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Agricultural economics: a discipline in crisis?*

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ABSTRACT

Agricultural economists have continuously raised questions about their role in the wider economy and society since the discipline's establishment. This led to continuous reinvention, development and stretching of the discipline's boundaries. We have seen the same critique by scholars in other disciplines; many of these evolved to thrive or regressed to die. This begs the question, is the agricultural economics discipline evolving and adapting to change or regressing and facing extinction? To answer this evolutionary question, I use the three key pillars that make up the hereditary material of a discipline as a conceptual framework: research, teaching and association. I use several data sets to diagnose the health of each of these pillars to ultimately comment on the health of the discipline. Our findings indicate the weakest pillar as the association. Although our research and teaching pillars are not as strong as we want them to be, we are in the process of reinforcement. In conclusion, the agricultural economics discipline is not in crisis, at least not yet. I also acknowledge that the emergence of crisis does not always lead to the end of a discipline, but it promotes educational reflection and reform to lead to disciplinary evolution.

KEYWORDS

Agricultural economics
discipline; discipline in crisis;
disciplinary evolution;
teaching; research;
association

1. Introduction

Agricultural economists have always questioned their tasks and role in the wider economy and society, and this has also been the case in South Africa. In 1939, fourteen years after the establishment of the discipline here, Professor F. R. Tomlinson, doyenne of the profession here, talked about this confusion during his inaugural lecture at the University of Pretoria. Since then, many conference themes have focused on the changing role of the agricultural economist, including (AEASA 2023; Vink, Hendriks, and Kirsten 2011):

- "The task of the agricultural economist" (Inaugural Conference, 1961).
- "The role and function of the agricultural economists in South African agriculture" (22nd conference, 1984).
- "The task and role of the agricultural economist in a normalised agriculture" (29th conference, 1991)
- "The role of the agricultural economist in the restructuring process" (33rd conference, 1995)
- "20 years on since democracy - Quo Vadis?" (53rd conference, 2014).
- "Practising agricultural economics in an uncertain neighbourhood" (57th conference, 2018)

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This article has been corrected with minor changes. These changes do not impact the academic content of the article.

Many of the annual F.R. Tomlinson lectures also took up this issue, including:

- “Agricultural economics in search of relevance” by Jan Groenewald in 1990.
- “The role of the agricultural economist in the finance sector – a challenge for the profession” by André Louw in 1997.
- Likewise, “The role of agricultural economics in agribusiness management” by Rex Hudson in 1999.
- A year later “The dilemma of a contemporary agricultural economist: Will the real Professor Tomlinson please step forward!” by Johan van Rooyen.
- “Economics education: aspirations and responsibilities of the profession” by Klopper Oosthuizen in 2007.
- “On agricultural economics and the economics of agriculture – perspectives from a distance” by Johan van Zyl in 2008.
- A year later “How the leopard has changed its spots: past dynamics and future opportunities” by Gavin Fraser.
- And again in 2010 “Agricultural economics scholarship in South Africa at the crossroads: is it time for a National Institute of Food, Agricultural and Resource Economics?” by Johann Kirsten.
- “The Agricultural Economics discipline in a socially transforming South Africa: Status, effects, responses and the future” by Charles Machethe in 2016.
- “Relevance versus indispensable in making the long-term urgent – Agricultural Economists can choose to shift the responsibility or to shift the paradigm” by Kobus Laubscher in 2017.

Sadly, when I talk to some of our working agricultural economists, it sounds like not much has changed. More than 80 years later, some of us are still unsure about the agricultural economist’s task and role in South Africa.

On a more personal note, three key events over the past year have shaped this Address. The first was my move to Stellenbosch University in April 2021, which enabled me to compare different agricultural economics departments and the larger space in which we operate. The second was my election as President of AEASA in October 2021, which allowed me to reflect on the past 60 years of AEASA’s existence and the almost century of the discipline’s existence. The third was a 2014 publication by Cohen and Lloyd entitled “*Disciplinary evolution and the rise of the transdiscipline*” which left me curious about the evolution of the agricultural economics discipline. Today, I, too, find myself in the shoes of Professor F. R. Tomlinson and others, asking questions about the role of the agricultural economist. My question, however, links back to the work of Charles Darwin on evolutionary biology, “*As a discipline, are we evolving and adapting to change, or are we regressing and facing extinction?*”

2. The future of our profession

I start with the formal definition. The dictionaries (e.g., Cambridge 2023a; Collins 2023a; Merriam-Webster 2023a; Oxford 2023a) define a discipline as a branch of knowledge typically studied in higher education; or a particular area of study, especially a subject studied at a college or university. Beyond the dictionary definition, we find the following definitions in literature:

- “... [the] practice of study of a certain category of experience, its methodologies, how it goes about its pursuit of truth.” (Dirks 1996)
- “... a distinctive way of thinking about the world [that] ... characterises the professions and are modelled by skilled practitioners, those who are responsible for advancing knowledge within a discipline.” (Gardner 2011)
- “... [a] field that defines and shares basic concepts, modes of inquiry, what counts as a problem, representation techniques, standards of proof, and types of explanations.” (Madsen et al. 2008)

- "... academic studies that focus on a self-imposed limited field of knowledge." (Cohen and Lloyd 2014)

According to Krishnan (2009), a discipline has the following six characteristics:

1. It has a particular object of research, though this may be shared with another discipline.
2. It is a body of accumulated specialist knowledge which is specific to the group and not generally shared with another discipline.
3. The theories, concepts, and terminologies are adjusted to the group's research objective.
4. The group has specific research methods and techniques that fit the research requirements.
5. There are some institutional manifestations in the form of subjects taught at universities or other academic departments.
6. The group has professional associations connected to it.

Three key pillars that make up the hereditary material of a discipline can be identified from these definitions and characteristics (Figure 1). The evolution or regression of a discipline then ultimately depends on the condition (or health) of these pillars.

According to Cohen and Lloyd (2014), disciplines evolve in response to environmental changes and interactions and either adapt and flourish or wither and disappear. In their work, they identified several processes through which a discipline can evolve, including (i) hereditary evolution (transfer defining materials through generations); (ii) natural selection (include only successful practices) or mutation (structural changes in the conduct of a discipline); (iii) speciation (divergence of a discipline into sub-disciplines); (iv) heterosis (combining different disciplines to form something new); (v) parallel evolution (evolution of different disciplines from different sources that appear similar); or (in the worst case) (vi) extinction (when disciplines fail to respond to environmental changes). However, unlike creatures that can completely die out, knowledge never completely dies. As a result, a discipline cannot become truly extinct. However, Cohen and Lloyd (2014) note two warning signs for extinction – little or no research conducted and published and a declining number of students majoring in the discipline.

Here my curiosity, driven by the three key events that shaped this talk, reached its pinnacle with the question, "Is the agricultural economics discipline heading for extinction?" and hence the theme of this Presidential Address - "*Agricultural Economics: A discipline in crisis?*"



Figure 1. Three key pillars of a discipline Source: Adapted from Gardner (2011) and Krishnan (2009).

As agricultural economists, we are no strangers to crisis. The word is often used to describe a potential apocalypse in a world plagued with natural disasters and major ecological, economic, political, and military problems. According to the dictionaries (Cambridge 2023b; Collins 2023b;

Merriam-Webster 2023b; Oxford 2023b), a crisis is described as “a turning point for better or worse” in the course of something or “an unstable or crucial time of affairs in which a decisive change is impending, especially one with the distinct possibility of a highly undesirable outcome”.

A literature search of disciplines in crisis at some point in their existence identified several that have gone extinct; have been in some kind of crisis; or have survived a crisis and flourished thereafter. Those identified as having been in crisis include, almost unbelievably, computer sciences, foreign languages, forensics, traditional legal scholarship, information systems, management information systems, and management sciences. Some of these survived extinction by adopting clever tactics, about which more below. Some did not survive, including secretarial/business education. In 1962, Anderson wrote about secretarial/business education’s bright future in shorthand and transcription. Less than 30 years later, Bennett (1988) warned the discipline to adapt or die at the hands of the evolution of the personalised computer. Shortly after, the discipline ceased to exist, whether by choice or circumstance.

The most interesting of the six disciplines in crisis identified above is computer sciences. In 1981, the Computer Science Board (CSB) warned against a looming crisis due to a staffing shortage. The industry was demanding more and more computer scientists (around 1300 vacancies in the USA at the time), driven by the computer revolution, but the Universities could not keep up with training (only 250 PhDs per year). To add insult to injury, those trained PhD’s were often lured to industry with high salaries, thereby depleting the talent pool for teaching and research. Agricultural economists at universities - sound familiar? Nonetheless, the computer science discipline adapted and survived the crisis (Denning et al. 1981).

The foreign languages discipline is also fascinating because we see the same happening to some of our agricultural sciences departments. Many of the foreign languages departments are merging, have been merged or have been closed at many universities. This is mainly due to declining student numbers, globalisation, and online offerings (Swaffar 2003). In the South African context, many of the smaller agricultural science departments at some universities have merged (e.g., soil science and agronomy, consolidated animal science departments, etc.), mainly as a supposed cost-saving exercise or due to declining student numbers.

One of the common remedies mentioned in the literature to save some departments from declining student numbers and subsequent mergers is to change the department’s name to something more representative of the changing times to attract students. This is also true in the agricultural economics space. Figure 2 highlights the most popular words in the names of agricultural economics departments worldwide, including the USA, Europe, South America, and Australia. Most names still include the words agricultural economics, followed by natural resources and environmental economics. Some departments added words like technology, engineering, consumer, agribusiness, applied and food economics to make the discipline sound more modern, but these are in the minority. In South Africa, all the departments include the words agricultural economics, with some referring to natural resources, environmental economics, rural development, and extension. To a large extent, the words captured in the names of the different departments are also indicative of the research focus areas of typical agricultural economists (see Figure 4).

From an evolutionary point of view, three disciplines are interesting to discuss: information sciences, management information systems and management sciences. The information science discipline originates in library science (American and Canadian influence) and computer science (Western European influence), created by parallel evolutionary paths to provide solutions to a given problem from different sources. The management and management information science disciplines faced an existential crisis because, unlike library science and computer science, it did not respond quickly enough to societal changes; student numbers started to decline (lacked competence in high-level mathematics), which resulted in the removal of management science as a major in many universities (Grossman 2001) and the redundancy of the management information systems discipline with the coming of the personal computer in the 1980s (Saunders and Lockridge 2011).

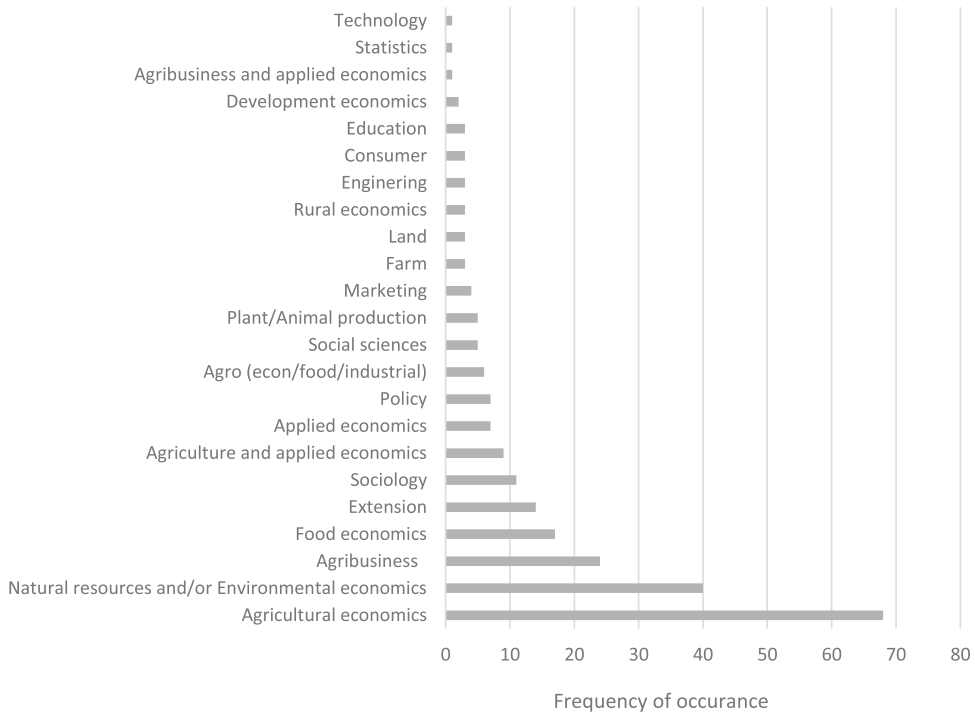


Figure 2. Words typically included in the names of agricultural economics departments. Source: EDIRC database 2023.

The crisis faced by both the forensics discipline and traditional legal scholarship is related to its applicability to practice, something that the agricultural economics discipline could perhaps also be accused of. The forensics discipline faces a crisis because the forensic tools developed for and used by the investigator might not always be grounded in sound science, which concerns the judiciary system. According to Daéid (2015), an open dialogue between lawyers and scientists can overcome this. As for the traditional legal scholarship discipline, a debate exists on the aims and methods of the academic study of law. Some critique the discipline for not being sufficiently “academic” and too close to legal practice, while others believe it is too detached from practice. Over time we have seen a shift from traditional legal scholarship to a more interdisciplinary and empirical approach encroaching on the domains of economists, sociologists, psychologists, and philosophers (Peters 2015). Perhaps something that the agricultural economics discipline can relate to.

To return to the question, “*Is the agricultural economics discipline in crisis?*” I adapted the three key pillars of a discipline (Figure 1) to develop a conceptual framework (Figure 3). The conceptual framework was applied to the agricultural economics departments at the following South African universities:

- Stellenbosch University (SU)
- University of KwaZulu (UKZN)
- University of Pretoria (UP)
- University of Fort Hare (UFH)
- University of the Free State (UFS)
- University of Limpopo (UL)
- University of Venda (UV)
- North-West University (NWU)



Figure 3. Conceptual framework.

A set of variables is identified for each of these pillars as a proxy to determine if the discipline is in crisis. The findings per pillar are discussed in the following sections, and the paper concludes with key intervention strategies.

The first pillar focuses on the status of our research and publications, particularly our research focus, NRF ratings, h-index, and publications (Figure 3). For this analysis, I developed a database of staff working at the various agricultural economics departments at the universities mentioned above. The data was collected from the department websites in July 2022 and included all academic staff listed on the website. At the time, the University of the Free State had the most staff (14), followed by the University of Limpopo (13), Stellenbosch University (11), the University Pretoria (8), University of KwaZulu Natal (5) and the North-West University and University of Venda (3 each). The websites also mentioned the research focus of the staff. For all the staff, the research focus spanned several areas, all of which were included in the database. The NRF rating and Scopus h-index (most complete set) were added to each staff member’s profile.

Figure 4 summarises the main research focus areas of staff at the various universities. The top four focus areas are:

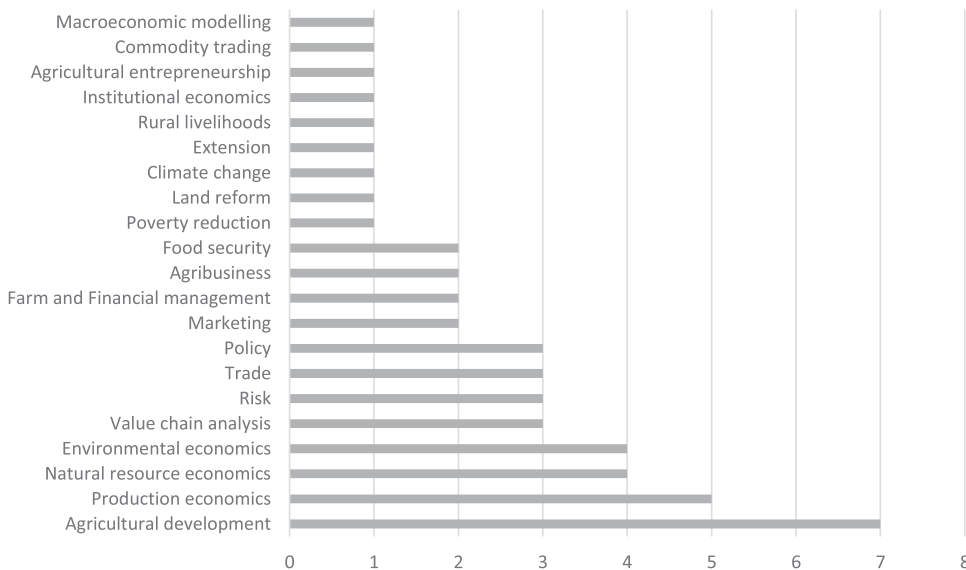


Figure 4. Research focus areas of agricultural economists.

Five or fewer agricultural economists represent the other focus areas. These areas and those that specialise in them are spread thinly between the agricultural economics departments.

1. Agricultural development (7 agricultural economists with 2 at the University of the Free State)
2. Production economics (5 agricultural economists with 2 at the University of Limpopo)
3. Natural resource economics (5 agricultural economists with 3 at Stellenbosch University)
4. Environmental economics (5 agricultural economists with 2 at Stellenbosch University)

As academic staff at universities, our performance, rigour as agricultural economists and global standing is measured by our NRF rating and h-index. The NRF rating system aims to build a globally competitive science community by benchmarking researchers against the best in the world. This system considers the quality and impact of research outputs perceived by international peers and identifies the cream of the crop that consistently delivers high-quality research outputs (NRF 2023). Of the eight universities with agricultural economics departments, only five departments employ NRF-rated researchers; the University of KwaZulu Natal (60% of the agricultural economics staff are rated), Stellenbosch University (36%), the University of the Free State (29%), the University of Pretoria (25%), and the University of Fort Hare (14%) (Figure 5).

The h-index, another scholarly metric, measures research productivity by relating the number of publications and the number of citations. The h-index score is calculated by “the maximum value of h such that the researcher has published at least h papers that have each been cited at least h times”. For example, an h-index of 5 means that a researcher has published at least 5 papers that have been cited at least 5 times (Elsevier 2023). Figure 6 illustrates the average Scopus h-index of agricultural economists per university (as of September 2022). The University of KwaZulu Natal leads with an average h-index of 8 among staff, and Stellenbosch University is in second place with an average h-index of 6. The researcher with the highest h-index (15) is at Stellenbosch University, with the second highest at the University of KwaZulu Natal (13) and the University of Pretoria (highest h-index of 13 and average of 5), followed closely by the University of the Free State (highest h-index of 12 and average of 5).

Although some of us compare well when we benchmark ourselves with the South African average h-index of 8, our international peers outperform us by far. A brief analysis of a few comparable international departments revealed a global h-index average of 30, with the United States of America in the lead (35), followed by Europe (25), Australia (18), and South America (16).

To understand the reason for our relatively poor performance, I returned to the source of the h-index calculation – publications. The first part of the analysis focused on publications in 15 of the 18 Web of Science’s “Agricultural Economics & Policy” category journals (Kirsten 2021). Three journals

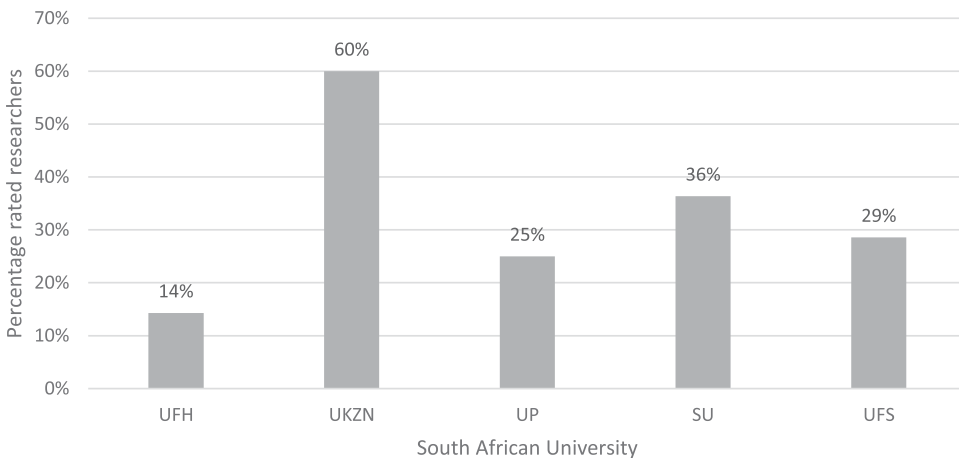


Figure 5. NRF ratings of agricultural economists per university.

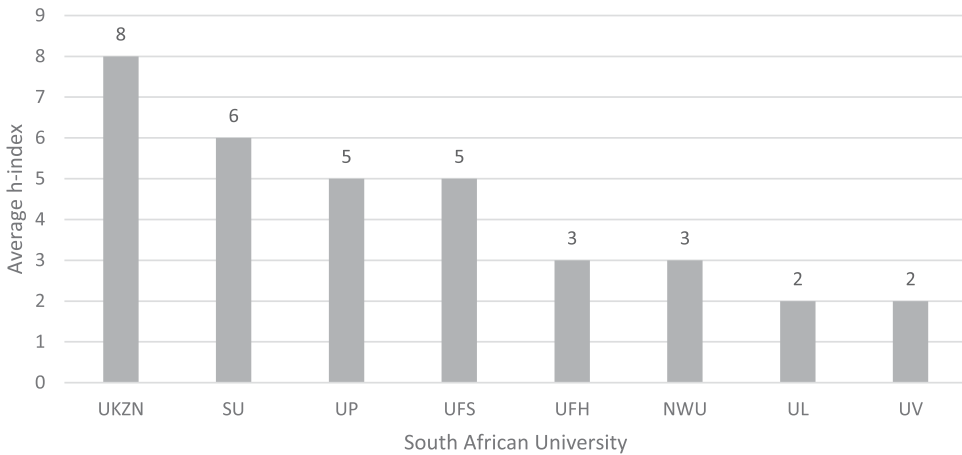


Figure 6. Average h-index of agricultural economists per university.

were excluded: *Journal of Wine Economics* (product specific), *German Journal of Agricultural Economics* and *Custos e Agronegocio Online* (publications in foreign languages made categorisation difficult). I used only 2022 publications (captured in September 2022). Ideally, one would want to analyse a longer period, but my data scraping and programming abilities were limiting factors. The publication data was then analysed in various ways to identify some evidence of why our h-indices are lower than the global average.

Table 1 summarises the publications in the 15 journals and isolates the authors and their affiliations. It was interesting to note that, on average, many of the publications in the 15 journals were written by authors by two or more universities (35%), followed closely by authors from the same university (32%), and authors from two or more universities and two or more research institutions (25%). Single research institutions published in various journals, with the majority in *Agricultural Economics* (18%). The same trend was seen for publications by two or more research institutions with a slight advantage to the *American Journal of Agricultural Economics* compared to *Agricultural Economics* (5% compared to 4%). The most publications from single university authors were published in the *Canadian Journal of Agricultural Economics* (65%), and the most by authors from two or more universities were published in the *Agribusiness* journal (79%). The most diverse group of authors (two or more universities and two or more research institutions) favoured the *Journal of Agricultural Economics* (35%), *Australian Journal of Agricultural and Resource Economics* (33%) and *Applied Economic Perspectives and Policy* (31%).

The second level of analysis identified the publications of South African and African agricultural economists affiliated with universities and research institutions in the 15 journals (Table 2). As expected, most authors associated with South African and African universities and research institutions publish their work in the *Agrekon* (the AEASA journal). Most African research institutions publish their work in *Agricultural Economics* (21 publications), *Food Policy* (12) and the *Journal of Agricultural Economics* (8). Interestingly, our colleagues from American or European universities or research institutions often collaborate with our colleagues from African universities or research institutions.

When I analysed the authors and publications by university affiliation, particularly in international journals, I found Stellenbosch University and the University of the Free State publish in the *Annual Review of Resource Economics* (same article) and the University of the Free State in the *European Review of Agricultural Economics*. The University of Pretoria published in the *International Food and Agribusiness Management Review*. In the year under review, authors from Stellenbosch University, the University of Pretoria, the University of the Free State, the University of KwaZulu Natal, and

Table 1. 2022 publication collaborations in the 15 agricultural economics journals.

Journal name	Single University	Joint Universities	Single Research Institution	Joint Research Institution	Joint Universities and Research Institutions
Canadian Journal of Agricultural Economics	65%	22%	3%	0%	11%
Annual Review of Resource Economics	32%	32%	8%	0%	27%
Food Policy	20%	41%	5%	3%	31%
Applied Economic Perspectives and Policy	30%	30%	7%	2%	31%
European Review of Agricultural Economics	33%	31%	9%	1%	26%
China Agricultural Economic Review	31%	38%	3%	0%	28%
Journal of Agricultural Economics	30%	24%	10%	2%	35%
Agricultural Economics	21%	31%	18%	4%	27%
American Journal of Agricultural Economics	19%	43%	5%	5%	28%
Australian Journal of Agricultural and Resource Economics	18%	33%	3%	0%	33%
Agribusiness	57%	79%	11%	2%	23%
Agricultural Economics - Zemedelska Ekonomika	44%	30%	11%	2%	12%
Agrekon	37%	27%	10%	2%	21%
International Food and Agribusiness Management Review	19%	26%	0%	0%	14%
Journal of Agricultural and Resource Economics	27%	36%	10%	1%	25%
Average	32%	35%	7%	2%	25%

the University of Limpopo published a total of 16 papers in Agrekon, with most from Stellenbosch University (8) and the University of Pretoria (4). South African research institutions such as the Bureau for Food and Agricultural Policy (BFAP), the Agricultural Business Chamber of South Africa (Agbiz), and the Agricultural Research Council (ARC), and other organisations, such as the Landbouweekblad and UT Grain Management, also contributed to publications in Agrekon.

Table 2. 2022 publications by South African and African universities and research institutions.

Journal name	University in South Africa	University in Africa	Research institutions in South Africa	Research institutions in Africa
Annual Review of Resource Economics	3			2
Food Policy		2		12
Applied Economic Perspectives and Policy				2
European Review of Agricultural Economics	1	1		4
Journal of Agricultural Economics				8
Agricultural Economics		2		21
American Journal of Agricultural Economics				3
Agribusiness		2		
Agrekon	16	17	9	4
International Food and Agribusiness Management Review	2			1
Journal of Agricultural and Resource Economics		1		1

When analysing South African agricultural economists based on their NRF rating, h-index, and publications, it seems we are publishing, but perhaps not in the same high-impact factor journals as our international colleagues. Possible reasons for our relatively poorer performance might be a lack of research funding, inability (due to lack of funding or capacity building capabilities) of universities to train and retain the best candidates for academic positions, gradual transition of universities as research institutions to teaching facilities, and staff shortages which often mean dedicating precious research time to teaching and supervision of students.

Upon further enquiry, some of our agricultural economists said that publications that improve ratings and h-indices are impactful in the academic space (often with a theoretical or methodological contribution), but are often not aimed at solving real-world problems, particularly those of the developing world. Hence, I also analysed the three best papers published in *Agrekon* according to Altmetric score (summary of the online attention and activity, including newspapers, social media platforms such as Twitter, policy documents and blogs, of a publication) to determine their “role” and impact in addressing these real-world problems. It is perhaps also important to note that Altmetric scores differ by journal status, and a good score for one journal might not be a good score for another. Journals with high readership therefore tend to generate higher Altmetric scores. The highest Altmetric score is 34 775 for a paper on the proximal origin of COVID-19 published in *Nature Medicine* (Altmetric 2023). The results from the analysis of the publications in *Agrekon*:

- First is a paper titled *“The impact of Covid-19 on black farmers in South Africa”* by Mark Wegerif in September 2021. In September 2022, this paper had 6 561 views, three citations according to the Scopus database, four according to the Web of Science database and an Altmetric score of 40. This publication received attention from four outlets with four news stories and 8 Tweets with an upper bound of 18 200 followers.
- Second is *“Sources of growth in smallholder agriculture in Sub-Saharan Africa: The role of vertical integration of smallholders with processors and marketers of high value-added items”* by Chris Delgado in May 1991. This paper has 289 views, 64 Scopus citations, 54 Web of Science citations, and an Altmetric score of 21. This publication was mentioned in 7 policy documents, mainly by the World Bank, the Food and Agriculture Organisation of the United Nations (FAO), the International Food Policy Research Institute (IFPRI), and the International Fund for Agricultural Development (IFAD).
- Third is *“Typology of contract farming arrangements: A transaction cost perspective”* by J. Bijman, I. Mugwagwa, and J. Trienekens in March 2020. This paper had 3 358 views with 12 Scopus citations, 12 Web of Science citations and an Altmetric score of 21. This publication received attention from 2 Tweets.

Following the Altmetric score analysis, I arrive at the following question - If we claim to be doing research that matters and that contributes locally, why is it that the top three papers (by Altmetric/attention score) in our own journal are not authored by South African agricultural economists?

The second pillar used to determine whether the agricultural economics discipline is in crisis is teaching. Here the focus is on the number of students, the number of staff and the relevance of our teaching (Figure 3). The data required for the analysis of the teaching pillar were requested from the heads of departments of the universities. The request was for the heads of departments to update the tables captured in Chapter 2 (The academic departments of Agricultural Economics) of AEASA’s 50th commemorative report (Vink, Hendriks, and Kirsten 2011). These tables captured the staff compliment and the graduates of the departments’ various undergraduate and postgraduate programmes. Table 3 below summarises the updated data of recent years of staff and students as provided by the heads of the department.

Table 3. Summary of the total lecturing staff and graduates from the various agricultural economics departments over the date range.

University	Date range	Undergraduate ¹	Honours ²	Masters ³	Doctoral	Staff
SU	2012–2021	247 (avg. p.a. 25)	119	94	9	11
UKZN	2013–2021	240 (avg. p.a. 27)	10	30	19	5
UP	2011–2021	171 (avg. p.a. 16)	40	125	26	7
UFH	2016–2021	492 (avg. p.a. 82)	278	75	33	7
UFS	2017–2021	235 (avg. p.a. 47)	170	25	7	14
UL	2012–2021					13
UV*	2012–2021	126 (avg. p.a. 13)		17		3
NWU_P	2019–2021	113 (avg. p.a. 38)	4			3
NWU_M*	2018–2021	116 (avg. p.a. 29)				

¹BAgric, BScAgric, and BCom²BAgric Hons³MAgric, MScAgric, and MCom

* Enrolment data

The data provided in Table 3 is captured for varying date ranges because many departments could not provide the entire dataset from 2012 to 2021. Nonetheless, the data analysis indicated that the average number of graduates (undergraduate and postgraduates) in our departments has increased over time. Some interesting observations from the dataset shared by the heads of departments include:

- The biggest increase in graduates in undergraduate programmes is at the University of the Free State, followed by the North-West University's Potchefstroom campus. The latter started offering a BCom Agricultural Economics degree at the economics department just more than 5 years ago, and their number of graduates is increasing significantly. The graduate numbers at other universities are increasing steadily.
- The number of honours graduates increased at all universities except for the University of Pretoria. Stellenbosch University and the University of the Free State showed a declining number of masters students graduating from their programmes. The other universities showed slight increases. The University of Pretoria and the University of the Free State showed a slight decrease in the number of doctoral students graduating from their programmes.

Overall, extracting the data from the university departments was challenging; some could only provide the totals over the date range, some provided initial datasets and then had to resend corrections, some only had access to enrolments, and some had significant delays in getting the data together. Many departments indicated that they did not have the information readily available and that the data had to be requested from the faculty or a centralised department responsible for managing the university's data. This is cumbersome as our departments (as the custodians of our discipline) cannot manage (declining) student numbers if the data is not readily available to the heads of departments when strategic decisions need to be made. This leaves the discipline vulnerable to crisis.

Over time, the staff complement at the University of Pretoria and the University of Venda declined significantly despite increasing student numbers. Over the past decade or so, the staff complement at the Universities of KwaZulu-Natal and Fort Hare remained constant. The staff complement increased at Stellenbosch University, the Universities of Free State, Limpopo, and the North-West Potchefstroom campus. Although the staff complement increased on average for all departments, the student-to-staff ratio has declined, which is worrisome. We are also lacking when we compare our staff complement to the agricultural economics departments in the United States of America, Europe, South America, and Australia. A count of the academic staff employed at these agricultural economics departments (according to their websites) revealed an average of 24 staff members.

Moreover, many of these staff members focus on teaching or research, not on both, as is the case for most of us in South Africa.

After seeing these increasing trends in the number of graduates, the economic question, “Is there an equilibrium between what universities supply and the market demands?” arose. Following discussions with colleagues at the different departments and industry organisations, the following points came to light:

- According to university staff, it seems like, in many cases, students continue their studies (sometimes up to a PhD) because they struggle to land a job.
- Some industry organisations admitted to preferring students who graduate from certain universities only.
- There seems to be an oversupply; some industry organisations mentioned nearly 200 curriculum vitae submitted for junior agricultural economics positions. This is in line with the approximately 200 students that we graduate, on average, per annum.

Our scholarly association is the third pillar used to determine whether the agricultural economics discipline is in crisis. Here I analysed the relevance of AEASA and its benefits to the members (Figure 3). For this analysis, I used the survey shared with about 400 AEASA members (past and present) early in 2022, for which we received 56 usable responses.

One of the first questions asked in this survey was for members to write down one word that comes to mind when they think of AEASA. These words are mostly positive except for two – “narrow” and “weak”. Most of our members associate AEASA with the annual conference, networking, and family. From this, we learn that we must keep hosting high-quality conferences that allow for networking opportunities (Figure 7, where the font size denotes the frequency of word association).

Over time our membership numbers have fluctuated between 200 (204 in 2021) and almost 500 (458 in 2011). We were also interested to know of other associations our members are involved with. The most prominent of these associations are the International Food and Agribusiness Management Association (8 members), the International Association of Agricultural Economists (6 members), and the African Association of Agricultural Economists (5 members).



Figure 7. Words that members associate with AEASA.

Reasons for...

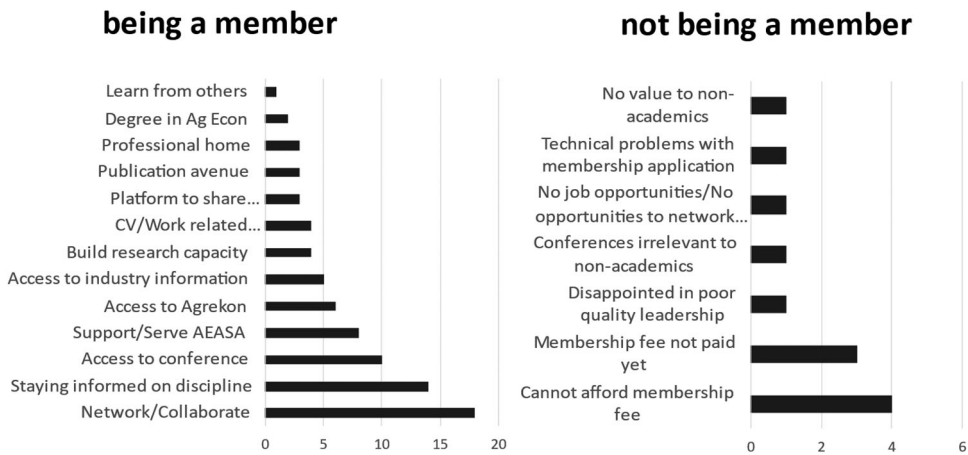


Figure 8. Reasons behind AEASA membership.

To allow us to support our members better, we asked them to highlight some of the reasons why they became members of AEASA. We also asked the non-members why they were not members of AEASA anymore (Figure 8). The main reasons for being a member speaks to Figure 7 – for networking and collaboration opportunities, staying informed about the discipline, and access to the conference. The main reasons for not being a member are the affordability of the membership fee and membership fees that have not been paid yet, either because members were struggling financially or forgot to pay.

We also asked our members why they would recommend (or not recommend) AEASA to the next generation of agricultural economists (Figure 9). Most of our members positively indicated that they would recommend AEASA to the next generation because the association is the home of agricultural economists, it is relevant to stay informed about new developments, and it supports networking opportunities and career growth. However, two of the most concerning negatives are that there

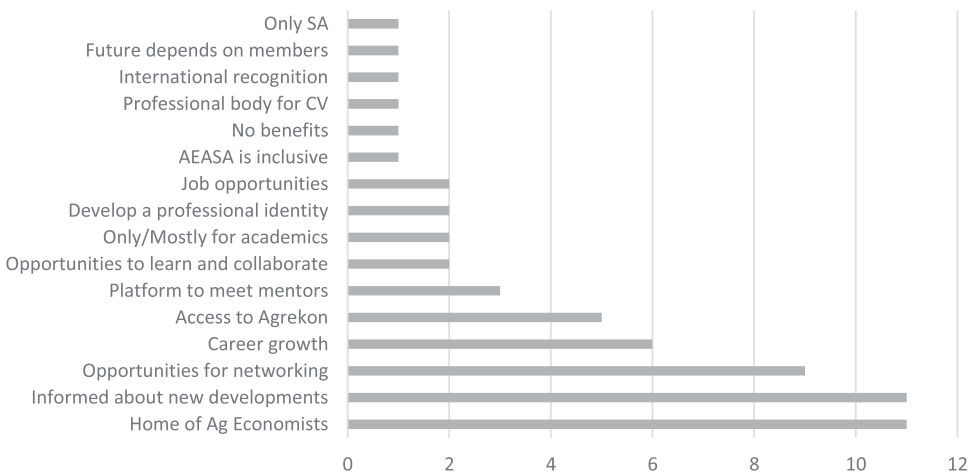


Figure 9. Recommending AEASA to the next generation.

are no benefits to being an AEASA member and that it is only for academics. We need to work on these two areas if the association is to remain relevant in the future.

Following the analysis of the three pillars, it seems like the agricultural economics discipline might not be in crisis, at least not yet. However, given the responses received on the AEASA survey, the association might be steering down the wrong path (Figure 10).

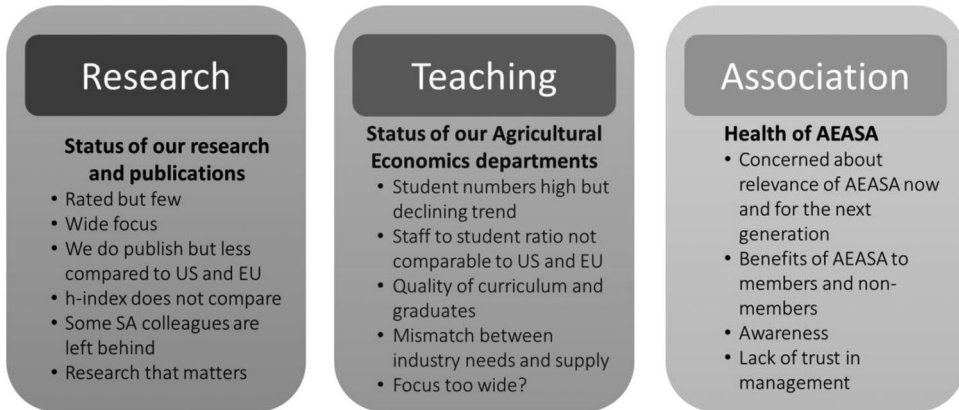


Figure 10. The diagnosis – A discipline in crisis?.

3. Conclusion

Based on this analysis of our association, as economists, we must ask, are we failing as a collective? Suppose we regard AEASA as a common pool resource and use the analogy of the “tragedy of the commons” (Hardin 1968). In that case, we need to ask ourselves if we are acting independently to serve our own interests or are we working collectively to support the objectives of the collective (AEASA). Some of the actions we can take to support the collective include:

- Reaffirm and redefine our purpose and value proposition.
- Reconnect with universities, government, and industry.
- Expand the family to include the next generation but ensure we understand their needs.
- Ensure more frequent two-way communication to hear and act on member concerns.
- Continue to host high-quality and high-value conferences to support networking and collaborations.
- Instil trust, loyalty, and a sense of belonging.
- Use collective interventions to drive the association forward.

As mentioned at the onset of this Address, many scholars have written about the evolution of disciplines, disciplines that are (or were) in crisis, those that managed to escape extinction and those that were not so lucky. These same authors (Krishnan 2009; Gill and Bhattacharjee 2009; Alter 2003; Cecez-Kecmanovic 2000; Cohen 1999; Avison and Nandhakumar 1995) also highlighted the following survival strategies:

- Turn inward, redefine our purpose, and strengthen our boundaries – are we, as agricultural economists, generalists, or specialists?
- Form strategic alliances with stronger disciplines, such as those in agricultural sciences, economics, engineering, accounting, and actuarial sciences.

- Reconstitute the discipline in a newer and larger field of study to provide solutions to a larger community of practitioners in stronger fields.
- Get out of the silos by collaborating with other universities and research institutions in South Africa and leverage the untapped potential in Africa.

Based on the diagnosis reached by applying the three-pillar diagnostic analysis, and the strategies highlighted in literature, the following key strategies were identified:

- Reconnect with industry through open dialogue to move away from the supply-push perspective and get back to the demand-pull responsible for the discipline's early development to ensure that the graduate supply meets the market demands.
- Heads of university departments should build strong departments and collaborate with highly cited researchers. Although we focus on research that matters, these findings could significantly contribute to the literature if positioned correctly.
- Researchers should strive to contribute to the discipline by publishing research with impact in high-impact journals while (as far as possible) supporting the Agrekon journal.
- Departments should keep their fingers on the data-pulse to ensure intervention strategies when we see tell-tale signs of crisis, such as declining student numbers.
- Proper management of the reputation of our agricultural economics departments are key if we are to continue to attract the best students and remain departments of teaching excellence.
- University departments should build a pipeline of talented young academics and aim to retain them to continue teaching excellence.

As we have seen, the emergence of a crisis does not always lead to the end of a discipline. On the contrary, it often promotes educational reflection and reform, ultimately leading the disciplinary evolution. Recall that extinction occurs only when disciplines fail to respond to environmental changes. Therefore, if the agricultural economics discipline continues to escape extinction, change in line with the changing environment is vital.

Disclosure statement

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