

THE STRUCTURE AND CONTENT OF THE UNDERGRADUATE ECONOMICS CURRICULA OFFERED BY SOUTH AFRICAN UNIVERSITIES

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Abstract

This paper aims to investigate the *structure*, *content* and certain *logistical aspects* of the economics curricula that are offered by economics departments at selected South African universities. International best practices for an economics curriculum are identified and the economics curricula offered by South African universities are compared to these best practices.

Regarding the *structure* of an economics curriculum, a benchmark tree structure is drawn from international best practices to which each South African university's curriculum is compared. The textbooks that are used by the different universities in the economics courses they offer, are provided as an indication of the *content* thereof. With regard to the *logistical aspects* of an economics curriculum, international best practices suggest, for example, class sizes of no more than 25 students in intermediate macro- and microeconomics courses. Student-lecturer ratios in economics courses offered by South African universities differ substantially from this norm.

JEL Classification: A22

Key words: Economics curriculum; economics courses; economics textbooks; student-lecturer ratios; South African universities

1. INTRODUCTION

“Academic quality can be defined as the merit of being among the best or at least good enough to compete with programmes at other institutions. It can also be defined as the effective meeting of goals or objectives.” (Lategan, 1997:4).

The Higher Education Quality Committee (HEQC) is in the process of evaluating all South African tertiary institutions to ensure quality within higher education and training. As stated by Lategan (1997:4), academic quality can be assessed if you have all the necessary comparative information to evaluate whether you are among the best, or are at least good enough to compete with programmes at

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other institutions. Therefore, the information provided in this study would assist economics departments to offer economics curricula⁴ of adequate academic quality.

A study by Luiz (2004:187-206) is the only South African study that has similar objectives to this study. Luiz (2004:187-206) addresses a broad range of issues to assess the state of economics curricula offered at South African universities which include staff qualifications, student numbers and research output. He also touches on courses and curricula by giving information on whether or not Honours, Masters and PhD programmes are offered by the participating economics departments, and by giving the number of students doing core courses in economics (Macroeconomics, Microeconomics and Econometrics). Luiz (2004:195) states that South African economics departments offer very heterogeneous products (curricula). He argues that this is particularly problematic when assessing student applications from other universities, as economics departments at universities in South Africa generally have very little knowledge of what is happening at other institutions. Luiz (2004:196) states that he did not address details about course curricula, but that it would be an important next step.

This study therefore sets out to contribute to the improvement of the academic quality of economics curricula offered by economics departments at South African universities by providing information on international best practices and the curricula offered by the economics departments in South Africa. Summary reports of the findings of this study were sent to all participating heads of departments. This information hope to serve as a means of improving academic quality and assessing student applications from other universities.

The rest of the paper is organized as follows. In section 2 a literature overview is given and international best practices for an economics curriculum are identified. Section 3 gives a short overview of the demarcation and the methodology of the study. In section 4 the state of the economics curricula offered by economics departments at South African universities is discussed. Information regarding the economics curriculum offered by each of the departments included in this study is given and these curricula are compared to the international best practices identified in section 2. Section 5 provides a summary of the results.

2. INTERNATIONAL BEST PRACTICES FOR AN ECONOMICS CURRICULUM

Studies on the content, structure and logistical aspects of an economics curriculum were researched and the views of the different authors were used to identify international best practices for an economics curriculum. These international best practices are discussed under the following headings: the *goals* of an economics curriculum and the skills or proficiencies graduate economics students⁵ should have; the *structure* of an economics curriculum, including the '*Siegfried blueprint*' for the structure of and

⁴ For the purposes of this study, an economics curriculum refers to the economics courses offered by a particular economics department to students specializing in economics or any sub-field thereof.

⁵ Economics students refer to students following a degree that includes economics as a major subject. In other words, economics students refer to students specializing in economics or any sub-field thereof.

economics curriculum and the inclusion of the *lecture-and-laboratory* format in economics courses; *economics textbooks*; and the *logistics* behind an economics curriculum, focussing on class size.

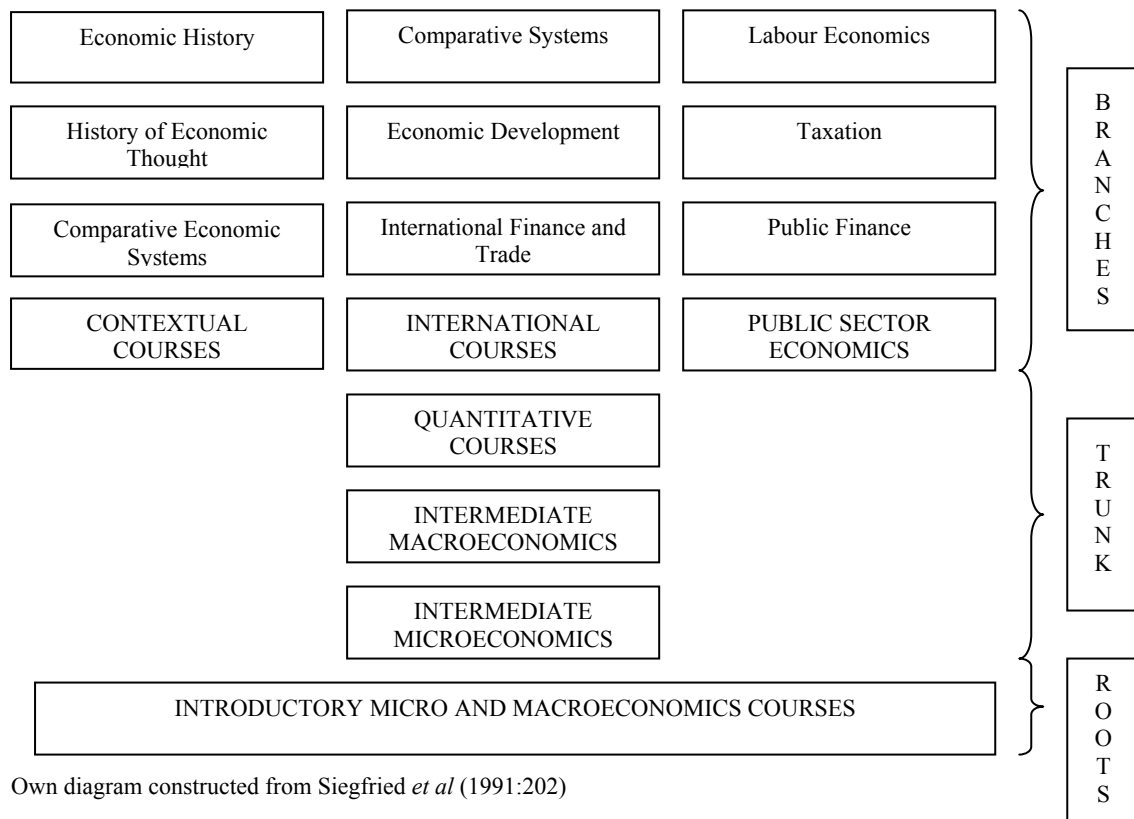
2.1 The goals of an economics curriculum

Siegfried *et al* (1991:21) suggest that the main goal of an economics curriculum is that students should be able to “think like economists”. Based on their extensive research in the field of economics education and survey information gathered in the United States of America, Siegfried *et al* (1991:21) suggest that “thinking like an economist” involves, amongst others, using deductive reasoning and simplified models (e.g. supply and demand, cost-benefit analyses and comparative advantage) to understand economic events. According to Siegfried *et al* (1991:220) economics graduates should have seven skills that reflect the essential competencies of economists. These are analytics, critical judgement, mathematics, computation, application, communication and creativity. Hansen (1986:150-151) also proposes a list of skills or proficiencies an economics graduate should have. These include locating economic data and published research, summarising existing knowledge in economic literature, interpreting economic journal articles, writing an analysis of a current economic problem, identifying and formulating a question about a particular economic issue and completing a research study.

2.2 The structure of an economics curriculum

Siegfried *et al* (1991:202) suggest a blueprint for the *structure* of an economics curriculum and it is illustrated in the form of a tree structure (see diagram 1).

Diagram 1: The ‘Siegfried blueprint’ tree structure for an economics curriculum



Own diagram constructed from Siegfried *et al* (1991:202)

The *roots* of the tree consist of introductory macro- and microeconomics courses that introduce students to economic concepts and thinking. According to Siegfried *et al* (1991:21) these courses often too formally concentrate on the theory that application is neglected. They recommend that the application of the most important concepts should be emphasised, rather than covering the large number of topics contained in most textbooks. Stigler (1963:658) also recommends that to ensure that students have a better understanding of what they learn; introductory courses should concentrate on fewer topics and the application thereof to a variety of actual economic problems.

The *trunk* of the tree structure includes intermediate macro- and microeconomics courses and quantitative methods courses (including Statistics, Econometrics and Mathematics) that equip students with the principles and quantitative skills that are widely used in the economics profession. Bartlett and King (1990:183), Hartman (1978:17-22) and Siegfried *et al* (1991:22) all state that students should have an appropriate amount of opportunities to apply the theoretical knowledge they acquire in intermediate macro- and microeconomics courses to real world questions. In terms of quantitative methods courses, Siegfried *et al* (1991:22) again identify the lack of the application of mathematical and statistical skills as the main deficiency of these courses. According to them quantitative methods courses are intended to provide an empirical foundation to enrich students' understanding of economic events and behaviour, but usually it focuses too formally on training students in statistics and mathematics. Siegfried *et al* (1991:22) suggest that quantitative methods courses should be reoriented to include the quantitative methods that are most widely used by economists in their empirical research. Becker (1987:19) and Becker and Greene (2001:170) also suggest that students should do exercises, case studies and solve problems by using real data rather than memorizing definitions, duplicating proofs and replicating computations in quantitative methods courses.

The *branches* of the Siegfried blueprint tree structure are elective courses that provide breadth for students to explore the sub-fields in economics. To achieve this breadth in the curriculum, Siegfried *et al* (1991:216) suggest that at least one course in each of the following categories must be included in the curriculum: (1) contextual courses, including Economic History, History of Economic Thought and Comparative Economic Systems; (2) international courses, including International Trade and Finance, Economic Development and Comparative Systems; (3) public sector economics courses, including Public Finance, Taxation and Labour Economics. Siegfried *et al* (1991:217) recommend that all elective courses should contain a substantial active-learning component to give depth to the curriculum. This includes writing reports, oral presentations and research projects that reinforce the empirical skills students have acquired in the quantitative methods courses.

Finally, Siegfried *et al* (1991:24) propose that students do a final research project that would complete the process of intellectual maturation of students and to provide further depth to the curriculum. According to them, this also gives students the opportunity to acquire an increased capacity to “think like an economist”.

From the above discussion it is clear that the application of economic theory and concepts at every level in an economics curriculum could not be overemphasised. The emphasis of economics courses should not be on formally teaching theoretical material, covering a vast number of topics with students memorising definitions, formal proofs and theoretical concepts. It should rather be on students discovering the theory for themselves, working with real world data, problems and situations. Therefore, Bartlett and King (1990:184-190) recommend the inclusion of the *lecture-and-laboratory format* in certain courses of an economics curriculum. This involves that lecturers cover the theory and concepts that need to be mastered during the usual instructional sessions and then make use of laboratory sessions to reinforce the students' understanding of these concepts by discovering, expanding and applying the theory themselves. The incorporation of laboratory sessions into an economics curriculum could therefore facilitate the important issue of giving students opportunities to apply their knowledge. Bartlett and King (1990:184-190) suggest that the lecture-and-laboratory format be implemented in at least intermediate micro- and macroeconomics courses, econometrics and other quantitative methods courses. By also incorporating it in the elective courses, the implementation of the depth requirement suggested by Siegfried *et al* (1991:24), could further be facilitated.

2.3 *The content of economics courses: textbooks*

Economics textbooks are thought to be a reflection of the *content* of economics courses. There are different problems identified with economics textbooks which include the lack of use of adequate examples and real-world applications and data (Becker, 1996:19), the growth in topics covered (Hansen, 1982:221), the out-datedness of the information in textbooks and the fact that textbooks, rather than the lecturer, set the agenda in the classroom (Bartlett & Weidenaar, 1988:109). To help overcome these problems, Siegfried *et al* (1991:210) suggest that computer assignments that require students to use updated, real world data should be given to supplement examples in textbooks. This further motivates the use of the lecture-and-laboratory format in the economics curriculum.

2.4 *The logistics behind an economics curriculum*

The achievement of the goals set out for an economics curriculum, requires more instructional resources, opportunities for students to learn actively and evaluation methods that give students opportunities to develop their writing and oral skills (Siegfried *et al*, 1991:24). Siegfried *et al* (1991:24) state that intermediate macro- and microeconomics courses are taught most effectively in classes of 20 to 25 students. They suggest that courses where writing, oral presentations and research projects are emphasised should have class sizes of about 15 students. When compromises are made on class size, lecturers are forced to use lecture formats in teaching instead of class discussions and other active learning methods. Multiple-choice exams also become a better option with larger classes, compromising on writing, oral presentations and essay types of questions that give a better indication of student understanding. Recommendations to avoid this include appointing more lecturers and limiting the access to the economics curriculum (Siegfried *et al*, 1991:24). Appointing more lecturers will most probably not be financially feasible for many institutions and limiting the access to the economics curriculum might be in conflict with the philosophy of many institutions. The lecture-and-

laboratory format will again provide a solution to the problems with the logistics of implementing the blueprint economics curriculum. Giving lecture sessions to larger groups and then dividing the group into smaller groups for laboratory sessions could overcome the problem of having inadequate financial resources to appoint more lecturers. Student assistants who are familiar with the work could rather be appointed at a much lower cost to help facilitate the laboratory sessions.

The result of the implementation of the above mentioned international best practices for an economics curriculum would be that, as Hansen (1986:152) states: "... students will be taught less, but will learn more, and learn what they do learn better now." Students will also find economics more exciting and challenging and the effect of completing an economics degree would be longer lasting.

3. DEMARCATION AND RESEARCH METHOD

This study was undertaken in 2005 and therefore information regarding the 2005 undergraduate economics curricula offered by economics departments at South African universities was gathered. Due to the mergers and incorporations of higher education institutions that took place during 2004 and 2005, only the institutions that incorporated the universities that existed before the mergers (and not technikons) were included in this study. Therefore all universities (universities that merged with other universities) and comprehensive universities (universities that merged with technikons) were included in this study, but universities of technology were excluded. A total number of 17 universities were therefore included in this study.

Open source (Internet and faculty yearbooks) searches were firstly undertaken to collect the information needed from each economics department included in this study. A basic format for the questionnaire was then constructed and the information that could be found in open sources was filled in on each department's individual questionnaire. This enabled each head of department to verify the information obtained from open sources and to fill in only the gaps. After several follow-up work with all the heads of departments, a 100% response rate was achieved, although some of the departments did not provide all the information that was asked. Attempts were made to gather all the outstanding information, and by the time the results of this study were written up most of the information had been acquired. Unfortunately, not all the information for each course offered by each department could be gathered.

4. RESULTS

A comparison between the economics curricula that are offered at the South African universities included in this study and the international best practices identified in the literature is made in this section in order to contribute to the quality of the economic curricula offered at South African universities. This comparison is made in terms of the different aspects of the international best practices including the *goals* of an economics curriculum, the *structure* of an economics curriculum,

the *content* of the courses included in an economics curriculum and the *logistics* behind the economics curriculum.

4.1 The goals of an economics curriculum

Firstly, the degree to which heads of departments agree with the *goals* of an economics curriculum, as identified in the literature overview, were investigated. Heads of departments were asked in the questionnaire to assign a score on a scale of 1 (totally disagree) to 5 (totally agree) to each identified goal as an indication of the degree to which they agree with each goal. In table 1 the average score for each goal included in the questionnaire is indicated.

Table 1: Average score for each identified goal of an economics curriculum

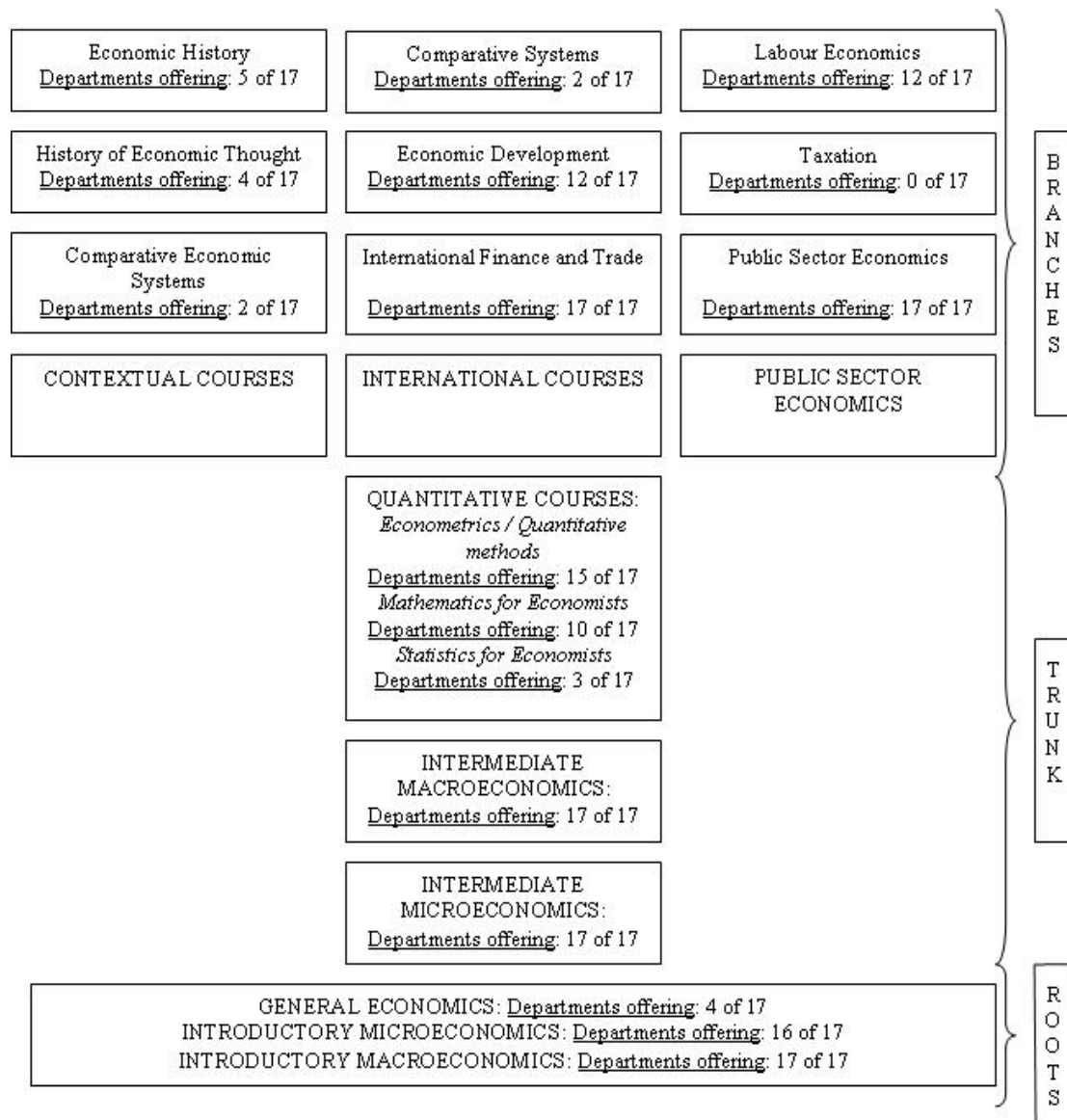
Graduate students in economics should be able to:		Score
1.	have a self-sustaining capacity to think and learn.	4.5
2.	know how to pose questions, collect information, identify and use an appropriate framework to analyse information, and come to a conclusion.	4.44
3.	make informed decisions about their lives and communities long after their tertiary learning experience.	3.56
4.	use chains of deductive reasoning, in conjunction with simplified models, to help understand economic events.	4
5.	speak publicly in front of large audiences.	3.5
6.	distinguish between positive and normative analysis.	4.38
7.	identify tradeoffs, given certain constraints.	4.44
8.	identify and abstract from other real-life situations, the behavioural implications of some change in the economy.	4.06
9.	explore the consequences of aggregation.	3.5
10.	describe the redistributive implications of changes in economic institutions and policies.	3.75
11.	collect data to evaluate and refine his/her understanding of the economy;	4.27
12.	test alternative hypotheses about how consumers and producers make economic choices and how the economic system works.	4.19

Note that goal 5 in the above table is not one of the goals identified in the literature study and was inserted to be able to test the internal consistency of the questions. Cronbach's alpha values were calculated to test the reliability and consistency of these questions (Cooper & Emory, 1995:155). The Cronbach's alpha value varies from 0 to 1 and an alpha value of above 0.7 normally indicates an acceptable reliability of the internal consistency of the data (Santos, 1999). The value for all twelve goals is 0.898 and the value with the fifth goal excluded is 0.931. The questions posed thus effectively measure the degree to which heads of departments agree with the goals identified in the literature.

2.2 *The structure of an economics curriculum*

The courses offered by each of the economics departments included in this study were structured according to the Siegfried blueprint tree structure for an economics curriculum (see diagram 1). This was done to establish how these departments' curricula comply with the international best practices identified for the *structure* of an economics curriculum. Each department's tree structure was included in the feedback report that was sent to them. To summarize the results of how the different departments in general comply with the international best practices, diagram 2 was constructed.

Diagram 2: The Siegfried blueprint tree structure in the South African context: The number of economics departments offering each course included in the tree structure



For the purposes of this study, Comparative Systems are assumed to be more or less the same as Comparative Economic Systems. The topic Taxation might be included in the content of courses offered by economics departments of South African universities, but is not offered by any department as a subject on its own.

The courses that are offered by the economics departments included in this study and not included in the Siegfried blueprint tree structure for an economics curriculum (see diagram 1) are the following:

- Third year Micro- and Macroeconomics (departments offering: 8);
- Bank Management (departments offering: 2);
- Financial Markets (departments offering: 7);
- Money, Banking and Financial Markets (departments offering: 7);
- Finance (departments offering: 1);
- Monetary Economics (departments offering: 2);
- Economics of Tourism (departments offering: 1);
- South African Economic Indicators (departments offering: 3);
- Environmental Economics (departments offering: 7);
- Cooperation and Competition (departments offering: 1);
- Management Economics (departments offering: 2);
- Health Economics (departments offering: 3);
- Agricultural Economics (departments offering: 1);
- Economic Planning (departments offering: 1);
- Economic Policy (departments offering: 4);
- Economics of Education (departments offering: 1);
- Industrial Economics (departments offering: 2);
- Economics of Africa (departments offering: 2); and
- Political Economics (departments offering: 1).

2.3 The content of the courses included in an economics curriculum

In order to provide a summary of the *textbooks* that are used in the differed courses of the economics curricula offered by the departments included in this study, table 2 was constructed. It contains the textbooks that are used by four or more universities in a specific course.⁶

Table 2: Textbooks that are used by four or more universities

Course	Textbooks
Introductory Microeconomics	MOHR, P & FOURIE, L. Economics for South African students. AND PARKIN, M., POWELL, M. & MATTHEWS, K. Economics.
Introductory Macroeconomics	MOHR, P & FOURIE, L. Economics for South African students. AND PARKIN, M., POWELL, M. & MATTHEWS, K. Economics.
Intermediate Macroeconomics	FROYEN, R. Macroeconomics: Theories & Policies.
Quantitative Methods	GUJARATI, D.N. Basic Econometrics.

⁶ A list of the textbooks that are used in every course included in the economics curricula of the departments included in this study is available from the authors. E-mail: Ermie.Steenkamp@nwu.ac.za.

Course	Textbooks
Mathematics for Economists	DOWLING, E.T. Introduction to Mathematical Economics.
Public Sector Economics	BLACK, CALITZ & STEENEKAMP. Public Economics for South African students.
Development Economics	TODARO, P.M. & SMITH, S.E. Economic Development.
Labour Economics	BARKER, F. The South African Labour Market.
Money, Banking and Financial Markets	MISHKIN, F. S. The Economics of Money, Banking & Financial Markets

2.4 The logistics behind the economics curriculum.

In section 2 it was stated that the achievement of the goals of an economics curriculum requires opportunities for students to learn more actively and evaluation methods that give students opportunities to develop their writing and oral skills. With large classes it is difficult for lecturers to facilitate active learning and the development of writing and oral skills. Therefore, the student numbers and *student-lecturer ratios* in the South African context were investigated. Table 3 provides a summary of these figures.

Table 3: Course offerings, student numbers and student-lecturer ratios

Name of course	Percentage of departments that offer the course	Total national university enrolments ⁷	Average student- lecturer ratio
<u>Introductory Economics</u>	23,53% 4 of 17	6476	345,84:1
<u>Introductory Microeconomics</u>	94,12% 16 of 17	45847	337,60:1(excl. the UNISA) 837,56:1 (incl. UNISA) 13 of 16 ⁸
<u>Introductory Macroeconomics</u>	100% 17 of 17	35273	358,25:1(excl. UNISA) 610,09:1 (incl. UNISA) 14 of 17
<u>Intermediate Microeconomics</u>	100% 17 of 17	11136	316,41:1(excl. UNISA) 369,84:1(incl. UNISA) 14 of 17
<u>Intermediate Macroeconomics</u>	100% 17 of 17	10243	271,82:1(excl. UNISA) 308,05:1(incl. UNISA) 14 of 17
<u>3rd year level Microeconomics</u>	47,06% 8 of 17	1728	163,92:1(excl. UNISA) 228,36:1(incl. UNISA) 7 of 8
<u>3rd year level Macroeconomics</u>	47,06% 8 of 17	1498	122,29: 1 7 of 8

⁷ University enrolments refer to the total number of students enrolled for each course at the universities included in this study. These aggregate figures do not include student numbers of the University of Venda, for this information was not filled in on their questionnaire.

⁸ This indicates that there are 13 of the 16 departments that offer this course that provided all the necessary information to calculate student-lecturer ratios.

Name of course	Percentage of departments that offer the course	Total national university enrolments	Average student- lecturer ratio
<u>Quantitative Methods</u>	88,24% 15 of 17	2482	101,13:1 (excl. UNISA) 117,19:1 (incl. UNISA) 12 of 15
<u>Mathematics for Economists</u>	58,82% 10 of 17	928	93,09:1 8 of 10
<u>Statistics for Economists</u>	17,65% 3 of 17	480	102,5:1 2 of 3
<u>Public Sector Economics</u>	100%	3966	168,61:1 (excl. UNISA) 184,87:1 (incl. UNISA) 14 of 17
<u>Development Economics</u>	70,56% 12 of 17	1822	98,75:1 (excl. UNISA) 115,28:1 (incl. UNISA) 10 of 12
<u>International Economics (including International Finance and Trade)</u>	100%	4221	159,87:1 (excl. UNISA) 199,21:1 (incl. UNISA) 14 of 17
<u>Labour Economics</u>	70,59% 12 of 17	1885	106,54:1 (excl. UNISA) 159,26:1 (incl. UNISA) 9 of 12
<u>Money, Banking and Financial Markets</u>			
- Bank Management	11,76% 2 of 7	374	109:1 2 of 2
- Financial Markets	41,18% 7 of 17	2733	146,5:1 (excl. UNISA) 305,1:1 (incl. UNISA) 5 of 7
- Money, Banking and Financial Markets	41,18% 7 of 17	859	113,5:1 5 of 7
<u>Monetary Economics</u>	11,76% 2 of 17	1199	75:1 (excl. UNISA) 299,75:1 (incl. UNISA) 2 of 2
<u>Economics of Tourism</u>	5,88% 1 of 17	117	117:1 Only offered by the University of South Africa (UNISA).
<u>Comparative Economic Systems</u>	11,76% 2 of 17	352	202:1 1 of 2
<u>History of Economic Thought</u>	23,53% 4 of 17	416	138,67:1 3 of 4
<u>Economic History</u>	29,41% 5 of 17	682	51,44:1 (excl. UNISA) 49,83:1 (incl. UNISA) 4 of 5
<u>South African Economic Indicators</u>	17,65% 3 of 17	1530	175:1 (excl. UNISA) 382,5:1 (incl. UNISA) 2 of 3
<u>Environmental Economics</u>	41,18% 7 of 17	270	61,25:1 4 of 7
<u>Cooperation and Competition</u>	5,88% 1 of 17	500	166,66:1 Only offered by the University of Cape Town
<u>Management Economics</u>	11,76% 2 of 17	179	29:1 1 of 2
<u>Health Economics</u>	17,65% 3 of 17	170	72,5:1 2 of 3
<u>Agricultural Economics</u>	5,88% 1 of 17	90	90:1 Only offered by the University of Zululand

Name of course	Percentage of departments that offer the course	Total national university enrolments	Average student- lecturer ratio
<u>Economic Planning</u>	5,88% 1 of 17	110	44:1 Only North-West University, Mafikeng Campus offers this course
<u>Economic Policy</u>	23,53% 4 of 17	996	72,71:1 (excl. UNISA) 208,29:1 (incl. UNISA) 4 of 4
<u>Economics of Education</u>	5,88% 1 of 17	This information was not indicated by the department in question	The information necessary to calculate these figures was not provided by the department in question.
<u>Industrial Economics</u>	11,76% 2 of 17	70	70:1 1 of 2
<u>Economics of Africa</u>	11,76% 2 of 17	25	25:1 1 of 2
<u>Political Economics</u>	5,88% 1 of 17	25	The information necessary to calculate these figures was not provided by the department in question

The average *student-lecturer ratio* for each of the courses indicated in table 3 was calculated by firstly calculating the student-lecturer ratio for each department offering a specific course and then calculating the average student-lecturer ratio of all the departments offering that course.

The student-lecturer ratio for each department offering a specific course was calculated by dividing the total number of students that take the course by the total number of lecturers that present that course. This does not directly reflect on class size because students could be divided into groups that are taught by the same lecturer, making the actual class size smaller than the student-lecturer ratio indicated in table 3. Nevertheless, the student-lecturer ratios indicated in table 3 give an estimate of class sizes.

It is clear that 270 to 315 students per lecturer in the intermediate theory courses differs substantially from the ideal of 15 to 25 students per class as specified in the international best practices (see section2). This is one of the biggest challenges faced by economics departments in South Africa, and also one of the biggest challenges for the implementation of the international best practices identified in this study.

In order to establish whether the student-lecturer ratios for economics courses in South Africa is increasing or decreasing, the information gathered in this study was compared to Luiz' (2004:193) study on the state of economics at South African universities. Luiz (2004:193-194) calculated an average student-lecturer ratio for each economics department that participated in his study by dividing the total number of economics students at each department by the total number of full time staff at that department. Table 4 illustrates the comparison between Luiz' (2004:194) 2002 figures and the student-lecturer ratios for 2005 obtained in this study. It is important to note that the student and lecturer numbers in this study were gathered per course and not in the aggregate as Luiz (2004:194) did. Therefore the average of the student-lecturer ratios for all the courses offered by a specific economics department were calculated to be used as comparative figures. Although the methods of calculation

between the two studies differ, one could still get an indication whether or not average student-lecturer ratios increased or decreased at the institutions that could be used in the comparison.

Table 4 Student-lecturer ratios compared to Luiz' (2004:194) study

University	Student-lecturer ratios: Luiz 2002 ⁹	Student-lecturer ratios: This study 2005 ¹⁰	% change ¹¹
Cape Town	128,4:1	204,2:1	59,03%
Pretoria	172,2:1	212,3:1	23,29%
Rhodes	103,8:1	168,8:1	62,62%
Stellenbosch	182,4:1	303,3:1	66,28%
Witwatersrand	93,6:1	74,2:1	-20,73%
Zululand	167,8:1	239,2:1	42,55%
Total average	141,4:1	200.3:1	41.65%

Twelve universities were included in Luiz' (2004:193) study. The six universities included in table 4 have not changed much in the merger process and therefore these universities were used for the sake of comparison with the information gathered in this study.

A discussion of these results and recommendations follow in the next section.

5. CONCLUSIONS AND RECOMMENDATIONS

The main objective of this study is to contribute to the enhancement of the academic quality of economics curricula offered in South Africa by identifying international best practices for an economics curriculum, providing information regarding the economics curricula offered at the South African economics departments included in this study and comparing the South African situation to the identified international best practices.

5.1 Conclusions

In a nutshell, the international best practices for an economics curriculum involve the following:

- delivering graduate economics students who are able to think like economists (see section 2);
- structuring the economics curriculum (in the form of a tree structure) to include introductory economics courses (roots), intermediate microeconomics, intermediate macroeconomics and

⁹ Luiz (2004:193-194) calculated the average student-lecturer ratio for each economics department by dividing the total number of economics students at each department by the total number of full time staff at that department.

¹⁰ These 2005 figures are averages of the student-lecturer ratios for all the courses offered by the economics departments in question.

¹¹ The methods of calculating the student-lecturer ratios differ between this study and Luiz's (2004:193-194) study. Therefore, the percentage change in student-lecturer ratios between 2002 and 2005 only gives an indication of the trend and cannot be considered as precise figures.

quantitative economics courses (trunk), as well as three to six elective courses in the fields of public sector economics, international economics and contextual economics (branches);

- incorporating a lecture-and-laboratory format in at least intermediate microeconomics, intermediate macroeconomics and quantitative economics courses to give students the opportunity to apply the theory and learn more by doing computer assignments and working with real world data;
- using textbooks that are updated regularly, include a sufficient amount of real-world examples and do not include more and more topics with every edition;
- teaching to classes of no more than 25 students to provide more active-learning opportunities (writing, oral presentations and research projects) for students to enhance their understanding of economics.

When the economics curricula offered by the economics departments included in this study were compared to the above-mentioned international best practices, the following observations were made:

On average, heads of economics departments at the South African universities included in this study agree with the *goals* of an economics curriculum set out in the international best practices (see table 1). Heads of departments are encouraged to use these goals to evaluate and reformulate their department's goals. As stated by Lategan (1997:4), academic quality involves the effective meeting of goals or objectives (see section 1). Therefore evaluating and reformulating goals to an international standard and then effectively achieving these goals will assure academic quality at a particular institution.

The South African universities included in this study mostly comply with the international best practices for the *structure* of an economics curriculum in terms of the roots and trunk of the Siegfried blueprint tree structure (see diagram 2). When considering the three categories of branches in the Siegfried blueprint tree structure (see section 2), South African economics departments mostly offer (at least) some courses in the Public Sector Economics and International Economics categories respectively, while Contextual courses are mostly not offered (see diagram 2). South African economics departments might consider including courses such as Taxation, Comparative Economics Systems, History of Economic Thought and Economic History in their economics curricula.

The *student-lecturer ratios* in the intermediate microeconomics and macroeconomics courses offered by the economics departments included in this study range from 270 to 315 students per lecturer. This is remote from the 15 to 25 students per class specified in the international best practices (see section 2). From table 4, it is clear that, on average, for the six universities used in the comparison, the student-lecturer ratio increased by 41,65% between 2002 and 2005. It therefore seems that the problem of large groups is increasing in the South African context. This is a point of concern for all South African economics departments, and heads of departments will need to do everything in their power to decrease these ratios. A few suggestions in this regard are made in the literature overview (see section 2).

5.2 Recommendations for future research

Most economics degrees in the United States of America are four-year degrees. Therefore future research could be done to include the Honours (4th year level) courses offered by South African economics departments. Future studies could also include a more in-depth assessment of the class sizes, teaching, assessment methods, faculty well-being and research outputs in the South African context. A follow-up study may also be undertaken to update the results of this study.

5.3 Weaknesses and strengths of this study

The weaknesses of this study might include the time lag between sending out the questionnaires and writing up the results. Due to the merger and programme alignment processes that most universities were faced with, heads of departments had very little time for filling in questionnaires. Therefore it took around 10 months to get all the responses from the different economics departments. The fact that a 100% response rate was important to be able to accurately reflect on the situation at South African universities, also contributed to the time lag. Furthermore, in one or two cases, it was observed that, although 2005 information was requested, 2006 information was given in the response. This was observed by comparing the information provided in the responses to the information collected in the open sources searches.

Little research was done in this field in South Africa and the contribution of this study to the field of economic education in higher education in South Africa is considered to be one of the biggest strengths of this study. Follow-up studies could further contribute to the academic quality of the economics curricula offered at South African universities.

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