integration (tight coupling) between these and its extended developmental periphery.

Acknowledgements

We would like to thank all respondents based at NMMU, especially Dr Charles Sheppard, Director for Information Management, for their kind assistance during the interview sessions and also in providing access to institutional data, and to Professor Thierry Chevaillier, Institute for Research in the Sociology and Economics of Education (IREDU), University of Burgundy, for the abstract translation into French.

Notes

1. 'Institutionalisation' pertains to the processes via which rules and repertoires of standard operating procedures are established and are supported by specific (organizational) capabilities and the allocation of resources, both human and financial (Olsen 2010).
2. NMMU. Nelson Mandela Metropolitan University. Online at: www.nmmu.ac.za.
3. CHET. Center for Higher Education Transformation. Online at: <http://chet.org.za/>
5. NMMU. Nelson Mandela Metropolitan University. Online at: www.nmmu.ac.za.
6. CHET. Center for Higher Education Transformation. Online at: <http://chet.org.za/>

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