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Examining the performance of the South African economics departments, 2005-2014

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Abstract
This study examines the teaching and research activities of 17 Economics Departments in 2005-2014 by consulting the information from each university's faculty prospectus, publication in accredited local and international peer-reviewed journals, Economic Society of South Africa conference participation, Economic Research Southern Africa working paper series and the National Research Foundation. The results indicate there is big variation in the departments' teaching and research activities during the period. Nonetheless, research output increased, in particular publication in accredited international journals in both absolute and proportional terms.

1. Introduction

Over the past two decades, there has been a growing body of research into the performance of economics departments internationally. Information on the ranking of the departments, although controversial at times, provide answers to questions asked by students, job seekers, university administrators and government officials, especially when it comes to the disbursement of a large sum of money amongst the tertiary institutions (Lee *et al.*, 2010:1346).

For students, information on the performance of the departments suggests the currentness of departmental knowledge and skills, and serves as a proxy for university quality which influences the students' decision on where to study (Graves *et al.,* 1982:1131; Miller *et al.,* 1996; Cokgezen, 2013:96; Macri and Sinha, 2006:112). Job searchers who would like to work in the best academic research environment could use the information as a low-cost proxy to identify the most suitable institution for potential employment upon completion of doctorate studies (Graves *et al.*, 1982:1131). University administrators use the information to evaluate the progress of the departments, if not a tool for raising funds (Scott and Mittias, 1996:378), while the governments would be able to identify the most productive institutions when providing research funds (Macri and Sinha, 2006:112). Finally, the economics departments may have very little knowledge of what has been happening at other institutions (Luiz, 2004:184). Particularly in South Africa, it has been more than 10 years since the mergers and rationalisation of tertiary institutions took place, so it is important to conduct a study to assess the recent changes and current state of the economics departments.

While there has been a lot of research literature on the performance and rankings of economics departments throughout the world (in particular the abundant studies in the United States), South Africa lags behind with only two studies conducted (Luiz, 2004, 2009), with one of them being done before the merging of the tertiary institutions took place. In addition, these studies evaluated the performance of the departments by mainly relying on the information provided by the departmental chairpersons in a survey, so departments that did not respond to the survey were excluded from the analysis.

It has been 7 years since the last major study of South African economics departments took place, so it is important to investigate the latest developments in teaching and research of the departments. This study examines the activities of the departments in 2005-2014, covering information ranging from staff profiles and curricula, to academic conference participation and publication on accredited journals. Section 2 reviews the commonly adopted methodologies used to rank the departments. Section 3 discusses the methodology and data collection of this study, while Section 4 presents the findings, before Section 5 concludes.

2. Literature review

This section reviews the commonly adopted methodologies to rank the economics departments in recent literature, namely survey, graduate outcomes, teaching activities, journal publications, citations and impact factor. In the two South African studies (Luiz, 2004, 2009), in addition to using the actual data compiled on staff profiles, teaching and research by a detailed survey, the departmental chairpersons were asked to rate and rank the teaching and research of the departments based on their perceptions, before the correlation between the perception-based ratings and the objective total research output of the departments was examined. However, one shortcoming of the survey approach is that any inference based on the data from the surveys could be "overtly subjective and vulnerable to measurement errors" (Dusansky and Vernon, 1998:165).

For the graduate outcome approach, the two focus areas are the graduates' publication and labour market outcome. Laband (1985) as well as Miller *et al.* (1996) ranked the departments by looking at publication by graduate students; Amir and Knauff (2005) focused on doctorate students' placement by examining how they fared with regard to employment in economics departments or business schools of the universities upon graduation.

Few studies examined the teaching activities of the departments (Luiz, 2004, 2009; Johnson *et al.*, 2012). In particular, Johnson *et al.* (2012) focused on the importance of econometrics in the undergraduate program of nearly 1,500 American colleges and universities as they argued that econometrics has become increasingly important and should be a compulsory subject for students majoring in economics.

For studies using research output to rank the departments, publication in accredited journals was chosen as the primary indicator. Whilst academics also publish in books and working papers, it is relatively more difficult to evaluate the quality of these alternative

outlets compared to peer-reviewed accredited journal articles, which have undergone a rigorous peer review process (King, 2000:3; Macri and Sinha, 2006:113).

Studies using peer-reviewed journal publications to rank the departments could be categorised into three groups: (*i*) those using the total number of journal articles published (*e.g*. Gerrity and McKenzie, 1978; Luiz, 2004, 2009; Macri and Sinha, 2006; Cokgezen, 2013); (*ii*) those using the total number of pages of journal articles published, without accounting for potential quality differences across the journals (*e.g*. Gerrity and McKenzie, 1978; Graves *et al*., 1982; Laband 1985; Miller *et al*., 1996; Scott and Mitias, 1996); (*iii*) those using the total number of pages of journal articles published, after considering the quality differences (if any) across the journals (*e.g*. Tschirhart, 1989; Conroy *et al*., 1995; Dusansky and Vernon, 1998; King, 2000; Coupè, 2003; Kalaitzidakis *et al*., 2003; Lubrano *et al*., 2003; Grijalva and Nowell, 2008; Lee *et al*., 2010; Mukhopadhyay and Sarkar, 2010; Anderson and Tressler, 2011). Regarding studies under groups (*ii*) and (*iii*), as font size and line spacing differ across the journals, the American Economic Review (AER) equivalent size number of pages was derived before the departments were ranked. For studies under group (*iii*), criteria such as number of citations and impact factor were used to derive the "quality or prestige weight" of each journal, before the total number quality-adjusted AER-equivalent size number of pages was derived to rank the departments. In simple equation terms, this was derived as $\sum_{i=1}^{i=k} Weight_i \times Pages_i$, where $Weight_i$ stands for the weight of journal i (out of k journals there were considered) while $Page_i$ represents the total number of AER-equivalent size number of pages published on this journal by the department. That is, for studies under group (*ii*), $Weight_i$ equals to one across all journals, but for studies under group (*iii*), the greater the weight, the higher the quality of the journal.

Studies under group (*i*) and (*ii*) are relatively straightforward by assuming the journals are equal in quality. One drawback of using the number of pages of journal articles published to rank the department is that there is no clear indication of strong positive correlation between length and importance, that is, "longer articles need not be better" (Macri and Sinha, 2006:113). Also, articles published in "major" journals may never be read while articles published in "minor" journals could be read and used extensively (Gerrity and McKenzie, 1978:610; Laband, 1985:218) so it may not be appropriate to treat all journals as the same, because "minor" journals could be easily accessible than "major" journals. Another shortcoming is that using the sheer number of publications is "too crude an indicator of a department's productivity or quality because it fails to consider the quality of the publisher" (Miller *et al*.., 1996:704).

The "quality or prestige" weight of each journal was derived using the impact factor of the journal, which generally stands for "the average number of current citations of articles published by a journal" (Cokgezen, 2013:97). A citation indicates a journal article not only has passed the hurdle of the peer review process to be accepted for publication, but also has been found relevant to someone else's work (Gerrity and McKenzie, 1978:610). Hence,

citations are a good way to quantitatively measure the quality of an article. This also implies that the higher the number of citations a department has accumulated over a period of time, the more productive the department is.

Nonetheless, there are criticisms on the reliability of the impact factor and citation statistics. First, due to the extreme tediousness of counting citations, it is virtually impossible to check if the publicised citation figures (and subsequently the impact factor of the journal) are accurate (Ramsden, 2009:139). Secondly, the impact factor of journals publishing articles from a broader area of science would inevitably be higher than the impact more specialist journals (Ramsden, 2009:139). For instance, an economics journal that publishes articles from all subject areas would enjoy a greater impact factor compared to another economics journal that only published articles in the area of public economics. Some articles with great professional impact may receive little citation credit as time goes by, as the knowledge introduced have become so common that the original authors are no longer cited (Laband, 1985:219). Also, an article could be heavily cited only because of the mistakes the article contains (Lubrano *et al.*, 2003:1368).

Self-citations could be serious in some journals (it was done unintentionally by the authors or it happened as the editors coercing the authors to add citations to their journal), thereby infl the total citations and the impact factor, and subsequently biasing the ranking of the departments (Kalaitzidakis *et al.*, 2003:1348; Wilhite and Fong, 2012:542). A time gap exists between the time the article is read and the time the readers incorporate it in their work. This time lag puts the recently published articles in a relatively disadvantaged position (Miller *et al.*, 1996:705). To correct for this, one common approach is to divide the total number of citations an article received by the number of years since publication, before a more reliable impact factor of the journal could be derived (Coupe, 2003:7). To conclude, ranking the relative quality of journals could be a highly subjective process.

As the staff size may differ across the departments, per-capita figures should be used to rank the departments to avoid producing biased results favouring larger departments (King, 2000:5; Macri and Sinha, 2006:113). Surprisingly, only few studies adopted this approach (Miller *et al.*, 1996; King, 2000; Luiz, 2004, 2009). Few studies went further to rank the lecturers by deriving the quality-adjusted total number of pages of journal articles published for each lecturer (*e.g.* Miller *et al.*, 1996; King, 2000, Coupe, 2003; Macri and Sinha, 2006), while others ranked the departments by subject area (*e.g.* Tschirhart, 1989; Grijalva and Nowell, 2008). Finally, Graves *et al.* (1982) and Anderson and Tressler (2011) conducted econometric analysis to investigate the influence of various factors (remuneration, teaching hours, rank, and demographic characteristics like age and gender) on the research output of the academics.

3. Methodology and data

The teaching and research activities of 17 economics departments in 2005-2014 are examined in this study. These departments either come from traditional (theoretically-

oriented)[1] or comprehensive (both theoretically- and vocational-oriented)[2] universities. Universities of technology are not included in the study.

The data with regard to teaching activities, namely modules offered at each level in 2014[3] , was sourced from the commerce (or economic and management sciences) faculty prospectus of each institution.[4] To assess research performance, activities of the departments in the following areas are examined: (*i*) participation at the 2009, 2011 and 2013 Economic Society of South Africa (ESSA) Conference; (*ii*) publication on the 2005-2014 Economic Research Southern Africa (ERSA) working papers; (*iii*) articles published in the local and international journals accredited by the Department of Higher Education and Training (DHET) and listed on the Institute for Scientific Information (ISI) and International Bibliography of the Social Sciences (IBSS), respectively (DHET, 2015); (*iv*) whether the lecturing staff members were awarded the National Research Foundation (NRF) rating in 2014.

In this study, articles of various lengths are treated as the same, *i.e.* "longer articles need not be better", as mentioned above. That is, the total number of journal articles (instead of total number of pages of these articles) is examined. The "unit" allocation to each institution was estimated on the following premise: in the situation where one person published an article alone and only worked for institution X, one unit was allocated to this institution. When one person published an article alone but worked for institutions X and Y, half a unit was allocated to each institution. Where two authors were involved and one worked for institution X while the second author worked for both institutions Y and Z, 0.5 unit was allocated to institution X, 0.25 unit each was allocated to institutions Y and Z. If two authors were involved in the publication of an article and they worked at the same institution X, the entire one unit was allocated to the institution. The scenario where multiple authors were involved, with two/three/four authors who solely worked at different institutions, 0.5/0.33/0.25 unit was allocated to each institution. Similar reasoning applies regardless the number of co-authors involved in the publication of an article, providing they all worked at different institutions. Publications by non-academics were not included for the analysis.

Journals accredited by DHET as well as the ISI and IBSS journals published in South Africa are regarded as local journals (*i.e.* ISI and IBSS journals published outside South Africa are regarded as international journals). As far as the control of quality of the journals is concerned, the following six methods would be adopted:

[1] University of Cape Town (UCT); University of Fort Hare (UFH); University of Free State (UFS); University of KwaZulu-Natal (UKZN); University of Limpopo (UL); North-West University (NWU); University of Pretoria (UP); Rhodes University (RU); Stellenbosch University (SUN); University of theWestern Cape (UWC); University ofWitwatersrand (Wits).

[2] University of Johannesburg (UJ); Nelson MandelaMetropolitan University (NMMU); University of South Africa (UNISA); University of Venda (Univen); Walter Sisulu University (WSU); University of Zululand (UniZulu).

[3] Two exceptions were UJ and UniZulu as only the 2015 faculty prospectus could be obtained by the authors.

[4] The authors initially emailed a questionnaire to the 17 departmental chairpersons to capture information on teaching, but only 4 responses were received, so it was decided to examine the information on faculty prospectus. One possible drawback is that some electives shown on the prospectus may not be offered in 2014 due to reasons like non-availability of the staff to teach the modules and low enrolment (e.g. the Economics Department of UWChas a policy that an elective would not be offered if fewer than 4 students enrolled it).

1. All publications are treated as the same;
2. Publications in the international journals are given a weight of 3, *i.e.* the weight adjustment approach of Luiz (2004, 2009) is adopted;
3. The impact factor of the journal in the year of publication is used to weight the article, *i.e.* the higher the impact factor of the journal, the greater the weight of the article;
4. As impact factor may fluctuate greatly from year to year, the 5-year impact factor (2009-2013) of the journal is used to weight the article;
5. The product of the impact factor and the total number of citations of the journal in the year of publication is used to derive a quality index between 1 and 10[5], and this index is used to weight the article;
6. As the number of citations of the journal may also vary a lot annually, the product of the 5-year impact factor and the average annual number of citations (2009-2013) of the journal is used to weight the article;

The statistics on impact factors and number of citations of the journals are obtained from the Journal Citation Reports online database. In all six approaches, differences in staff size would be taken into consideration by deriving per-capita figures for each department. Four drawbacks of the study are as follows: (*i*) it is not possible to obtain information on the staff size on UL, so only 16 departments were assessed when it comes to the per-capita research output; (*ii*) it is not possible to investigate the teaching activities at UL, as it was not possible to obtain the faculty prospectus, and the department did not specify the courses offered on the departmental website; (*iii*) it was not possible to obtain information on research output of five departments (UFH, UL, Univen, WSU and Uni-Zulu); (*iv*) For NWU, only the information on research and staff size of the Potchefstroom campus was obtained.

4. Findings

4.1 Staff Profile

Table 1 presents a breakdown of the staff size, highest qualification and rank of the lecturing staff members in each department in 2014. Significant variation in the sizes of these departments can be seen, ranging from as small as 5 at WSU and UniZulu to as high as 38 at UCT and 39 at UNISA (the average staff size across all departments was 20).[6] Comparing with the two Luiz studies, after the merging of tertiary institutions, UCT, UJ (which was founded after the merging of Rand Afrikaans University, Technikon Witwatersrand as well as the Soweto and East Rand campuses of Vista University) and UNISA are the three departments with relatively larger staff size.

In 6 departments, more than half of the staff members have a doctorate degree (PhD). The average proportion across the 16 departments is 47.1% (it was 47% in the 2009 Luiz study that included 11 departments). Only 2 departments (UCT and UP) met the minimum international accreditation norms of 75%. The results suggest that the

[5] This is the approach used by Lubrano et al. (2003). If 0<product_25, the quality index is 1; if 25<product_100, the index is 2; if 100<product_250, the index is 4; if 250<product_1,000, the index is 6; if 1,000<product_5,000, the index is 8; if product>5,000, the index is equal to 10.

[6] Both permanent and contract staff members were included, but Emeritus, Honorary and Extraordinary staff members were excluded. One drawback is that the faculty prospectuses did not clearly distinguish between full-time and part-time staff members.

departments may need to consider PhD as the entry-level requirement, as staff members with PhD are those carrying the postgraduate supervision workload, and only the departments with more of these staff members have the capacity to accept more post-graduate intakes.

Table 1. Rank and qualifications of lecturing staff members in each department, 2014

		Qualification		Rank											
		Doctorate		Full Professor		Associate Professor		Senior Lecturer		Lecturer		Junior Lecturer		NRF rating	
University	Staff size	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
UCT	38	30	78.9	14	36.8	11	28.9	8	21.1	5	13.2	0	0.0	6	15.8
UFH	9	4	44.4	3	33.3	1	11.1	1	11.1	1	11.1	3	33.3	0	0.0
UFS[1]	17	8	47.1	3	17.6	0	0.0	4	23.5	9	52.9	1	5.9	2	11.8
UJ	34	22	64.7	5	14.7	2	5.9	5	14.7	21	61.8	1	2.9	1	2.9
UKZN	22	9	40.9	0	0.0	3	13.6	4	18.2	15	68.2	0	0.0	0	0.0
UL	Information is not available													0	N/A
NMMU	12	8	66.7	2	16.7	3	25.0	0	0.0	5	41.7	2	16.7	1	8.3
NWU[2]	16	11	68.8	2	12.5	4	25.0	5	31.3	5	31.3	0	0.0	3	18.8
UP	23	18	78.3	8	34.8	4	17.4	7	30.4	4	17.4	0	0.0	7	30.4
RU	15	7	46.7	4	26.7	2	13.3	5	33.3	4	26.7	0	0.0	0	0.0
SUN	30	14	46.7	6	20.0	4	13.3	5	16.7	13	43.3	2	6.7	7	23.3
UNISA	39	13	33.3	5	12.8	5	12.8	15	38.5	14	35.9	0	0.0	4	10.3
Univen	8	1	12.5	1	12.5	0	0.0	0	0.0	6	75.0	1	12.5	0	0.0
WSU	5	0	0.0	0	0.0	0	0.0	3	60.0	2	40.0	0	0.0	0	0.0
UWC	7	4	57.1	1	14.3	1	14.3	2	28.6	3	42.9	0	0.0	0	0.0
Wits[3]	25	12	48.0	0	0.0	6	24.0	3	12.0	12	48.0	4	16.0	1	4.0
UniZulu	5	1	20.0	1	20.0	0	0.0	0	0.0	4	80.0	0	0.0	0	0.0

Source: NMMU (2014), NRF (2015), NWU (2014a), RU (2014a), SUN (2014a), UCT (2014a & 2014b), UFH (2014), UFS (2014a), UJ (2015a), UKZN (2014a & 2014b), UNISA (2014a), Univen (2014a), UniZulu (2014), UP (2014a), UWC (2014a), Wits (2014a), WSU (2014).

N/A: Information is not available.

[1] The staff members from the Bloemfontein campus (13), Qwaqwa campus (2) and South Campus (2) were included.

[2] Only the staff members from the Potchefstroom campus were included.

[3] Only the staff members from the Economics division of the School of Economic and Business Sciences were included.

Table 1 also presents the employment rank of the academic staff. UCT and UP had the highest proportion of staff members having a PhD and the highest percentage of staff employed at the rank of full professor in 2014. In 3 departments (UKZN, WSU and Wits), there were no full professors, while only 7 departments had junior lecturers (only an Honours degree is generally required for employment at this level).[7] The last two columns indicates that 9 departments had at least one lecturing staff awarded the NRF rating in 2014, with UP (30.4%), SUN (23.3%) and NWU (18.8%) having the highest proportion of rated staff.

4.2 Courses and Curriculum

Table 2 shows that all 16 departments under study offered Honours program in 2014. Students were required to pass a certain number of coursework modules (ranging from 4 to

[7] It is possible that a Masters student with good potential was first hired as junior lecturers. Upon completing their Master studies, they would be promoted to lecturer.

8) plus the Honours research essay. The only exception is UNISA, as students were only required to pass five coursework modules.[8]

Table 2. Postgraduate programs offered by each department, 2014

	Honours program			Masters program				Doctorate program	
University	Number of coursework modules	Honours Research essay	More than one stream is offered	Master by dissertation is offered	Master by coursework is offered	Number of coursework modules	More than one stream is offered	PhD by thesis is offered	PhD by coursework is offered
UCT	7	Yes	No	Yes	Yes	6	Yes	Yes	Yes
UFH	6	Yes	Yes	Yes	No	Not applicable		Yes	No
UFS	7	Yes	Yes	Yes	Yes	4	Yes	Yes	No
UJ	8	Yes	Yes	Yes	Yes	6	Yes	Yes	No
UKZN	6	Yes	No	Yes	Yes	6	No	Yes	No
UL	Information is not available								
NMMU	5	Yes	No	Yes	Yes	4	No	Yes	No
NWU	7	Yes	Yes	Yes[1]	No	Not applicable		Yes	No
UP	6	Yes	Yes	No	Yes	7	Yes	Yes[2]	No
RU	8	Yes	No	Yes	No	Not applicable		Yes	No
SUN	8	Yes	Yes	Yes	Yes	8	No	Yes	No
UNISA	5	No	No	Yes	No	Not applicable		Yes	No
Univen	7	Yes	No	Yes	No	Not applicable		Yes	No
WSU	5	Yes	No	No	No	Not applicable		No	No
UWC	6	Yes	No	Yes	Yes	8	No	Yes	No
Wits	6	Yes	No	Yes	Yes	4 or 6[3]	Yes	Yes	No
UniZulu	4	Yes	No	Yes	No	Not applicable		Yes	No

Source: NMMU (2014). NWU (2014c), RU (2014b), SUN (2015b), UCT (2014c), UFH (2014), UFS (2014c), UJ (2015a), UKZN (2014b), UNISA (2014b), Univen (2014b), UniZulu (2015), UP (2014b), UWC (2014b), Wits (2014b), WSU (2014).

[1] The students were required to pass two course work modules in addition to the full dissertation, namely Advanced Economics or Advanced International Trade AND Advanced Research Methodology. Also, the students' full dissertation could either be a general topic or a specialised topic in the area of International Trade.

[2] The students were required to pass the Master Research Methodology module along with the full doctorate thesis, which could either be a general topic or a specialised topic in Econometrics.

[3] If students opted for the General stream, they were required to pass a 60-credit research report module along with 6 course work modules, while those opting for the Development Theory and Policy stream were required to pass a 120-credit research report module (the topic must relate to Development Theory and Policy) along with 4 course work modules.

Specialisation streams are offered along with the general stream in 6 departments: (*i*) UFH: Financial Markets; Transport Economics; (*ii*) UFS: Applied Econometrics; Financial Economics and Investment Management; (*iii*) UJ: Econometrics; (*iv*) NWU: International Trade; (*v*): UP: Econometrics; (*vi*): SUN: Financial Economics; Economic and Mathematical Statistics.

There is greater variation when it comes to the Masters program, as all but 2 (UP and WSU) offered it by full dissertation, while 9 departments offered it by coursework. Looking at

[8] In 2015, the research essay module was introduced, but as an elective only. That is, students could still graduate by passing five coursework modules by opting not to enrol the research essay module.

these 9 departments in greater detail, students were required to enrol as few as 4 but as many as 8 coursework modules along with the mini-dissertation. Furthermore, 5 departments offered specialisation streams along with the general stream: (*i*) UCT: Economic Development; Economics and Demography; Health Economics; (*ii*) UFS: Applied Econometrics; Financial Economics and Investment Management; (*iii*) UJ: Development Economics; Financial Economics; (*iv*) UP: Econometrics; (*v*) Wits: Development Theory and Policy. Hence, UFS, UJ and UP were the only 3 departments offering specialised streams at both Honours and Masters levels. All departments except WSU offered full-thesis Doctorate program. UCT was the only institution also offering the coursework program through the African Economic Research Consortium (AERC) program, with students being required to pass 10 course work modules along with the minor dissertation.

Table 3 captures the modules offered at each undergraduate level in 2014. All departments offered introductory modules in Microeconomics and Macroeconomics at Level I. They were once again the two core modules at Level II. Mathematical Economics and Econometrics were offered by 5 and 3 departments, respectively. This implies that some South African economics departments have been quick in adapting to align with international standards, as economics has become increasingly mathematical, statistical and dependent on specialised quantitative techniques (Luiz, 2004:192; 2009:591). The other most commonly offered modules at Level II were Development Economics and Labour Economics.

At Level III, 13 departments offered Econometrics while 4 departments offered Mathematical Economics. Two other modules commonly offered at this level were Public Economics and International Economics. For the latter module, it was either offered as one module called International Economics (covering both International Trade and International Finance) or two separate modules, namely International Trade and International Finance. Microeconomics and Macroeconomics were only taught by 6 departments at this level, but some departments made up for that by offering other modules that covered the important microeconomic and macroeconomic topics. For instance, at UP, there were two Microeconomics and two Macroeconomics modules at Level II, while Economic Policy was offered at Level III. The latter module was also offered by UKZN and UFS at Level III, while UCT offered a microeconomic-intensive Game Theory module at Level III.

The postgraduate modules offered in 2014 are summarised in Table 4. Only modules offered by at least 2 departments were shown. Only 5 departments offered Honours Research Methods and another 5 departments offered Master Research Methods modules (the primary aim of these modules is to guide the students to learn the skills of writing long research assignments).[9] As expected, Microeconomics and Macroeconomics were offered by all institutions at the Honours level, but they were only offered by 10 departments at the Masters level. All departments offered Econometrics at the Honours level. The general Econometrics module was offered by 8 departments at the Masters level, but 5 departments offered two

[9] It is possible that some departments instead offered a two-week intensive research methods workshop in January (e.g. SUN). However, the information was not clearly reflected in each university's prospectus.

separate modules, namely Advanced Time-Series Econometrics and Advanced Cross-Sectional Econometrics.

Ten departments offered Mathematical Economics as an Honours module or a compulsory module to new Master students who did not complete it at Honours level. Other most commonly offered modules were Development Economics (offered by 13 departments), Public Economics (12), Labour Economics (10), Monetary Economics (10), Environmental Economics (8) and Financial Economics (8). Finally, as observed at undergraduate level, some departments offered the full International Economics module or split it into two separate modules (International Trade and International Finance).

As economics has become increasingly quantitative, so the Honours students could be required to attend an intensive "mathematical and statistical economics bootcamp" in January. Only UCT indicates on the faculty prospectus (UCT, 2014c:29) that it is a compulsory module for students to enrol and pass (despite carrying zero credit).[10]

[10] The authors were also informed by the departmental chairpersons of NWU, SUN and UWC (via email correspondence) that the bootcamp is offered during January.

Table 3. Courses offered at undergraduate level by each Economics Department in 2014

Level	Course	UCT	UFH	UFS	UJ	UKZN	NMMU	NW	UP	Rhodes	SUN	UNISA	Univen	WSU	UWC	Wits	UniZulu	Total (16)
Level I	Macroeconomics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16
	Macroeconomics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16
Level II	Microeconomics	✓	✓	✓	✓	✓	✓	✓	✓[8]	✓	✓[11]	✓	✓	✓	✓	✓[19]	✓	16
	Macroeconomics	✓	✓	✓	✓	✓	✓	✓	✓[9]	✓	✓[11]	✓	✓	✓	✓	✓[19]	✓	16
	Development Economics	✓	✓		✓						✓			✓				5
	Mathematical Economics		✓[2]										✓	✓	✓	✓[20]		5
	Labour Economics				✓							✓		✓	✓			4
	Econometrics				✓[5]								✓		✓			3
	Economic History						✓[6]					✓[16]						2
	Economic Indicators				✓[5]							✓						2
	Environmental Economics											✓		✓				2
	International Economics										✓[12]					✓[20]		2
	Agricultural Economics		✓															1
	Applied Policy Analysis															✓[20]		1
	Business Statistics					✓												1
	Economics of Tourism											✓						1
	Financial system											✓						1
	Game Theory	✓																1
	Health Economics													✓				1
	History of Economic Thought				✓													1
	Monetary Economics										✓[12]							1
	Political Economy													✓				1
	Public Economics														✓			1
Level III	Microeconomics	✓[1]	✓[3]								✓[13]			✓[17]	✓	✓[21]		6
	Macroeconomics	✓[1]	✓[3]								✓[13]			✓[17]	✓	✓[21]		6
	Public Economics	✓	✓		✓	✓	✓	✓[7]	✓	✓	✓[14]	✓	✓	✓	✓		✓	14
	Econometrics	✓	✓	✓		✓		✓	✓	✓	✓[15]	✓		✓[18]	✓	✓[21]	✓	13
	International Economics	✓		✓	✓	✓	✓		✓						✓	✓[21]	✓	9
	International Trade		✓			✓		✓		✓		✓	✓	✓				7
	International Finance		✓					✓		✓		✓	✓					5
	Development Economics		✓			✓	✓	✓				✓			✓		✓	7
	Labour Economics	✓	✓			✓	✓				✓[15]		✓				✓	7
	Monetary Economics				✓	✓		✓[7]				✓	✓	✓			✓	7
	Environmental Economics		✓			✓				✓	✓[14]							4
	Mathematical Economics			✓						✓						✓[21]	✓	4
	Economic Policy			✓		✓			✓									3
	History of Economic Thought	✓										✓	✓					3
	Agricultural Economics		✓										✓					2
	Economic History		✓[4]							✓[10]								2
	Financial Economics				✓		✓											2
	Industrial Economics					✓							✓					2
	Managerial Economics						✓				✓[15]							2

Table 3. Continued

Level	Course	UCT	UFH	UFS	UJ	UKZN	NMMU	NW	UP	Rhodes	SUN	UNISA	Univen	WSU	UWC	Wits	UniZulu	Total (16)
	Applied Economics															✓		1
	Cost Benefit Analysis												✓					1
	Economic & Development Ethics						✓											1
	Economic Systems		✓															1
	Economics of Africa												✓					1
	Institutional Economics										✓[14]							1
	Quantitative Economics										✓[13]							1
	Resource Economics	✓																1
	Statistics for Economics			✓														1

Source: NMMU (2014), NWU (2014b), RU (2014b), SUN (2014b), UCT (2014b), UFH (2014), UFS (2014b), UJ (2015a), UKZN (2014b), UNISA (2014b), Univen (2014b), UniZulu (2015), UP (2014a), UWC (2014a), Wits (2014b), WSU (2014).

[1] They were offered as one module called "Advanced Micro & Macroeconomics."

[2] Two different Mathematical Economics modules were offered at this level, namely "Mathematical Economics 2A" and "Mathematical Economics 2B."

[3] They were offered as one module called "Micro and Macroeconomic Theory."

[4] This module, despite being named "Economic History," focused primarily on the evolution of the modern economic systems.

[5] They were offered as one module called "Economics 2D."

[6] Two different modules were offered, namely "Economic History A" (Introduction to World Economic History) and "Economic History B" (Economic History of South Africa).

[7] They were offered as one module called "Fiscal and Monetary Policy."

[8] Two different Microeconomics modules were offered at this level, namely Economics 224 and Economics 244.

[9] Two different Macroeconomics modules were offered at this level, namely Economics 214 and Economics 234.

[10] This module focused primarily on the economic history of South Africa.

[11] They were offered together as one module called "Economics 214."

[12] International Economics and Monetary Economics were offered together as one module called "Economics 244."

[13] Microeconomics, Macroeconomics and Quantitative Economics were offered together as one module called "Economics 318."

[14] Public Economics, Environmental Economics and Institutional Economics were offered together as one module called "Economics 381."

[15] Econometrics, Labour Economics and Managerial Economics were offered together as one module called "Economics 388."

[16] Two Economics History modules were offered at this level, namely "Economics History of South Africa" and "Economic History of the World."

[17] They were offered as one module called "Economic Theory."

[18] Two Econometrics modules were offered at this level, namely "Introduction to Econometrics" and "Applied Econometrics.".

[19] They were offered together as one module called 'Economics ECON2000'.

[20] They were offered together as one module called 'Economics ECON2001'.

[21] They were offered as one module called 'Economics ECON3007'.

Table 4. Courses offered at postgraduate level by each Economics Department

Course	UCT	UFH	UFS	UJ	UKZN	NMMU	NW	UP	RU	SUN	UNISA	Univen	WSU	UWC	Wits	UniZulu	Total (16)
Honours Microeconomics	✓	✓	✓	✓	✓	✓	✓	✓[9]	✓	✓	✓	✓	✓	✓	✓	✓	16
Honours Macroeconomics	✓	✓	✓	✓	✓	✓[4]	✓	✓[10]	✓	✓	✓	✓[14]	✓	✓	✓	✓	16
Honours Econometrics	✓	✓	✓	✓	✓	✓[4]	✓	✓[11]	✓	✓	✓	✓	✓	✓	✓		15
Honours Research Paper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	15
Honours Research Methods					✓		✓					✓		✓	✓		5
Master Microeconomics	✓[1]		✓	✓	✓	✓	✓[6]	✓		✓				✓	✓[15]		10
Master Macroeconomics	✓		✓	✓	✓	✓[5]	✓[6]	✓		✓				✓	✓		10
Master Econometrics	✓			✓	✓	✓[5]		✓[12]		✓				✓	✓		8
Advanced cross-sectional econometrics	✓		✓					✓		✓					✓		5
Advanced time-series econometrics	✓		✓					✓		✓					✓		5
Master Mini-Dissertation	✓		✓	✓	✓	✓		✓		✓				✓	✓		9
Master Research Methods				✓	✓		✓	✓						✓			5
Master Full Dissertation	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	13
Doctorate Mini-Dissertation	✓																1
Doctorate Full Dissertation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	15
Development Economics	✓	✓		✓		✓	✓	✓	✓	✓[13]	✓	✓	✓	✓	✓		13
Public Economics		✓	✓[2]	✓		✓	✓[7]	✓	✓	✓	✓		✓	✓	✓		12
Labour Economics	✓	✓	✓	✓	✓				✓	✓			✓	✓	✓		10
Monetary Economics		✓	✓	✓[3]			✓[7]	✓	✓	✓	✓	✓	✓				10
Mathematical Economics	✓	✓	✓	✓	✓	✓			✓	✓					✓	✓	10
International Economics			✓		✓	✓					✓		✓			✓	6
International Trade	✓	✓		✓	✓		✓[8]	✓		✓				✓	✓		9
International Finance	✓	✓	✓					✓		✓				✓	✓		7
Environmental Economics	✓	✓			✓	✓			✓	✓				✓	✓[16]		8
Financial Economics	✓	✓		✓					✓	✓		✓		✓	✓[17]		8
Derivative Markets		✓	✓				✓		✓	✓							5
Industrial Organization	✓								✓	✓					✓		4
Industrial Economics	✓	✓			✓												3

Table 4. Continued

Course	UCT	UFH	UFS	UJ	UKZN	NMMU	NW	UP	RU	SUN	UNISA	Univen	WSU	UWC	Wits	UniZulu	Total (16)
Institutional Economics	✓									✓					✓		3
Financial Econometrics						✓				✓							2
Health Economics			✓		✓												2
Investment Management			✓				✓										2
Political Economy				✓											✓		2
Portfolio Management			✓							✓							2
Risk Management			✓				✓										2

Source: NMMU (2014), NWU (2014c), RU (2014b), SUN (2014b), UCT (2014c), UFH (2014), UFS (2014c), UJ (2015a), UKZN (2014b), UNISA (2014b), Univen (2014b), UniZulu (2015), UP (2014b), UWC (2014b), Wits (2014b), WSU (2014).

[1] Two different Microeconomics modules were offered at Master level.

[2] Two different Public Economics modules were offered, one at Honours level and the other at Master level.

[3] Two Monetary Economics modules were offered at Honours level, namely 'Monetary Theory' and 'Monetary Policy'.

[4] NMMU was the only institution offering Honours Macroeconomics and Honours Econometrics as electives.

[5] NMMU was the only institution offering Master Macroeconomics and Master Econometrics as electives.

[6] They were offered as one module called 'Advanced Economics' for Master full-dissertation students.

[7] They were offered as one module called 'Fiscal and Monetary Policy'.

[8] Two different International Trade modules were offered, one at Honours level and the other at Master level.

[9] There were two Honours Microeconomics modules, and students were required to enrol both. For the higher-level Microeconomics module, topics relating to Game Theory and Information Economics were covered (UP, 2014b:163).

[10] There were two Honours Macroeconomics modules, and students were required to enrol both. For the higher-level Macroeconomics module, topics relating to International Finance and Political Economy were covered (UP, 2014b:159).

[11] There were two Honours Econometrics modules, and students were required to enrol both.

[12] There were two Master Econometrics modules, and students were required to enrol both.

[13] There were two Development Economics modules, one at Honours level and the other at Master level.

[14] There were two Honours Macroeconomics modules, with the elementary-level module being compulsory but the advanced one being an elective.

[15] There were two Master Microeconomics modules, with the first module being compulsory but the other (more advanced) one being an elective.

[16] There were two Environmental Economics modules, one at Honours level and the other one at Master level.

[17] There were two Financial Economics modules, one at Honours level and the other one at Master level.

Table 5. Research – ESSA conference participation, ERSA working paper series and publication on the accredited journals, 2005-2014

	ESSA conference papers (2009, 2011, 2013)			ERSA working papers (2005-2014)			Publication in accredited local journals (2009-2013)		Publication in accredited international journals (2009-2013)		Publication in all accredited local and international journals (2009-2013)	
University (Staff size in brackets)	Total units	% Share	Per- lecturer number per conference	Total units	% Share	Per- lecturer number per annum	Total units	Per- lecturer number per annum	Total units	Per- lecturer number per annum	Total units	Per- lecturer number per annum
UCT (38)	54.42	13.0	0.48	100.13	29.1	0.26	37.60	0.20	108.99	0.57	146.60	0.77
UFH (9)	3.17	0.8	0.12	2.00	0.6	0.02	Information is not available					
UFS[1] (17)	25.50	6.1	0.50	3.00	0.9	0.02	11.77	0.14	7.60	0.09	19.38	0.23
UJ (34)	46.50	11.1	0.46	35.37	10.3	0.10	37.33	0.22	28.95	0.17	66.28	0.39
UKZN (22)	39.83	9.5	0.60	26.00	7.5	0.12	13.50	0.12	16.67	0.15	30.17	0.27
UL (N/A)	4.00	1.0	N/A	0.00	0.0	N/A	Information is not available					
NMMU (12)	9.58	2.3	0.27	16.00	4.6	0.13	21.50	0.36	3.00	0.05	24.50	0.41
NWU (16)	33.75	8.1	0.70	6.67	1.9	0.04	35.00	0.44	13.00	0.16	48.00	0.60
UP (23)	40.32	9.7	0.58	75.25	21.8	0.33	41.25	0.36	102.23	0.89	143.48	1.25
RU (15)	24.08	5.8	0.54	14.50	4.2	0.10	25.17	0.34	32.67	0.44	57.83	0.77
SUN (30)	94.08	22.5	1.05	35.83	10.4	0.12	44.08	0.29	23.12	0.15	67.21	0.45
UNISA (39)	7.92	1.9	0.07	7.33	2.1	0.02	11.33	0.06	66.08	0.34	77.42	0.40
Univen (8)	1.00	0.2	0.04	0.00	0.0	0.00	Information is not available					
WSU (5)	0.00	0.0	0.00	0.00	0.0	0.00	Information is not available					
UWC (7)	2.50	0.6	0.12	3.50	1.0	0.05	4.42	0.13	5.42	0.15	9.83	0.28
Wits (25)	29.92	7.2	0.40	19.08	5.5	0.08	17.33	0.14	11.35	0.09	28.68	0.23
UniZulu (5)	1.00	0.2	0.07	0.00	0.0	0.00	Information is not available					
	417.57	100.0		344.66	100.0							

Source: Authors' own calculations using ERSA (2015), ESSA (2009, 2011, 2013), NMMU (2015), NWU (2015), RePEc (2015, 2016), RU (2015), SUN (2015), UCT (2015), UFS (2015), UJ (2015b), UKZN (2016), UNISA (2016a,b), UP (2015), UWC (2015) & Wits (2015).

[1] The 2013 publications records are not available, so the average of the 2009-2012 units was used to derive the 5-year total units.

4.3 Research Activities

Research is a core activity and an important indicator of productivity at tertiary institutions, as academics are expected to contribute significantly to the development of new knowledge via the publication of original research on peer-reviewed journals. In fact, academics would "either publish or perish" (Skeels and Fairbanks, 1968:17) as research output plays a big role in determining the staff's promotion, tenure, mobility and respect (Luiz, 2004:193).

Table 5 indicates that academics from SUN, NWU, UP, UKZN and RU were amongst the front-runners of ESSA conference presentation (in per-capita terms[11]), with SUN being the only institution with at least one paper presented in each conference in[12], once again in per-capita terms per annum, UP and UCT garnered the first and second placements (0.33 and

[11] For the remainder of the study, the 2014 staff size would be used to derive the per-capita figures. Although it is expected that staff size would fluctuate throughout the years, it would be very time-consuming to obtain information on staff size of each department in each year.

[12] ERSA is, to the authors' knowledge, the only peer-reviewed economics working paper series in South Africa. Once accepted for publication as an ERSA working paper, the authors would receive a certain amount of payment. If the paper is eventually published on a peer-reviewed journal, the authors would be rewarded with additional payment (ERSA, 2015).

0.26 units, respectively). In fact, these 2 departments accounted for half of the working papers during the 10-year period.

Table 5 also presents information on publications in accredited journals in 2009-2013 for the 12 departments with such available information. The information is obtained from the following sources: (*i*) the university annual research reports which are publicly available on the university websites (for NMMU, RU, UCT, UJ (2011-2013 only) and Wits); (*ii*) contacting the departmental staff members directly to request for the annual research reports, in case they are not publicly available on the university websites (for NWU, UP and UWC); (*iii*) the list of publications as shown publicly on the university or departmental websites (for UFS, UJ, UKZN, SUN, UNISA); (*iv*) The publication list of the staff members in their Research Papers in Economics (RePEc) profile (for UJ (2009-2010 only) and UKZN); (*v*) contacting each staff member of the department to obtain their annual publication list (for UKZN).[13]13 Regarding (2), ethics clearance was obtained.

During the 5-year period under study, 912 articles (715.5 units) in total were published in 317 journals by these 12 departments. By treating both the local and international articles as the same – *i.e.* method (1) – the second last column of Table 5 shows that in absolute terms, UCT and UP published the most number of units of articles over the 5-year period – about 145 units each, or an average of 29 per annum. UCT and UP were also the top two in 2004-2007, publishing an average of 29.50 and 21.75 units per annum, respectively (Luiz, 2009:598). This is followed by UNISA (77.42 units in total, or 15.48 per annum), SUN (67.21; 13.44), UJ (66.28; 13.26) and RU (57.83; 13.2). On a per-lecturer per annum basis, UP was ranked first with 1.25 units, followed by RU and UCT (0.77), NWU (0.60) and SUN (0.45).

The results change somewhat if only publications in international accredited journals are looked at. These publications as proportion of total (local and international) was as low as 12.2% at NMMU and 27.1% at NWU to as high as 71.3% at UP, 74.3% at UCT and 85.4% at UNISA. In absolute terms, UCT and UP lead with 108.99 and 102.23 units published, respectively, in total (or an average of 21.78 and 20.45 units per annum). On per capita terms, UP was ranked first (0.89 units per annum), followed by UCT (0.57) and RU (0.44).

By adopting a 3:1 weighting in favour of international publications (*i.e.* method (2)) and then re-visiting the per-lecturer number of units of publications per annum, the top fi e institutions were UP (3.03; it was 1.69 in 2004-2007 as found by Luiz in 2009), UCT (1.93; 2.00), RU (1.64; 0.75), UNISA (1.09; the 2004-2007 result was not available in the Luiz, 2009 study) and NWU (0.93; 0.85), as seen in Table 6. These results are quite similar to what was founded in the two Luiz studies that also adopted the same approach, as the top-performing departments in research were UCT, UP, NWU, SUN and Wits.

[13] Despite the adoption of methods (3)-(4) for UJ and (3)-(5) for UKZN, the research aggregates in Tables 5 and 6 are still likely to be under-estimated for these two departments, as the publication records of staff members who worked in 2009-2013 but resigned after 2013 were not obtained.

Table 6 also presents the results after taking impact factor and number of citations of the journals into consideration. The results need to be interpreted with caution, as these statistics are only available in 194 (out of 317) journals.[14] First, it can be seen that the results derived from methods (3) and (4) are highly similar, as the UCT, UP and RU stand out as the top-performing departments.[15]

The results derived from methods (5) and (6) are also highly similar: in absolute terms, UCT was the top-performing department (with a total score of about 700), followed by UP (approximately 470), before a big gap is observed between UP and the other departments. UJ, RU, SUN and UNISA (ranked after UCT and UP) were the only departments with the total scores above 100 in method (5) while the first three were the only ones with the total scores above 100 in method (6). In per capita terms, the per-capita per annum score was the highest in UP (4.15 in method (5) and 4.07 in method (6)), followed by UCT (3.69; 3.53), RU (2.05; 1.84), SUN (0.92; 0.86), NWU (0.78; 0.73) and UJ (0.71; 0.70).

Comparing the results across all six approaches, UCT, UP, SUN and NWU remain the most research-active departments as found in the two Luiz studies. However, RU and UJ emerge as the departments with rapid improvement in research output.

Table A1 provides additional detail by presenting information on publications in the fi e South African-published accredited economics journals in 2005-2014.[16] Focusing on the per-capita number of units of publications during the 10-year period, the following findings could be observed: SUN and UP were the two top-performing institutions when it comes to publication in SAJE, while UP and NMMU were the most active publisher in SAJEMS and SEE, respectively. Secondly, SUN, UCT and UWC were the most active publishers in DSA, which mainly publishes articles relating to development issues; SUN emerged as the leading institution on economic history research, as indicated by its top ranking on publication in SAJEH/EHDR. Finally, looking at the per capita total number of publications in these five journals as a whole, the results indicate that SUN, UP and UCT are the only 3 departments with a per capita of 2 units of publications during the period under study. This is followed by RU, NWU, NMMU, UFS and UKZN, with the per-capita number of units above 1.

[14] For instance, the local journals accredited by DHET but are not listed on ISI and IBSS would not have impact factor and citation statistics available.

[15] The very high total "units" of UCTare attributed to the fact that 10 articles were published on the Behavioral and Brain Sciences and 1 article was published on the Science Journal. The impact factors of both journals are very high (22.821 in the former and 34.463 in the latter, when it comes to the 5-year impact factor. The annual impact factors are similarly high in both journals). In fact, they are the only 2 journals (out of 317) with impact factors exceeding 10.

[16] Economic History of Developing Regions (EHDR) was formerly known as the South African Journal of Economic History (SAJEH) until 2009. The SAJEH was listed as a local journal accredited by the DHET, while EHDR has been listed as an international journal (published in the United Kingdom) accredited by the IBSS since 2010, so strictly speaking EHDR is not a South African-based journal. However, it is still included in Table A1 due to the fact that a lot of South African lecturers (particularly SUN) still actively publish in this journal in recent years.

Table 6. Research – ESSA conference participation, ERSA working paper series and publication on the accredited journals after controlling for quality differences across the journals, 2009-2013

University (Staff size in brackets)	Method (2)		Method (3)		Method (4)		Method (5)		Method (6)	
	Total "units"	Per-capita "units" per annum	Total "units"	Per-capita "units" per annum	Total "units"	Per-capita "units" per annum	Total "scores"	Per-capita "scores" per annum	Total "scores"	Per-capita "scores" per annum
UCT (38)	364.58	1.92	335.15	1.76	259.87	1.37	700.15	3.69	670.27	3.53
UFS (17)[1]	34.58	0.41	9.01	0.11	6.78	0.08	40.78	0.48	40.78	0.48
UJ (34)	124.18	0.73	22.35	0.13	15.82	0.09	120.44	0.71	118.38	0.70
UKZN (22)	63.50	0.58	9.23	0.08	7.14	0.06	43.83	0.40	37.33	0.34
NMMU (12)	30.50	0.51	6.17	0.10	4.32	0.07	38.17	0.64	31.17	0.52
NWU (16)	74.00	0.93	11.75	0.15	8.99	0.11	62.77	0.78	58.61	0.73
UP (23)	347.94	3.03	115.34	1.00	92.16	0.80	476.78	4.15	467.96	4.07
RU (15)	123.17	1.64	65.20	0.87	51.84	0.69	153.46	2.05	138.13	1.84
SUN (30)	113.46	0.76	24.96	0.17	18.54	0.12	138.19	0.92	129.36	0.86
UNISA (39)	209.58	1.07	25.53	0.13	18.97	0.10	104.01	0.53	97.35	0.50
UWC (7)	20.67	0.59	2.20	0.06	1.76	0.05	15.00	0.43	14.50	0.41
Wits (25)	51.38	0.41	8.02	0.06	6.34	0.05	52.20	0.42	50.03	0.40

Source: Authors' own calculations using ERSA (2015), ESSA (2009, 2011, 2013), Journal Citations Reports (2016), NMMU (2015), NWU (2015), RePEc (2015, 2016), RU (2015), SUN (2015), UCT (2015), UFS (2015), UJ (2015b), UKZN (2016), UNISA (2016a,b), UP (2015), UWC (2015) & Wits (2015).

[1] The 2013 publications records are not available, so the average of the 2009-2012 "units" or "scores" was used to derive the 5-year total "units" or "scores."

5. Conclusions

This is the first local study that examines the teaching and research activities of the South African economics departments in 2005-2014 using the official information from the university's faculty prospectus (on teaching activities and staff size) and annual research reports (for publications in accredited local and international journals), NRF website (on staff members receiving the NRF rating), as well as presentation at recent ESSA conferences and publication on the peer-reviewed ERSA working paper series, instead of mainly relying on the data provided by the departmental chairpersons by means of a questionnaire.

Regarding the teaching activities, some interesting findings deserve attention: not all departments offer Microeconomics and Macroeconomics at undergraduate third-year level; not all departments teach the Honours and Masters Research Methods modules to the postgraduate students; some institutions offer the specialised programs other than the general stream at Honours and Master levels; and few departments offer two separate Econometrics modules (time-series econometrics and cross-sectional econometrics) at Masters level.

As far as research activities are concerned, research output in general has increased in 2009-2013 (compared to the 2004-2007 period as examined by the 2009 Luiz study). In particular, publications in accredited non-South African international journals increased in

both absolute and relative terms in some institutions. However, big variations were observed across the departments in their research activities.

Two performance areas are not examined in this study due to various reasons (e.g. data non-availability) but could be researched in future, namely labour market outcome of the postgraduate students (this would require a comprehensive departmental Alumni database, capturing the work activities of the graduates upon completing their studies) and postgraduate supervision activities of the lecturing staff. Finally, the impact of different methods on quality-adjusted number of journal articles or total number of pages, and subsequently the research performance of each department is another area that can still be investigated in greater detail, but this would require a comprehensive study of its own (Appendix A).

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Appendix

Table A1. Research – Publication on the five South African-based economics journals, 2005–2014

	DSA			EHDR			SAJE		
University	Unit	% Share	Per- lecturer number	Unit	% Share	Per- lecturer number	Unit	% Share	Per- lecturer number
UCT	17.75	28.4%	0.47	5.50	14.5%	0.14	32.67	19.3%	0.86
UFH	0.00	0.0%	0.00	0.00	0.0%	0.00	2.00	1.2%	0.22
UFS	1.00	1.6%	0.06	0.00	0.0%	0.00	13.25	7.8%	0.78
UJ	0.75	1.2%	0.02	5.50	14.5%	0.16	12.25	7.2%	0.36
UKZN	5.00	8.0%	0.23	1.83	4.8%	0.08	7.50	4.4%	0.34
UL	3.00	4.8%	N/A	0.00	0.0%	N/A	0.00	0.0%	N/A
NMMU	1.00	1.6%	0.08	0.00	0.0%	0.00	2.00	1.2%	0.17
NWU	3.17	5.1%	0.20	1.50	4.0%	0.09	8.17	4.8%	0.51
UP	5.00	8.0%	0.22	1.33	3.5%	0.06	26.00	15.4%	1.13
RU	3.17	5.1%	0.21	0.00	0.0%	0.00	12.83	7.6%	0.86
SUN	13.92	22.2%	0.46	16.84	44.4%	0.56	35.17	20.8%	1.17
UNISA	1.50	2.4%	0.04	1.50	4.0%	0.04	10.00	5.9%	0.26
Univen	0.33	0.5%	0.04	0.00	0.0%	0.00	0.00	0.0%	0.00
WSU	1.00	1.6%	0.20	0.00	0.0%	0.00	0.00	0.0%	0.00
UWC	3.00	4.8%	0.43	0.00	0.0%	0.00	1.00	0.6%	0.14
Wits	3.00	4.8%	0.12	3.93	10.4%	0.16	6.42	3.8%	0.26
UniZulu	0.00	0.0%	0.00	0.00	0.0%	0.00	0.00	0.0%	0.00
	62.58	100.0%		37.94	100.0%		169.25	100.0%	

	SAJEMS			SEE			Sum of 5 journals		
University	Unit	% Share	Per- lecturer number	Unit	% Share	Per- lecturer number	Unit	% Share	Per-lecturer number
UCT	1.00	1.4%	0.03	21.17	22.7%	0.56	78.08	17.9%	2.05
UFH	0.00	0.0%	0.00	1.33	1.4%	0.15	3.33	0.8%	0.37
UFS	3.50	4.8%	0.21	4.33	4.6%	0.25	22.08	5.1%	1.30
UJ	3.00	4.1%	0.09	3.17	3.4%	0.09	24.67	5.7%	0.73
UKZN	5.50	7.6%	0.25	4.00	4.3%	0.18	23.83	5.5%	1.08
UL	0.00	0.0%	N/A	0.00	0.0%	N/A	3.00	0.7%	N/A
NMMU	4.50	6.2%	0.38	10.83	11.6%	0.90	18.33	4.2%	1.53
NWU	12.92	17.8%	0.81	3.83	4.1%	0.24	29.58	6.8%	1.85
UP	24.38	33.6%	1.06	7.70	8.3%	0.33	64.42	14.8%	2.80
RU	2.50	3.4%	0.17	11.00	11.8%	0.73	29.50	6.8%	1.97
SUN	5.33	7.4%	0.18	13.42	14.4%	0.45	84.67	19.4%	2.82
UNISA	3.83	5.3%	0.10	7.50	8.0%	0.19	24.33	5.6%	0.62
Univen	0.00	0.0%	0.00	0.00	0.0%	0.00	0.33	0.1%	0.04
WSU	0.00	0.0%	0.00	0.00	0.0%	0.00	1.00	0.2%	0.20
UWC	0.00	0.0%	0.00	0.67	0.7%	0.10	4.67	1.1%	0.67
Wits	6.00	8.3%	0.24	4.33	4.6%	0.17	23.68	5.4%	0.95
UniZulu	0.00	0.0%	0.00	0.00	0.0%	0.00	0.00	0.0%	0.00
	72.47	100.0%		93.28	100.0%		435.52	100.0%	

Source: Authors' own calculations using DSA (2015), EHDR (2015), SAJE (2015), SAJEMS (2015) and SEE (2015).