

A black and white photograph of an elephant's head and trunk, with the skin's wrinkled texture serving as the background for the journal cover.

ISSN 2305-946X

The South African Economic History *Annual* 1

A publication of the Economic History Society of Southern Africa • Volume 1 • December 2012

Highlights:

The World Economic History Congress
African leaders and economic history
A history of CGE modelling in South Africa
The economic underpinnings of social history
Mountains of the Moon University
Interview with Grietjie Verhoef

EDITORIAL

Economic history is not the preserve of a single academic discipline. Our understanding of the economic past can only benefit from the collective efforts of social historians, archaeologists, economists, linguists, archivists and many others. This publication, the first volume of *The South African Economic History Annual* published by the Economic History Society of Southern Africa, aims to help facilitate this interdisciplinary nature of our subject.

2012 was a great year for economic history in South Africa. The World Economic History Congress was held in Africa for the first time and, as Sophia du Plessis writes, shifted the focus to African economic histories neglected for too long. New data sources are being unearthed and digitised, more South African universities are offering undergraduate or graduate programmes in economic history, and several South African students are enrolled in economic history programmes abroad. As Africa's future prospects brighten, so does the interest in African economic history.

I hope that this *Annual* will further promote an exchange of ideas, techniques and viewpoints that will strengthen the research community, and encourage more students to consider economic history as an essential tool for understanding current global developments.



Johan Fourie



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ISSN 2305-946X

Department of Economics, Private Bag X1, Stellenbosch University, Matieland, 7602

www.ehssa.org.za

Edited by Johan Fourie

Department of Economics, Private Bag X1, Stellenbosch University, Matieland, 7602

Tel: +27 (0)21 808 3590; E-mail: johanf@sun.ac.za

Stellenbosch hosts World Economic History Congress

Sophia du Plessis, Department of Economics, Stellenbosch University



From 9-13 July 2012 almost 800 delegates from 55 countries gathered in Stellenbosch, South Africa, for the World Economic History Congress. It was the first time for the Congress to be held on African soil and by far the largest gathering of economic historians on the continent.

Holding the Congress in Africa was symbolically important. Economic history has important implications for development and underdevelopment in Africa and it is important that academic discussions about the “roots of development” take place in Africa. Economic history as research field can provide new insights to previously general accepted ideas, like the landmark publication by Fogel and Engermann, *Time on the Cross*, did. New data sources will bring forth new understandings about development in Africa.

Several sessions at the congress focused on Africa-specific themes and challenged previously accepted ideas.

These included the sessions on New African economic history: approaches to long term African economic development; Labour, wages and living standards in colonial Africa; Dynamics of agriculture and agrarian institutions in sub-Saharan Africa, 19th and 20th centuries; Pre-colonial sub-Saharan Africa: interactions between internal and external sources of change, 1450-1890. Readers are invited to download these papers from the conference website.

Other sessions compared Africa to other developing regions, including the sessions on Human capital and development in Africa and Latin America, and Historical origins of developmentalism: Asian and African experiences compared

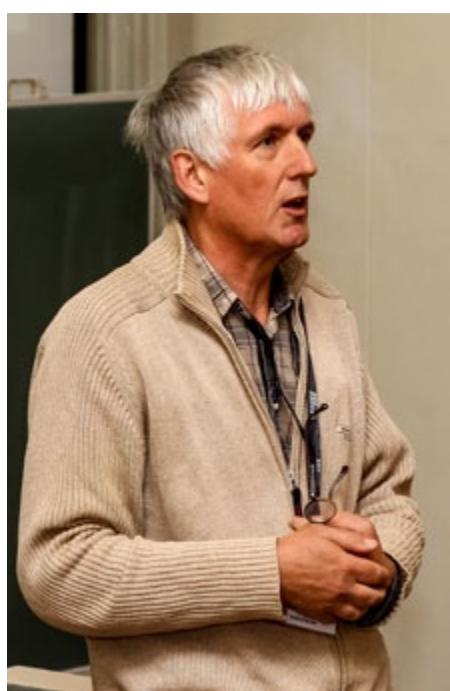
There were sessions that addressed specific themes, like for instance Does the history of entrepreneurship in Africa matter?; The South African industrialisation model and its consequences; Modern economic history

ABOVE: The Congress is opened by traditional African drums and singing. BELOW: Minister Pravin Gordhan delivers the welcome address at the opening of the Congress.





ABOVE: Participants enjoy scenic Stellenbosch. BELOW: Jan Luiten van Zanden, professor at Utrecht University and former president of the IEHA, discusses global inequality.



of South Africa from the perspective of comparison and connectedness: land, labour and business; Global land grabbing and food security in Africa: on whose terms?

What were particularly striking about some of the papers presented on African themes, was the interesting data sources that were explored. In the absence of reliable historical data, it is important to be creative in finding data that allow researchers to test their hypotheses.

The lack of easy-to-find data contributes to the fact that Africa is not receiving the research attention it deserves and leaves room for new researchers. We witnessed a lot of new, young researchers with an interest in Africa present at the conference. This is an important development and one that needs encouragement.

It was also the first time that a substantial number of participants from Africa registered for the congress. They included established research-

ers, but also young scholars. For the more established researcher it was an opportunity to showcase the work already being done on the continent. For the younger researcher it was an opportunity to witness new techniques and to get inspired by the older generation. For both these groups it was an opportunity to establish research contacts. We hope this will encourage even more economic history research on the continent.

THE WORLD Economic History Congress is held every three years. The next conference will be held in Kyoto in 2015. The first call for session proposals will open in 2013. Readers are invited to visit the website of Kyoto (<http://www.wehc2015.org/>) for frequent updates and reminders of the registration process.

EHDR now has global footprint



Economic History of Developing Regions, the official journal of the Economic History Society, is attracting global interest from readers and authors alike. The editor, Stefan Schirmer, recently noted the increase in submissions from authors outside Africa, while global readership has increased significantly since Taylor & Francis joined as publisher in 2010.

A special issue (pictured) was published in June to coincide with the World Economic History Congress 2012. The papers, written by twelve leading economic historians, are available on the T&F website: <http://www.tandfonline.com/toc/rehd20/current>

Heritage information online

The South African Heritage Resources Information System, commonly known as SAHRIS, went live on 5 August 2012. The first version includes heritage case management of the National Inventory of heritage sites. Version 2 is being developed to cover all objects management for museums and other curating institutions.

SAHRIS is the first government-run service which allows the public to logon and view all developments in their area with online commenting. Smaller developments handled only at municipal level are not captured on SAHRIS unless they trigger the National Heritage Act (Act 25 of 1999), typically encountered for applications involving demolitions and alterations to buildings older than 60 years.

A large body of data from KZN and UCT has already been migrated into SAHRIS, making it the single largest repository of archaeological data in South Africa. A mapping and digitisation project conducted by SAHRA was concluded in 2009 where all Archaeological Impact Assessments were scanned and mapped dating back to the 1980s. This dataset of over 5000 reports has been made available online, free of charge, allowing research-

ers and other users to view current and historical cases in their area. The current cases can be queried by development type as illustrated in the tutorials available on SAHRIS, but the historical data pre May 2012 was not captured in this format. However, since the reports are available for download in pdf, this information can be extracted by researchers.

One of the roadmap plans for SAHRIS in 2013 is to obtain historical maps of the country and other more specific areas (eg historical maps of Cape Town), and to reprocess them for online viewing via the SAHRIS mapserver. The 1:50 000 and 1:250 000 maps of South Africa are already on SAHRIS with the usual cadastral, municipal, district, index and magisterial layers. We are also in the process of hosting the first online fossil sensitivity map for South Africa.

The SAHRA registry is commencing the full digitisation of all SAHRA's archives (estimated 2.5 million pages) in December this year and records dating back to the 1920s will also be available for download - there is a wealth of historical data in these records that will be of use to researchers. For more information, visit the SAHRA website at: www.sahra.org.za.

New network promises more African economic history research



With the support of the Riksbank Jubileumsfonds in Sweden, a new African Economic History Network (AEHN) was established at a workshop in Lund, Sweden in December 2011. The network is an initiative intended to foster communication, collaboration and research as well as teaching amongst scholars studying the economic history of sub-Saharan Africa, from the pre-colonial to the post-colonial era. Erik Green, Lund University, and Morten Jerven, Simon Fraser University, are the co-founders of the network.

The AEHN will publish working papers in African Economic History and a newsletter. The first working paper - *Moving Forward in African Economic History: Bridging the Gap in Methods and Sources* - discusses recent African economic history scholarship. With the support of sponsors like Riksbank, membership is open to anyone and is free. Upcoming meetings are planned for April 2013 in Vancouver, Canada and for August 2013 in Lund. Visit the AEHN website (www.aeh-network.org) for more information.

'Without history, everything is new'

Keith Brackenridge, WISER, University of the Witwatersrand

At the end of October, the World Bank hosted a Workshop on Using History to Inform Policy. The event was interesting in part because it brought together a group of researchers who don't often meet: archivists, lawyers and economists, scholars of US foreign policy, the history of the IMF, historians of the Bank and Africanists who work on economic policy, and the history of states.

After many interesting presentations a single quote from Daves Kapur, brilliant historian of the bank, reflected the mood of proceedings very well: "Where there is no history," he observed drolly, "everything is an in-

novation."

By this he meant that decision makers dislike history because it reminds them that almost everything they want to do has been tried before, and resulting, very often, in failure.

But another aphorism reminded us that institutions that seek progress have little option but to engage history, for it is only, as Bill Becker noted in concluding the workshop, through the detailed study of history that they can gain something like self-awareness.

These two precepts capture the difficult relationship between historians and policy makers very nicely, in South Africa as much as in Washington DC.

Economic history popular at UCT

Ashley Millar, History Department, University of Cape Town

Based in the Department of Historical Studies, economic history at UCT offers a humanities centred approach to understanding the economic past of advanced and developing economies. Students are expected to develop the conceptual language and quantitative reasoning necessary to talk about economies over time and space.

2012 has been an excellent year for economic history at the University of Cape Town. With the recent global economic crisis and the ongoing interest in economic development, economic history has proved a popular choice for students. We have seen the number of students in our undergraduate courses grow dramatically (doubling in second year). We launched our own Facebook page with current affairs articles relevant to economic history as well as updates and information about economic history at UCT. It is also venue for students across disciplines and years of study to network and share information. And in 2012 we offered a new economic history Honours course centred on Kenneth Pomeroy's *The Great Di-*

vergence. Next year we are adding another Honours level course on South African economic history. With a new appointment set to join us in 2013 we are working towards expanding our graduating teaching with a course in methodology and eventually we hope to establish a taught Masters degree in economic history.

Our third year students and Honours students are undertaking exciting research on South African economic history. Their projects range from protectionism in the interwar period to examining the profitability of railway construction before South Africa's mineral revolution. For my own research, I am currently finishing up a manuscript examining how knowledge of China's economy in the early modern period filtered into theories of political economy during the European Enlightenment. I am also writing an article on how European travel literature described pre-colonial African economies, and in particular how we use that information as evidence in our studies on Africa's economic past.

Please visit us at: <http://www.facebook.com/UCT.Economic.History>



News in brief

- Stan du Plessis (pictured), professor of Economics at Stellenbosch University, delivered a TEDx talk during August at Spier. His talk - How we've cooperated our way to prosperity - takes a long-run view of human development. It is available on YouTube.
- Twitter is becoming a popular medium to disseminate new research. The Association of Business Historians now have their own twitter account: @the_abh.
- The seventh World Congress of Cliometrics will be held in Honolulu, Hawai'i from June 18-21 2013. Abstract submissions are due December 16, 2012.

ERSA hosts economic history workshops

ECONOMIC Research Southern Africa hosts two Economic History Workshops annually. The eighth workshop was held during November in East London. Alexander Moradi of Sussex University was the invited speaker and presented several papers and tutorials on the use of GIS in historical research.

The next ERSA Economic History Workshop is planned for early 2013. Contact Johan Fourie (johanf@sun.ac.za) for more information. ERSA also accepts Working Papers in economic history. Visit www.econ-rsa.org for more information.

Why should African leaders study economic history?

Bheki Mngomezulu, Research Coordinator, Durban University of Technology

There is a general assumption that politicians deal with political or governance issues and have little or nothing to do with economic matters. The reality, however, is that for any politician to do well in the realm of politics or in his trade as a politician and survive the hurdles of political activism, extensive knowledge of how the economy operates in the global scale is of pivotal importance. In fact, in country politics, it is not an exaggeration to say that economy is indubitably the verve and nerve of each and every nation across the globe. This is so because the country's economy and politics are inextricably intertwined and interdependent or interwoven. According to this trajectory, if a country (any country) experiences political upheavals it inevitably suffers economically too.

The main reason for this is that any volatile political situation scares potential foreign investors resulting *inter alia* into the low Gross Domestic Product (GDP), loss of jobs and many such related ramifications. Secondly, whenever political disturbances occur, economic or financial resources are diverted towards addressing the prevailing political commotions. This is done at the expense of the other economic projects aimed at improving the country's economy.

If this line of thought is anything to go by, it goes without saying that African leaders need to be acutely aware of economic history and understand it both from the historical and present contexts if the countries they lead are to survive and compete at the global level. Any politician who does not have a grip on economic history runs the risk of making decisions that are not economically sound and thereby plunging the country into economic chaos. Without the knowledge of economic history, it becomes difficult for politicians to have reference points

when they plan the future of their respective countries. For example, in East Africa, the East African Community (EAC) which was established in 1967 as an economic body was dissolved in 1967 due to a confluence of factors.

It would be foolhardy for the current political leadership to run the new Eastern African Community in the same manner that the initial EAC was run. Such action would be a futile exercise if the factors that led to the demise of the first EAC are not evaded or addressed properly. It is in this context that the question posed above becomes relevant here. It is a forward-looking question aimed at urging the current African political leadership to do things differently from their predecessors.

It is a fact that in order to progress as a human race we need to constantly reflect on our past experiences and learn from our mistakes as we move forward. Africa is replete with examples of how the continent advanced or failed to advance economically.

The positive aspects of Africa's economic history include the trans-Saharan trade whereby Africans South of the Sahara traded with those geographically located on the Northern part of the continent. Through this trade, West and West-Central Africa interacted with both North Africa and the Middle-East. This enabled different stakeholders to forge economic, political and religious relations. The latter point is buttressed by the evident prevalence of the Islamic religion in most North and West African countries to-date. Most importantly, these economic relations laid a solid foundation for the spread of ideas and created fertile ground for the development of education institutions. Places like Timbuctu in present-day Mali epitomize the ramifications of economic engagements in North, West

and West-Central Africa.

Understanding how this trans-Saharan trade began and how it was conducted is pertinent to the current leadership because it provides the basis on which intra-trade can be organised among members of the African Union (AU) and within each of the continent's geographical regions represented by regional bodies such as the EAC, Common Market for Eastern and Southern Africa (COMESA), Economic Community of West African States (ECOWAS), Southern African Development Community (SADC), and others. Although the trade items used at the time may be non-existent today, the reality is that understanding the manner in which such trade was conducted would be a good starting point for the continent's current leadership to plan the way forward for each of the African countries' economic development agendas.

Another historical reason why African politicians should know the continent's economic history is the impact of the Atlantic Slave Trade (AST) on the African continent's economic development. Drawing from Walter Rodney's famous title *How Europe underdeveloped Africa* (1973), the current African leadership will, through their understanding of economic history, get to know the potential detrimental effects of China and Europe's economic activities in Africa.

With this knowledge, African politicians would be better positioned to know how to plan their engagement with the international community in the present era of globalisation – which is one reality the African continent has to contend with. These African politicians could use the experiences referred to by Rodney (above) as precaution and try to dodge similar experiences as they take their respective nations forward. Another reason (perhaps one of the most important

of all) why African politicians should understand economic history is that it would enable them to instil pride and revive the lost self-esteem among the African people. An understanding of Africa's economic history would alert Africans to the fact that economic activities within the African continent were not invented by Europeans as is generally assumed, but pre-existed before the dawn of colonialism and apartheid (in the case of South Africa).

It is imperative for African politicians to fully understand why countries of the African continent are at different levels of economic development. Knowing the economic history of the continent will enable the current leadership to appreciate several facts. First, they will know, for example, that African contacts with the outside world did not happen simultaneously, hence the differences in the state of economic development in each part of the continent. A related point is that trade commodities differed from one country to the other, e.g. cotton, cocoa, gold, copper, diamond, sisal, and many more were not found everywhere on the continent but in selected countries. Second, they will know that the Slave Trade did not affect different parts of the African continent in the same manner and that this historical episode did not happen at the same time in each part of the continent. For example, slavery and the slave trade in East and West Africa happened at different times and under different conditions. In this context, the economic effects of slavery in countries such as Kenya in East Africa and Senegal in West Africa were not the same. But one will only understand the present differences amongst African countries and regions once the continent's economic history has been seriously considered and analysed by these politicians.

One of the key questions currently is: why is Africa poor? There is no way that African leaders can answer this question without drawing from the continent's economic history. Frederick Cooper's detailed study ti-

tled: Africa since 1940 (2002) argues among other things that one of the reasons why African countries struggled economically after independence is because they inherited weak states with weak institutions from the Western colonial powers. In a way, this response removes agency from African nationalist leaders and exonerates them for the failures of African states economically and politically after independence. It presents African leaders as innocent victims of colonial subjugation. However, Cooper and others also make the point that when African politicians replaced their former white masters they replicated what white masters used to do. In some instances, they even wittingly or unwittingly worsened the continent's national economies by living a lavish lifestyle which did not consider the economic situation in their respective countries. They imported expensive cars, clothes, food items, and many such personal luxuries. They also literally looted the state. This 'lootocracy' had detrimental effects on economic development.

It also had other corollaries. For example, when the masses complained about lack of basic human services, the national police and the army were called in to restore order through forceful means. Most of the civil wars that have bifurcated the African continent for the past few decades trace their origins from this transitional period. Unless African politicians today know this history, they will never understand why Africa has become so notorious for intermittent civil wars. Related to this is the issue of who colonized which part of Africa and how each of the international powers practiced colonial domination. A case in point is the juxtaposition of British and French colonialism. While the British used indirect rule and let Africans govern fellow Africans, the French wanted Africans in their colonies to be more like French citizens. Indeed, some individuals from West Africa relocated to France and some even served in the French parliament and also voted for politi-

cal office bearers. At face value, these are insignificant facts about the British/French dichotomy. But when one ponders about these facts, it becomes clear why former French and former British colonies are in different states of economic development.

The discussion thus far shows that it is imperative for African politicians to understand economic history if they are to become relevant and proactive leaders now and in the future. As much as the focus is on present and future development, it is clear from the discussion above that history remains the best teacher. In the same vein, economic history is the sinequa-non and a panacea for having a clear understanding of the current social and economic conditions prevailing in Africa. Any politician who consciously or unconsciously ignores the continent's economic history runs the risk of literally shooting in the dark when developing economic policies aimed at developing the African continent. Looking in the past enables us to plan for the future from a strong position.

In conclusion, the complexity of the question posed in this article becomes more explicit when different historical moments are cited as examples to show why it is important for African politicians to know economic history. Suffice to say although the focus here is on African history, the reality is that African politicians should understand global economic history. It is this knowledge that will enable them to draw parallels between African and other countries. By understanding the economic histories of other countries across the globe, African politicians will appreciate the African continent's successes while also identifying areas for improvement. For these reasons, it is of fundamental importance for African politicians to understand economic history, not only in the African context but also in the global context. Africa does not live in a vacuum. It is in this spirit of globalization that African politicians should think globally but act locally (within the continent, their regions and their countries).

Social history and its economic underpinnings: An excursion into South African historiography

Albert Grundlingh, History Department, Stellenbosch University

There is no shortage of academics in South Africa and elsewhere who have expressed themselves in favour of a historically informed study of economics or the other way round, a history that is more sensitive to economic developments. (Botha 1989, Hodgson 2001, Fourie and Schirmer 2012) Such pleas have obvious merits and the various ways in the two disciplines can be enriched by cross-pollination should not be a matter of dispute.

It can be argued though that in South Africa a too stark a depiction of the trajectory of mainline economics and historical writing as separate entities tends to gloss over the fact that the social history variant of historical writing in South Africa has over the years been attentive to economic factors. This in part may be due to the fact that this genre has by and large not projected itself as being a variant of economic history, but rather sought to engage more directly with what it considered the shortcomings of mainline history with either its overwhelming emphasis on purely political matters or unproblematised conceptualisation of the workings of capitalism in South Africa. It is the purpose of this piece to outline the process through which social history has acquired a specific economic dimension and to tease out the way in which this has featured in the work of some social historians.

The problem of defining social history is compounded by the fact that hybridity is an essential characteristic of this genre. Hybridity, however, is not a code for random intellectual confusion. If the notion of the “social” in social history has to be explained, three

main features can be discerned. First it implies a synthetic understanding of society, allowing for an interrogation of those dimensions that may at first glance appear as distinct but which may on closer inspection emerge as intricately interwoven. Secondly, as opposed to focusing only on individual agency, it foregrounds systemic forces usually rooted in but not necessarily axiomatically restricted to material considerations as the encapsulation of the “social.” Thirdly social history declared a strong interest on the everyday lives of “ordinary people”. (Posel, 2010, 29-30). Less formulaic but equally insistent on the integrative nature of social history is the formulation of EJ Hobsbawm, one of the British pioneers: “the social or societal aspects of man’s being cannot be separated from other aspects of his being, except at the cost of tautology or extreme trivialization. They cannot, for more than a moment, be separated from the ways in which men earn their living and their material environment. They cannot, even for a moment, be separated from their ideas, since their relations with one another are expressed and formulated in language which implies concepts as soon as they open their mouths” (Hobsbawm, 1972, 6).

Elements of social history in South Africa appeared in the works of historians like CW de Kiewiet in the 1940’s under the title *History of South Africa: Social and Economic*. However, more fully integrated social history in a modern guise had its origins in the emergence of an academically radical historiography in the early 1970s. The immediate genealogical antecedents of

this historiography can be found in various British universities at the time and to a lesser extent in the United States of America. Emigrés (mainly white) from South Africa, caught up in the post-Sharpeville and post-Rivonia brain drain and strongly opposed to the increasingly rigid apartheid ordering of society during the 1960’s were exposed to broader international intellectual currents, such as western Marxism, which contributed to a more radical view of social forces in the country. At issue was the questioning probe of the role of capitalism in helping to shape the nature of South African society over time. (Bundy, 1994a and Bozzoli and Delius, 1990) In its simplest form, FA Johnstone formulated it as follows in 1982: “Who owns what? Who gets what? Who does what to whom? Who does what for whom? How are who does what and who gets what linked to who owns what and who controls what?” (Johnstone, 1982, 8). It is pertinent to note that the radical camp was not a homogeneous entity. Different varieties with different emphases emerged; sometimes intersecting and at other times competing with one another. Broadly speaking three main tendencies can be discerned: an overtly political line in tandem with the “official” Marxism of the African National Congress and the South African Communist Party in exile which resonated in some corners of academe; the structuralists which were influenced by rigid European Marxists; and then social historians who drew inspiration from Britain and North America with a more flexible form of historical materialism.

The political Marxism of the South African Communist Party had little fertile to offer; it was weighed down by the clunky jargon of unreconstructed communists; live human beings were replaced by “forces” and “cadres” who were ever “advancing” or “in the

“Social history brought onto the historical stage hitherto forgotten actors: gangs, cab drivers, prostitutes, “poor whites””

trenches” or “opening a new front”. (Hyslop, 2012, a, 61). The structuralists who took their cue from French Marxists such as L Althusser and N Poulantzas were barely one step removed; their approach, though more sophisticated could not escape a certain sterility with a mechanical grinding and grating of classes and fractions of capitalism, devoid of human agency, consciousness, experience and at times of regional and chronological specificities. “The Poulantzians”, one bemused academic observed, “produced excruciatingly tortured prose that seemed to be based on the assumption that a statement had to be more profound if it read like a bad translation from French” (Hyslop, a, 2012, 62).

Where did social history stand in all of this? It took empirical research seriously and sought to avoid crude generalisations. Its wellsprings were the works of British historians such as EP Thompson, E Hobsbawn, R Samuel and H Guttman in America who espoused a softer form of materialist analysis. Although Marxian categories were deployed, these did not become articles of faith and could be refined and even rejected if found wanting. One of the important contributions of these historians, if not the most important, was that a Marxian awareness helped to alert them to topics which had other historians have neglected. They brought the underclasses into play in ways which have not been done before.

In South Africa social history concentrated mainly, but not exclusively on the late 19th century and the 20th century - an era of huge transformation in the wake of intensive capitalist expansion. It brought onto the historical stage hitherto forgotten actors: gangs, migrants, cab drivers, prostitutes, “poor whites” as well as a host of other marginalised groups. The clearing house for much of this history was the History Workshop at the University of the Witwatersrand where during the late 1970’s and through the decade of the 1980’s a rich crop of finely grained studies were produced.

The disintegration of communism in Eastern Europe, however, had profound implications for western Marxism in that it made it easy to dismiss any form of Marxism as obsolete or irredeemably tainted. Among many academic abroad there was a headlong flight from Marxism. They fled “from political economy to textuality with scarcely a footprint in the sand between.” There was “something exaggerated about their apostasy: it was as if they had thrown out the baby and drank the bath-water”, one historian has noted. (Bundy, 1996, b, 37). The various traditions of Marxism were simply conflated and discredited along with communism. Of course, in the light of the excesses of communism, a blanket condemnation of all ideas associated with such a repressive system was understandable. Nor could it be argued in its defence that it was only in its application that communism was defective, the whole system was indeed fatally flawed. It should, however be noted that academic Marxism in the West had long since parted with political communism in the East and had been a pluralist discourse with a range of cross-cutting perspectives for a considerable time.

In South Africa it was readily admitted that reductionist Marxist historical writing has had its day. As the historian/sociologist Jon Hyslop explained this development succinctly: “Crude Marxism had a clear identity, but at the price of skating over conceptual ambiguities and historical evidence. Once Marxism became sufficiently empirical or theoretically subtle, it tended to lose what advertisers would call its ‘unique selling point’”. (Hyslop, b, 2007, 138). Social history, however, was not held ransom by rigid Marxist paradigms. Nevertheless, in an important respect it retained the Marxian dictum that “men made their own history, but they do not make it just

as they please”. (Fairburn, 1999,228). The conditions in which they make history are often handed down to them and not necessarily of their own choosing.

It was from this vantage point that social history emphasised the elusive nature of the links between the economy, culture, experience and consciousness. It readily acknowledged that no variable could be considered as timeless and immutable. Belinda Bozzoli, one of the important figures

of the History Workshop explained:

“To a historical materialist – concepts (such as class and race) are to be understood as historical and social categories

rather than reified universals. At some historical moments social groups may well appear to be driven by ideological forces, or cultural ones, which have come to gain a certain relative autonomy, and at others, the crude realities of economic necessity and process seem to prevail. And at all times we need to be alert to the interplay between these dimensions, rather than regarding them as polar opposites” (Bozzoli, 1987, 2).

A trailblazer through the jagged dialectics of this approach was Charles van Onselen in his book *New Babylon: Everyday life on the Witwatersrand, 1886-1914*, first published in 1982. Van Onselen’s focus was on the cab drivers, petty thieves, prostitutes, washermen, male domestic servants and the Afrikaner poor on the Witwatersrand. Economic circumstances came into play in a specific manner in his analyses. It fulfilled more than just the function of a general backdrop; cycles of growth and depression were appraised for their impact on the proletarian workforce and this meant that linkages between the ebb and flow of the economy and the fortunes of those at the bottom end of the social scale had to be established. He tried to grasp, often simultaneously, the

Social history emphasised the elusive nature of the links between the economy, culture, experience and consciousness.

manifestations of large and abstract structures as well as the small details of life; recapturing people's experiences and understanding the multiple grids which mediated these. Culture did not exist apart from economic realities any more than it did from politics, but at the same time culture and politics were not wholly dependent upon economics.

An awareness of how material circumstances can help to shape the motives of historical actors during the Anglo-Boer War of 1899-1902 also surfaced in some analyses explaining the phenomenon of Boer collaboration during the war. It transpired that among the ranks of the so-called "joiners", those Boers that fought on the side of the British, many were "poor white" bywoners - in some units as high as 75% of the total. One of the reasons they were prepared to fight on the side of the British was that they were promised farms after the conclusion of hostilities which proved to be a powerful incentive for those who had no land

(Grundlingh, 2006). Some twelve years after the war, a similar scenario but with different expressions of loyalties played itself out during the Afrikaner rebellion 1914. Although some of the rebels, particularly the leaders took up arms against Louis Botha shortly after outbreak of the First World War because they opposed his invasion of South West Africa out of nationalistic convictions, among the rank-and-file rebels there was a substantial number of rural "poor whites" who saw in the rebellion an opportunity to ransack stores in Free State towns and were also led to believe propaganda that once the republics were restored their material circumstances would improve accordingly. These "poor whites" of the rebellion only differed from those of the "joiners" in the war inasmuch as the latter's loyalties swung towards

the British in contradistinction to those of the 1914 rebels; otherwise the wellsprings of their conduct were the same. (Grundlingh and Swart, 2009).

Economic considerations not only impacted on the bottom end of the social scale, but in the 1950's during the wool boom, for instance a rapid increase in material wealth had its correlation in terms of changing attitudes of farmers in the North Eastern Cape and Southern Free State. With only slight exaggeration one observer had this to say about the newly affluent farmers: "The farmer plays billiards, 'does' Europe on a Cook's tour, buys a new car when the ashtray of the old one is full, goes deep-sea fishing and puts stink wood parquet flooring in his shearing pen" (Burger, 1960, 37-38). This development also played itself out in the acquisition of American saddle horses for display purposes. (Swart, 2010).

Because of the nature of their enquiries social historians have used the economic factors in a particular way. Economic dimensions entered

into the analysis not on their own terms, but as elements that could help to cast light on specific social processes and their impact on individuals or groups. The weight accorded to economic considerations differed in relation to the phenomena that were being examined; the use of economics did not become a goal in itself. Moreover, social historians had to be careful not to employ economics as a joker in a pack of cards, as an explanatory device when all else has failed. Therefore, in line with this the causal links between economics and social phenomena had to be demonstrated; they could not merely be assumed. Overall social historians may refract evidence through various versions of historical materialism, but they still attach great importance to the relative autonomy of evidence and to deriving at inductive generalisations. The challenge had

been not to fall into the trap of some a priori method, abstracted from historical time, "but to seek always to find dialectical relationships between the moments of social totality and the levels of structure." (Lloyd 1986, 313) It is within this framework that economics feature: at times prominently, other times less so, depending on the state of play of the evidence and the need to foreground other more competing factors.

References

- Botha, DJJ. 1989. Economic historians and the economy. *South African Journal of Economics* 57,3, 301-311.
- Bundy, C. 1994. (a) The art of writing history. *Southern African Review of Books*, January/February.
- Bundy, C. 1996. (b) Sharing the burden? A response to Terry Lovell in Cooper B and A Steyn (eds.) *Transgressing boundaries: new directions in the study of culture in Africa*. Cape Town: University of Cape Town Press.
- Burger, J. 1960. *The gulf between*. Cape Town: Howard Timmins.
- Bozzoli, B. (ed.), 1987. *Class, community and conflict: South African perspectives*. Johannesburg: Ravan Press.
- Bozzoli, B. and P Delius. 1990. Radical history and South African society. *Radical History Review* 46/7, 13-45.
- De Kiewiet, C. 1941. *History of South Africa, social and economic*. Oxford: Clarendon Press.
- Fairburn, M. 1999. *Social history: problems, strategies and methods*. London: Macmillan Press.
- Fourie, J. and S. Schirmer. 2012. The future of South African economic history. *Economic History of Developing Regions* 27,1: 114-124.
- Grundlingh, A. 2006. Dynamics of treason: Boer collaborators in the South African War of 1899-1902. Pretoria: Protea Press.
- Grundlingh, A. and S. Swart. 2009. *Radelose Rebel: Dinamika van die 1914 Afrikanerrebellie*. Pretoria: Protea Press.
- Hobsbawm, E.J. 1972. From social history to the history of society in F Gilbert and R Graubard (eds.), *Historical Studies Today*. New York: Pluto Press.
- Hodgson, G.M. 2001. How economics forgot history: the problem of historical specificity in social science. London: Routledge.
- Hyslop, J (a). 2012. South African social history and the new non-fiction. *Safundi: The Journal of South African and American Studies*, 13:1-2 59-71.
- Hyslop, J (b). 2007. Rock and roll Marxists? in McGregor L., and S. Nuttall (eds.), *At Risk: Writing on and over the edge of South Africa*. Johannesburg: Jonathan Ball Publishers.
- Johnstone, F.A. 1982. Most painful to our hearts: South Africa through the eyes of the new school. *Canadian Journal of African Studies*. 16, 1, 5-26.
- Lloyd, C. 1986. *Explanation in social history*. Oxford: Blackwell Press.
- Posel, D. 2010. Social history and the Wits History Workshop. *African Studies*, 69:1, 29-40.
- Swart, S. 2010. *Riding high: Horses, humans and history in South Africa*. Johannesburg: Wits University Press.
- Van Onselen, C. 1982 and 2009. *New Babylon, New Nineveh: Everyday life on the Witwatersrand, 1886-1914*. London: Longmans, 1982 and Johannesburg: Jonathan Ball: 2009.

The causal links between economics and social phenomena had to be demonstrated; they could not merely be assumed.

Linking economic history to theory and practice

Jonathan Reader, Department of Economics, Stellenbosch University

As an intellectual activity, economic history, like any rigorous social science, is a valuable pursuit. McCloskey (1976:438) puts the point elegantly when he writes that “at the least pragmatic level, indeed, the worth of economic history is that of intellectual activity generally, and nothing should be easier than convincing professional intellectuals that such activity is worthwhile”. Over the past 50 years, however, a growing divide between economists and economic historians has forced the latter group to articulate more carefully the pragmatic value of economic history.

There are two channels through which economic history creates pragmatic value. Firstly, economic history guides economic theory by providing questions, testing answers and improving economic facts. In addition, there is a further but less direct link between theory and policy. Secondly, economic history has a direct influence on policy by laying the foundation for analogous reasoning. These channels can be summarised as follows:

- (i) economic history → economic theory (→ policy)
- (ii) economic history → policy

This essay examines both channels in an attempt to better understand the use of economic history. It considers several contributions that historical studies have made to economic theory and policy and illustrates the potential for further transfers between these fields.

Economic history and theory

Economic history guides theory with varying degrees of directness. McCloskey (1974) describes two of the indirect channels as ‘more economic facts’ and ‘better economic facts’. According to Demeulemeester and Diebolt (2007), the enriching of historical information in this way is the

primary function of economic history. There are several examples of historical studies that have dramatically broadened ‘economic fact’. Research aimed at understanding the industrial revolution has led to rich time-series of real wages which are used to illustrate the high cost of labour relative to capital in eighteenth century England (Allen, 2011). In a similar line, efforts to determine historical business cycles have encouraged the development of long-run time-series of output (Reinhart & Rogoff, 2008). This data on real wages and output provides a testing ground for macroeconomic theory on unemployment, growth and inflation. For example, theoretical links between the money supply and inflation are confirmed by the price effects of vast increases in silver mined by the Spanish during the fifteenth and sixteenth centuries.

History also plays an indirect role in defining the problem sets and questions that economists should address (McCloskey, 1976). For example, the finding that per capita economic growth was only partly explained by increases in capital per worker spurred Robert Solow’s seminal work on the importance of technology in economic growth. The Solow model is now central to the study of economic growth and serves as the foundation for further developments in neoclassical growth theory. One top of its theoretical value, the Solow residual (technology) has also found more practical application in growth accounting.

Beyond its factual role, economic history clarifies theory in a similar fashion to applied economics. For those studying international trade, protectionist policies of the 1930s provide the perfect illustration of the damaging effects of high tariffs on international trade. Elementary supply and demand models can be brought to life by the study of the Atlantic slave trade or wine production in the Cape Colony. These and other examples are

widely invoked by university academics, students and authors searching for practical illustrations of economic theory.

In a far more direct manner, economic history has contributed to other aspects of economic theory. History is the very bread and butter of institutional economics, for example – the seminal work of North (1990) illustrates this well. Though institutional theory is still in its infancy, constrained by the sheer complexity of societal interactions, economic history continues to guide its development. Historical studies of economic progress in North America emphasise the importance of property rights and free markets (Hornbeck, 2010); research into European colonies highlights the persistence of extractive institutions (Acemoglu et al., 2000); and studies of comparative development in northern and southern Italy illustrate the importance of informal norms such as social networks (Putnam, 1993).

Not all economic history does (or should) contribute to economic theory. History makes a far greater contribution to broad macroeconomic issues than abstract microeconomic theory (Cesarano, 2006). The study of economic growth, for example, would be futile in the absence of historical evidence on capital, labour and institutional environments. On the other hand, abstract theory on the incidence of taxation or the Slutsky equation (to give two of many examples) does not gain significantly from economic history.

A final contribution of economic history to theory has been to emphasise the intricacy of economic systems. This stands hand in hand with the growth of institutional economics and broader economic thinking that recognises the importance of other social sciences. Robert Solow (1985) gives clear expression to this point: “To get right down to it, I suspect that the attempt to construct economics as

an axiomatically based hard science is doomed to fail...[but] there is enough for us to do without pretending to a degree of completeness and precision which we cannot deliver". For Solow, the appeal of economic history lies in its descriptions of interactions between players and the social institutions that guide these interactions.

Economic theorists face several challenges when drawing on history directly. Chief among these is the possibility of multiple interpretations of the same historical events. Friedman and Mundell, for example, propose starkly different exchange rate regimes based on the same reading of twentieth century monetary history (Cesarano, 2006). Where Friedman is unwavering in his support of flexible exchange rates, Mundell remains a firm advocate for fixed exchange rates. Of course, this challenge is not unique to the interpretation of economic history.

Has the New Economic History missed a trick? Despite the clear potential for economic history to influence economic theory, the divide between economics and economic history has undermined this role. A cluster of essays in the 1970s and 1980s, led by Donald McCloskey's *Does the Past Have Useful Economics?*, attempted to explain this split in the wake of the cliometric surge of the late 1950s. While the authors of these essays shared a similar view on the general trend of New Economic History, their explanations differed. For McCloskey (1976), the backward shift in the 'demand curve' for history resulted from the failure of cliometricians to explain the relevance of the field to their colleagues.

North (1977) argued that New Economic History was constrained by the strict assumptions of neoclassical theory – trapping economists into focusing on individual parts of the 'jigsaw puzzle' rather than broader economic systems. Solow (1985:330) was similarly critical about the isolated focus of New Economic History and the overriding attention given to statistical elegance: "Far from offering the

economic theorist a widened range of perceptions, this sort of economic history gives back to the theorist the same routine gruel that the economic theorist gives to the historian".

Clear in the minds of all these authors, however, was that New Economic History had made a far smaller contribution to economic theory than the history study that preceded it. In the words of McCloskey (1976:434): "Smith, Marx, Mill, Marshall, Keynes, Heckscher, Schumpeter, and Viner, to name a few, were nourished by historical study and nourished it in turn. Gazing down from the Valhalla it would seem bizarre that their heirs would study economics with the history left out".

In 1997, Douglass North and Avner Greif published 40-year reviews of cliometrics in the *American Economic Review*. Although they remained critical of the constrained focus of cliometricians, both authors were optimistic about the growing contributions of the field. For North (1997), the emerging literature on institutional change was central to the rising prominence of New Economic History. Greif (1997) placed more weight on advanced statistical techniques and greater flexibility of underlying theory, while recognising the challenge of developing a coherent methodological framework. More recently, Cesarano (2006) and Lie (2007) have updated this literature. Cesarano (2006:448) doesn't appear to share the optimism of North (1997), arguing that the influence of history on theory has all but disappeared. Lie (2007) is less cynical, citing developments in institutional economics and theories on financial stability as contributions of New Economic History. In summary, New Economic History remains an underutilised tool in the shed of the economic theorist, despite specific contributions to the broadening of economic study (especially institutional theory).

Economic history and policy

The primary influence of economic history on policy runs indirectly through economic theory (as indi-

cated in the introductory schematic). When policy makers rely on history directly, there is broad scope for discretionary reference to historical events that can be used to justify nearly any economic stance (Eichengreen, 2011). Despite this warning, there are several examples of policy being drawn directly from economic history. For instance, references to the age of mercantilist economics justified protectionism throughout the developed world in the 1930s; historical studies on the role of international trade during the first era of globalisation encouraged Japan's resolute focus on exports during the second half of the twentieth century; and research on the economic benefits of the American railroads justified vast extensions of transport infrastructure (McCloskey, 1976).

Economic history finds even greater policy relevance during financial crises as it provides an immediate guide for action when time is scarce. A patent example of this is Ben Bernanke's description of the four lessons from the financial collapse of the 1930s: "(i) economic prosperity depends on financial stability; (ii) policy makers must respond decisively; (iii) international crises require an international response; and (iv) history is never a perfect guide" (Bernanke, 2010). Eichengreen (2011) emphasises similar lessons learned from the Great Depression. In particular, he explains the aggressive approach of the US Federal Reserve to the 2008/2009 financial crisis as a reaction to the inadequate response of the Fed during the 1930s. Friedman ascribed the 'greatness' of the 1930s depression to precisely this lack of intervention (Eichengreen, 2011). Another response based on the history of the Great Depression was to resist the temptation to adopt beggar-thy-neighbour policies – in this case learning from poor policies of the past.

While analogous reasoning based on historical events is central to the human psyche, there are several other types of human reasoning. Deductive reasoning (developing an understand-

ing based on theory) and inductive reasoning (analysing events through an examination of the available facts) are both essential to decision making. Why then does policy draw so readily on history during financial crises? Eichengreen (2011) suggests two reasons. The first is that policy makers face constraints when processing information and analogies to past events can provide fast solutions to complex issues. In the 2008/2009 crisis, the immediate severity of events required a fast policy reaction that necessitated comparisons to the Great Depression. Secondly, policy makers rarely agree on the theory that should be called on to develop an effective response. For example, proponents of the Post-Keynesian School proposed vastly more interventionist policies during the 2008/2009 crisis than those of the Neoclassical School.

The challenge that policy makers face when calling on history is to decide which analogies should be invoked. In a recent article on eight centuries of financial crises, Reinhart and Rogoff (2008) illustrate that crises are not unique to time or place. Why then were analogies drawn nearly exclusively to the Great Depression during the 2008/2009 crisis? The 1873 crisis driven by a similar boom/bust cycle and the 1907 crisis followed by similar bailout operations could also have provided historical material for the recent response (Eichengreen, 2011). One answer is provided by the “structure-mapping” approach (see for example, Gentner, 1983) which suggests that humans are quick to draw structural parallels between events. In this sense, there were several similarities between the Great Depression and 2008/2009 crisis (for example the global nature of both events) that justified comparisons. A more cynical explanation is that analysts draw on experiences that are closest to hand – something along the lines of the Tversky and Kahneman (1973) ‘availability’ heuristic. As the most recent global financial crisis, the Great Depression is still taught in academic spheres and remains in the collective mind of the

present generation. Yet another view is that policy makers choose analogies for their ‘goal relevance’. Spellman and Holyoak (1996), who fall into this camp, suggest that decisions are based on analogies that fit prior deductive or inductive reasoning.

The purpose of providing these explanations is to illustrate that economic history is not always used judiciously. In Eichengreen’s (2011) view, policy makers may simply choose historical analogies as a means to justify decisions made for separate reasons. Several authors support this argument. For example, May (1973) argues that policy makers do not call on a broad understanding of history, relying rather on the ‘availability’ heuristic discussed earlier, and Taylor and Rourke (1995) provide evidence on Congressional voting that suggests that members of Congress use history as an *ex post* justification for decisions.

Despite these criticisms, there is undoubtedly room for policy makers to draw on economic history in a sensible manner. Eichengreen (2011) proposes that history be used to determine a ‘consideration set’ of possible policy choices. He explains this with reference to policies adopted by President Kennedy during the Cuban Missile Crisis of 1962. According to May (1973), these were chosen by Kennedy after careful consideration of the Pearl Harbour attack, the 1956 Suez Crisis, the German invasion of Czechoslovakia and the 1948/1949 Berlin blockade. This created a relevant and pragmatic ‘consideration set’ of several policy options including negotiation, air strikes and a naval blockade.

Of course, not all political leaders exhibit the same interest in history as Kennedy, who won the Pulitzer Prize for a book on popular history. Nevertheless, there are several organisations taking a growing interest in economic history as a guide to good policy. In Europe the Centre for Economic Policy Research now funds an active Economic History Initiative, in South Africa the National Treasury sponsors economic history research through Economic Research Southern Africa

and across the world central banks are devoting resources to financial history research.

3. Conclusions

Trevelyan (1942) states that “intellectual curiosity is the lifeblood of real civilisation”. By this standard, the study of economic history needs no further explanation. The divide between economists and economic historians, however, necessitates a further investigation into the pragmatic value of economic history. There are two channels through which economic history creates pragmatic value. First, economic history has an influence on the development of economic theory (which in turn affects policy) and second, economic history directly shapes the making of policy. Economic history guides theory both indirectly, by enriching historical information and defining problems or questions, and directly, through a primary influence on certain aspects of theory such as the process of institutional change. It also brings dry theories to life through practical examples, serving as an indispensable tool for the community of economics educators. Finally, economic history acts often as a reminder of the intricacy of economic systems and encourages theorists to approach economic questions with a broader range of tools.

Despite this scope for the development of theory, several authors have argued that the approach underlying New Economic History has created a divide between economists and economic historians. They attribute this to the limited and isolated focus of cliometrics, the overriding attention given to statistical elegance and the failure of economic historians to explain the relevance of the field to their colleagues. While these criticisms remain valid, there are specific aspects of economic theory that continue to develop through New Economic History (particularly institutional theory). The evidence suggests, however, that history remains an underutilised tool.

The influence of economic history

on policy is apparent in numerous policy choices of this and past generations. History has been used to justify continued expansions to infrastructure networks, protectionist policies throughout the developed world during the 1930s and Japan's resolute focus on exports during the latter half of the twentieth century. During financial crises, economic history plays an even greater role in policy as it provides an immediate plan for action. Ben Bernanke's reference to the four lessons of the Great Depression is just one example of this analogous reasoning from the recent 2008/2009 crisis. There is reason to be cautious, however, of policy makers that are merely cherry-picking historical events to justify decisions *ex post*. Nevertheless, there is certainly scope for judicious use of economic history to inform policy, just as it has been shown that economic history shapes theory.

References

- Acemoglu, D., Johnson, S. & Robinson, J. 2000. The Colonial Origins of Comparative Development: An Empirical Investigation. NBER Working Paper 7771.
- Allen, R.C. 2011. *Global Economic History: A Very Short Introduction*. Oxford: Oxford University Press.
- Bernanke, B.S. 2010. Economic Policy: Lessons from History. Proceedings of the 43rd Annual Alexander Hamilton Awards, Washington D.C., 8 April 2010.
- Cesarano, F. 2006. Economic history and economic theory. *Journal of Economic Methodology*, 13(4):447-467.
- Demeulemeester, J. & Diebolt, C. 2007. How much could economics gain from history: the contribution of cliometrics. *Cliometrica*, 1(1):7-17.
- Eichengreen, B. 2011. Economic History and Economic Policy. Presidential address to the annual meeting of the Economic History Association, Boston MA, September 2011.
- Gentner, D. 1983. Structure-Mapping: A Theoretical Framework for Analogy. *Cognitive Science*, 7(2):155-170.
- Greif, A. 1997. Cliometrics After 40 years. *American Economic Review*, 87(2):400-403.
- Hornbeck, R. 2010. Barbed Wire: Property Rights and Agricultural Development. *Quarterly Journal of Economics*, 125(2):767-810.
- Lie, E. 2007. Economic History and Economic Theory. *Nordic Journal of Political Economy*, 33(2):1-8.
- May, E. 1973. *Lessons of the Past: The Use and Misuse of American Foreign Policy*. New York: Oxford University Press.
- McCloskey, D. 1976. Does the Past Have Useful Economics? *Journal of Economic Literature*, 14(2):434-461.
- North, D.C. 1997. Cliometrics – 40 Years Later. *American Economic Review*, 87(2):412-414.
- North, D.C. 1990. *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press.
- North, D.C. 1977. The New Economic History After Twenty Years. *American Behavioural Scientist*, 21(2):187-200.
- Putnam, R.D. 1994. *Making democracy work: Civic traditions in modern Italy*. Princeton N.J.: Princeton University Press.
- Reinhardt, C.M. & Rogoff, K.S. 2008. This Time Is Different: A Panoramic View of Eight Centuries of Financial Crises. NBER Working Paper 13882.
- Solow, R. 1985. Economic History and Economics. *American Economic Review*, 75(2):328-331.
- Spellman, B.A. & Holyoak, K.J. 1996. Pragmatics in Analogical Mapping. *Cognitive Psychology*, 31(3):307-346.
- Taylor, A. & Rourke, J. 1995. Historical Analogies in the Congressional Foreign Policy Process. *Southern Political Journal*, 57(2):460-468.
- Trevelyan, G.M. 1942. *English social history*. London: Longmans, Green.
- Tversky, A. & Kahneman, D. 1973. Availability: A Heuristic for Judging Frequency and Probability. *Cognitive Psychology*, 5(2):207-232.

The nature, causes and distribution of Cape wealth

Johan Fourie, Department of Economics, Stellenbosch University

An inquiry into the nature, causes and distribution of wealth of the eighteenth century Cape Colony offers new insights that are pertinent to both scholars of South African history and to economic historians interested in the determinants of growth. There are several reasons to investigate the early Cape: Its unique Mediterranean climate, low population density of native Khoes, and fertile soil made it ideal for European settlement, similar to the geographies of the North American colonies. The Cape is located on an important trade route between Europe and the East Indies, was a colony governed by a Company, and was also the destination for settlers from a variety of origin countries. But, being much closer to the slave markets of Africa and the East, the Cape was also a slave economy which, as is spelled out below, had important developmental consequences.

Investigating the Cape Colony also offer another distinct advantage: de-

tailed records survive that allow economic historians access into the lives of eighteenth century Cape households. I made use of several recently digitised records: probate inventories, auction rolls, tax censuses and ship arrivals. These rich sources, combined with standard econometric techniques, allow for a reinterpretation of the wealth of the Cape Colony, and contributes to current debates about the causes and consequences of long-run growth.

The nature of Cape wealth

Until recently, the eighteenth-century Dutch Cape Colony, located at the southernmost tip of Africa, was seen as an "economic and social backwater", "more of a static than a progressing" slave-based subsistence economy that "advanced with almost extreme slowness" (De Kock, 1924: 24-40, Trapido, 1990, De Kiewiet, 1941). While close to Cape Town pockets of wealth emerged during the eighteenth century (Guelke and Shell, 1983), this

relative affluence stood in sharp contrast to the increasing poverty of the pioneers who, "living for the most part in isolation, gained a scanty subsistence by the pastoral industry and hunting" (De Kock, 1924). As Dooling (2007: 22) summarises: "There is overwhelming evidence that the difficulties of these early decades were real."

These views were somewhat ameliorated by recent quantitative contributions from Van Duin and Ross (1987) and Brunt (2008). Du Plessis and Du Plessis (2012) and De Zwart (2011), using wage and price data, show that Cape settlers could afford high and improved living standards compared with their counterparts in Europe. Their work supports the notion that the Cape was more dynamic and prosperous than previously held. The generally accepted view of the Dutch Cape Colony, however, remains that of a disparate society, succinctly summarised by Guelke (1980: 84): "At the top of the European population was a

pocket of rich farmers with large estates and many slaves”, however, “the average hard-working farmer could only with some effort eke out a subsistence living”.

I use 2577 probate inventories to prove that the average Cape settler was not poor, destitute and backward, and there is no evidence to suggest that average wealth declined over the course of the eighteenth century (Fourie 2012). Throughout the eighteenth century, the average Cape settler acquired goods equal to and often in greater quantities than those in the settlers’ countries of origin and many other New World societies. I also show that in terms of income per person, the Cape Colony achieved some of the highest levels measured for the eighteenth century.

I also provide evidence to suggest that the average, eighteenth-century Cape settler – and not only the elite – could consume a greater range of non-essential goods. The proliferation of objects in the settler homes – of paintings, mirrors, books, jewellery and other goods, even though, as Randle (2011) would argue, these were second-hand goods – suggests that Cape settlers were part of what came to be known as the ‘consumer revolution’ (Pomeranz, 2000; McCants, 2007). Cape settlers not only were as affluent as citizens of Holland and Britain, but they had access to, and indulged in, the same fashions as their European counterparts.

The causes of Cape wealth

The role of settler communities in the economic development of colonial societies has received ample attention in the recent economic history literature. Most notably, the distinctions between ‘extraction’ and ‘settler’ (Acemoglu, Johnson and Robinson, 2001) or ‘tropical’ and ‘temperate’ (Engerman and Sokoloff, 2011) colonies suggests an often artificial division into two distinct extremes (Austin, 2008). The Cape Colony of the seventeenth and eighteenth century provides a case study of a newly settled, preindustrial society that does

not fit either of these two extremes: The Cape settlement was established with the unique purpose of providing refreshments to passing ships on their way from Europe to the East and back.

I show that the rapid growth of the early settlers were determined by three demand-generating effects created by ship traffic (see Boshoff and Fourie 2010). Passing ships required fresh produce to consume on the remaining part of their voyage. There is strong statistical evidence of a bidirectional long-run relationship between wheat production and ship traffic. The size of the correlation reveals that ships were more significant in their impact on wheat than vice versa. There is only partial evidence that ship traffic may have been the stimulating force for viticulture, while, when also controlling for long-run information (information with a time horizon exceeding 40 years), stock herding fluctuations appear to have been unrelated to ship traffic fluctuations. Some products were also exported to markets in the East. In contrast to the work of early historians, I found a statistically important impact of exports on output growth in the Colony. More importantly, while fluctuations in ship traffic certainly influenced exports, these fluctuations had an even greater effect on overall wheat production. This suggests that the demand created by the ships was not restricted only to goods that could be exported to other settlements, but it also stimulated the tertiary sector (to accommodate the thousands of sailors and soldiers arriving annually). The Cape Colony attained economic growth not only by exporting goods, but also by providing services (in modern parlance, travel service exports) to the passing ships.

These results bring new insights to our understanding of colonial development. While the Cape does not fit into the traditional ‘staples thesis’ of settler or temperate colonies given the presence of slaves and a labour-intensive crop, its growth was dependent on exporting goods and services. Neither was the Cape a fully ‘extractive’ or

tropical colony, given the growth of a settler society. This colonial dichotomy of the institutional literature is rejected; Austin (2008: 1021) justifiably criticises these theories – the “emphasis on the primacy of a single cause is stimulating but insufficient” – and calls for more case studies like this one to understand the nuances of development in colonial settlements. The Cape provides an alternative development model – perhaps akin to other coastal nexuses, like Jamaica and Jakarta – that explains why a society might arrive at high early standards of living, anchored by the demands of ship traffic.

Neither does the institutional literature suggest a link between settlers’ origins and the development of settler regions. In fact, the seminal contributions nearly all reflect on the environmental conditions the settlers experienced on arrival to explain why certain regions developed growth-inducing versus growth-inhibiting institutions. I posit that this neglects an important component of development. The French Huguenots who arrived in the Cape Colony in 1688/89 possessed uniquely different skills than the incumbent farmers, which allowed them to become more productive winemakers (see Fourie and Von Fintel 2011).

None of the standard factors of production explain these differences, nor any ‘institutional’ difference between the French and the Dutch. In fact, I controlled for the unquantifiable cross-group differences by showing that the Huguenots who originated from wine-producing regions were more productive in viticulture than the Huguenots from non-wine producing regions and also from all other countries. I posit that the Huguenots from wine-producing areas possessed ‘specialised skills’ in viticulture that could not be easily (cheaply) acquired, as was possible for the ‘general skills’ of wheat farming. In fact, an elite of Huguenot descendants from wine-producing regions maintained their advantage in wine-making in the Cape. This disparity cannot be satisfactorily

explained through a first-mover advantage in production, ownership or social capital, or the Cape inheritance laws. Specialised skills – trade secrets – gave the Huguenots from wine-producing regions a sustainable competitive advantage.

These results point to strong evidence that settler capabilities – specific skills acquired in the land of origin – mattered in colonial development and should be considered an important element – together with environmental conditions and resource endowments in the destination region – in explaining why countries follow different development paths.

Settler skills and ship traffic not only buttressed wine production, but viticulture also required a large labour force. Since the beginning of the eighteenth century, settlers invested their surplus in purchasing slave labour: one quarter of all movable assets owned by settlers was slaves (see Fourie 2013). Slave labour was not only profitable at low levels of ownership: Through investment in other forms of capital and because of economies of scale and scope, slaves would yield increasing returns to the wealthiest farmers, most often to viticulturalists. The high marginal product of slave labour explains why demand for slaves continued even as real slave prices rose throughout the eighteenth century, and offers an economic perspective on why Cape settlers would reinforce the institution of slavery in the Cape Colony.

The distribution of Cape wealth

The use of slave labour created an affluent but unequal society. I report measures of inequality using three different approaches (see Fourie and Von Fintel 2010; 2011; Fourie 2013). All reveal high to severe levels of inequality. Depending on various assumptions, the Cape Colony Gini ranged between 0.543 and 0.837, which is high relative to other countries for which measurements exist for the preindustrial period. The differences in mean incomes between slaves and Europeans only partially explains the high levels

of inequality. Notably, within-group inequality (particularly among farmers) played an important role that could not be accounted for in the social tables often used in such studies. My results support earlier qualitative and quantitative evidence of a rising farming elite in the Cape Colony relative to the rest of the distribution. While recorded farming income declined in real terms across most of the distribution, this was due to not capturing by-product production, as was evidenced by the improvement in the living standards of the poorest groups in society.

Disaggregating the sources of inequality provided a more comprehensive analysis of agricultural income trends in the Cape. I found that wheat and especially wine production exacerbated inequality. This is consistent with the literature. The arrival of French Huguenots in the Cape in the late seventeenth century led to a shift towards viticulture. As viticulture was a labour-intensive industry, wine production resulted in a greater demand for slave labour. Slave imports increased after 1700 and especially after 1717 when the Council of Policy in the Cape restricted European immigration in favour of slave labour. Proximity to the slave markets in Africa and Asia probably also ensured relatively lower slave acquisition costs. These changes gave rise to a small elite in the Cape consisting mostly of alcohol pachters and wine farmers. Proof of this was provided by the rising inequality within the farmer population in my results.

Implications for long-run development

In a paper comparing the development of four major nineteenth-century staple economies, Australia, Argentina, Canada and New Zealand, Schedvin (1990: 545) argues that: “although the long-term development characteristics of primary producing economies are strongly influenced by the distinctive production function and other technical characteristics of the leading staple, the development path will also be influenced by the hierarchy

of staple production: by the degree of dominance of the leading staple. If for economic or geographical reasons a single staple is of overwhelming importance (e.g. sugar in the eighteenth-century West Indian plantation economy), long-term development may be blocked. If the dominant staple also has weak domestic linkages, the development prospects are further diminished. On the other hand, if there is a broad spread of staple production and domestic linkages are strong, the economy is more likely to diversify in the way envisaged by staple theorists.”

Wine, wheat and meat were the overwhelming staple products of the eighteenth-century Cape Colony. Each of these industries had strong domestic linkages: not only did farmers benefit from the greater demand of ships, but so, too, did the tertiary industry in Cape Town. Partially diversified production and domestic linkages ensured that the Cape wealth was not only confined to a small group of affluent landholders, even though the preference for viticulture – from both the demand and supply side – did create a highly unequal settler society. But the main difference between the eighteenth-century Cape and later staple economies was that capital accumulation, as the in the antebellum South, was in the form of slaves (Wright, 2006). The ownership of slaves yielded high returns on private capital, but in the long-run harmed the Cape's growth potential.

A shortage of labour resulted in labour-saving capital investments first in Britain during the Industrial Revolution (Allen, 2009) and later in the North American colonies (where slaves were absent). This resulted in new innovations and technology that increased labour productivity. Where farmers replaced labour-substituting investments with slaves, though, there was little incentive to improve labour productivity that caused growth. Smith noted this effect in 1776, saying “slaves, however, are very seldom inventive; and all the most important improvements, either in machinery or in the arrangement and distribution

of work which facilitates and abridges labour, have been the discoveries of freemen” (Smith, 1776, IV.7.46). This also adds a twist to the perceived importance of property rights to economic growth. Strong enforcement of property rights – in people – combined with the extremely asymmetric way in which the law of property operated in favour of settlers (Dooling, 2007: 16-17), reduced the incentives for landowners to find alternative inputs into the production process, either by way of wage labour or, like in Britain, in using labour-saving capital investments. Slavery had thus put the Cape economy on a high plateau.

Engerman and Sokoloff (2011) note another consequence of slavery that would affect its long-run development trajectory. They suggest that the mechanism through which initial factor endowments affect later development is inequality. Severe initial inequality would result in growth-debilitating institutions, such as low access to education, low levels of immigration, disenfranchisement, and property rights favouring the elite. By contrast, low levels of inequality would have resulted in high levels of educational attainment, the extension of the franchise, immigration and property right protection for all.

In Engerman and Sokoloff’s model, initial inequality arises from the type of climate and the size of the native population: a temperate climate with a small native population would likely have resulted in low initial inequality, whereas a tropical climate with a large native population would have likely resulted in severe initial inequality. These initial factor endowments were less relevant in the case of the Cape Colony: The Cape was situated in a temperate climate and, although there was a sizable native population, the policies of the Company prevented settlers from enslaving them. Rather, the skills brought to the Cape by the arrival of the French Huguenots and the demand for wines from the passing ships shifted production towards viticulture, a labour-intensive crop.

The Company invested in slavery

as a way to circumvent the shortage of labour on the farms and to keep production costs as low as possible. The institution of slavery created a highly unequal Cape society during the eighteenth century. As predicted by Engerman and Sokoloff, this high inequality would reinforce growth-debilitating institutions in the Cape, notably the choice to limit European immigration at the start and middle of the eighteenth century. In 1717 the Company officials in Cape Town requested that immigration to the Colony be discouraged as the objectives of the Cape settlement – to supply produce for passing ships – had been met as a result of the extension of the frontier. And again, in the 1750s, the Company – now with the support of a number of prominent settler farmers – discouraged European immigration because slave labour could fulfil all the labour requirements the farmers might have had.

What is less clear is how to weight the short-term “benefits” of slavery against the long-term “losses”? As Feinstein (2005) points out, the South African mining industry of the early twentieth century would have been considerably smaller and less profitable had it not been for the use of “artificially” cheap black labour. Without such low input costs, the mining industry would not have been able to make a significant contribution to the diversification of the South African manufacturing industry. And while the inequalities and long-term disadvantages that Engerman and Sokoloff (2011) warn against did begin to affect the South African economy by the 1970s, to what extent did the low wages of more than half a century create an affluent (though unequal) and industrialised economy? In other words, if the counterfactual had been relatively high wages and no wage coercion during the first few decades after the mineral discoveries, would a diversified South African economy have arisen at all?

Yet the long-term costs of slavery were severe. Slavery at the Cape was only abolished in 1834, and the slaves

remained on the farms until at least 1838. Even after emancipation, de facto labour contracts and practices continued mostly as before, which meant that the institutions of the eighteenth century were entrenched in Cape society. The extent to which these institutions influenced later South African development is more contentious; the temptation is large to draw parallels between the high inequality of the eighteenth century Cape settlers and indentured labourers after emancipation. Perhaps these early institutions moved with Cape farmers on their Great Trek into the interior of South Africa in 1836 and were reinforced by the discovery of diamonds and gold at the end of the nineteenth century (which also made use of cheap, indentured labour on the mines).

The causal link connecting early inequality to twentieth century apartheid is even more questionable. Yet, there is little doubt that later developments in South Africa resemble the institutions of a wealthy but static eighteenth century Cape economy. As Terreblanche (2002: 393) notes, the institutions created during “Dutch colonialism” – the “racism and racial inequality in the distribution of political, economic and ideological power” – “contributed most, directly and indirectly, to the inequality in [South Africa’s present] income distribution”.

Selected references

- Boshoff, W. H. & Fourie, J. (2010) The significance of the Cape trade route to economic activity in the Cape Colony: a medium-term business cycle analysis. *European Review of Economic History*, 14, 469-503.
- Fourie, J. (2012) The remarkable wealth of the Dutch Cape Colony: measurements from eighteenth-century probate inventories. *The Economic History Review*, Forthcoming.
- Fourie, J. (2013) Slaves as capital investment in the Dutch Cape Colony, 1652-1795. IN Hillbom, E. & Svensson, P. (Eds.) *Agricultural transformations in a global history perspective*. London, Routledge.
- Fourie, J. & Von Fintel, D. (2010) The dynamics of inequality in a newly settled, pre-Industrial society: Evidence from Cape Colony tax records. *Cliometrica*, 4, 229-267.
- Fourie, J. & Von Fintel, D. (2011a) Income Inequality in the Dutch Cape Colony. *Economic History of Developing Regions*, 26, 16-48.
- Fourie, J. & Von Fintel, D. (2011b) Settler skills and colonial development. Working Papers 213. Cape Town, Economic Research Southern Africa.

The lens of South African economic history

Laurence Wilse-Samson, Department of Economics, Columbia University

South African economic history is fertile ground for addressing fundamental questions about the interrelationships between factor endowments, political institutions and economic growth. In an important recent book, Daron Acemoglu and James Robinson (2012: 260) characterize the political institutions that prevailed in South Africa throughout most of the twentieth century as “extractive” and as creating a “dual economy” wherein white elites initiated policies designed to “produce a reservoir of cheap labour for their businesses and reduce competition from black Africans”. This is only the beginning of an analysis - if we accept the centrality of “institutions” to economic growth, the question becomes how they come to be selected and retained. Furthermore, how then does the nature of the economic growth that arises in turn affect the sustainability of the political institutions?

The South African case also speaks to the literature on political transition. Economic and political theories exist which attempt to capture the various dimensions of economic growth, voice, repression and political freedoms. The modernization hypothesis is that economic growth (and rising per capita incomes) creates and consolidates political freedoms. In South Africa it is not obvious that the period of political and economic reform was associated with growth in incomes. Democratisation can also arise in some models as a way for elites to respond to protest through committing to future redistribution (and thus escape violent revolution). In other cases, voice might be met by repression or temporary transfers. In South Africa, the Apartheid government traded off both repression and minor reforms, while retreating from its “Grand Apartheid” apex at the start of the 1970s. The black trade union movement became from at least the late 70s a central political player. In a

setting where political voice was denied, economic voice was permitted (particularly after 1979) and the labour movement became an important mechanism for the organization of political protest.

It thus appears to me that a deep knowledge of South African economic history would bring the added reward of new perspectives into old and important questions in political economy and economic development. For example, a central feature of the 20th century South African economy was the control of labour. There is perhaps here an analogy to various issues around globalisation. When, increasingly, in the 1960s and 70s, white mine owners wanted to “outsource” routine tasks to (far cheaper) black workers, white unionized miners responded with strong and prolonged action against this “unfair competition” – the secretary of the famously reactionary white Mine Workers Union responded to an experiment of giving black mineworkers more responsibility by declaring – in an almost unsurpassably racist turn of phrase – that he would resist “the onslaught of Kaffir, Moor and Indian on the White working community” (Wilson 1972: 116).

Obviously, the nature of enforcement of such protectionist measures is different in the globalisation process from that of the cruel Apartheid regime. For example, pass laws, influx control and job reservation restricted the movement of black South Africans (and the 1913 Natives Land Act denied them property rights on “white land”). However, some of the economic logic is similar, and the argument of unfair competition sounds a little like what one might hear in Western Europe or in the US. The barriers against movement across nations are today just as strong and strongly enforced if less barbaric than those that existed within the Apartheid state. Apartheid was an awful, inhumane system, cruelly and systematically en-

forced. And it is perhaps also true that the welfare gains from lifting restrictions on cross-border migration (were that politically feasible) would swamp any gains from trade in goods and services, or capital flows.

These issues have of course been carefully studied by a long and distinguished list of authors both from within South Africa and without. But, there is still room for new insight by, for example, mining the archives for new data and exploiting new tools from the digital humanities to better make use of existing datasets. Linked to this is a longer term project of digitizing and preserving South Africa’s economic and administrative records. An easy way to encourage the study of South African economic history would be through the publication of more historical data in digital format. Beyond the population censuses (available from 1970 onwards), little digitally accessible material exists. This is despite the fact that data-collection by the state historically has been quite large (see, for example, the sources listed in Fedderke and Simkins (2009)).

Furthermore and perhaps most importantly, new tools, techniques and standards of evidence exist for analyzing this data to address questions about the economic and political mechanisms which might be at work. Some of my own work looks to exploiting the spatial variation of Apartheid policies – the fact that different policies impacted different parts of the country differently. But this is just a beginning. I hope this brief note helps alert young South African scholars to the vast potential on offer by studying our unhappy history.

References

- Acemoglu, D., and J. Robinson, 2012, *Why Nations Fail*, NY: Crown Business
- Fedderke, J. and C. Simkins, 2009, “Economic Growth in South Africa since the late nineteenth century,” Working Papers 138, ERSa.
- Wilson, F., 1972, *Labour in the South African Gold Mines 1911-1969*, London: Cambridge University Press.

Policy questions and CGE answers: A brief history of modelling in South Africa^{*}

Riaan Rossouw, School of Economics, North-West University

Waldo Krugell, School of Economics, North-West University

1. Introduction

Since the 1990s, there has been a considerable increase in the use of computable general equilibrium (CGE) models in South Africa to study a variety of policy issues. The advantages of CGE models for policy analyses, compared to traditional macroeconomic models, are now widely acknowledged. General equilibrium models allow for consistent comparative analysis of policy scenarios and they incorporate microeconomic mechanisms and institutional features within a consistent macroeconomic framework, and avoid the representation of behaviour in reduced form (Zalai, 1982). This allows analysis of structural change under a variety of assumptions.

Since the 1990s there has, however, been a major shift both in the questions to which models have been addressed and in the types of models used in South Africa. The early CGE models were used to examine the issues of the day such as macroeconomic stability and the opening up of the economy. Currently the challenges have shifted to the labour market, environmental questions and sub-national issues. A timely overview may help to indicate the way forward for CGE modellers.

This article is structured as follows. Section two provides a brief introduction to CGE modelling. Section 3 reviews the models used in South Africa from the early 1990s, up to the development of the so-called IDCgem. Section 4 looks at the mid-1990s which was marked by applications of the IDCgem. The new millennium saw the emergence of new modelling teams and the propagation of new approaches to the policy challenges of the day. Section 5 examines these recent models. Section 6 concludes and

considers the way forward for CGE modelling in South Africa.

2. Computable general equilibrium models

CGE models have become workhorses for policy analysis since they are particularly suited for answering “what if” questions: What if productivity in agriculture increased, what if foreign demand for exports fell, what if emissions were taxed? Policymakers are typically interested in the direct and indirect effects of specific policy measures, but often these effects are studied only in partial setting. The CGE models have the advantage that the possible effects of specific policy measures can be examined without the excessive simplification and aggregation of partial equilibrium analysis (Iqbal and Siddiqui, 2001).

In general equilibrium models, households, firms and markets are synthesized into a model of the equilibrium of the economy as a whole. Computable general equilibrium models are similar, but specified for many households, sectors, factors and are based on data. There are many simultaneous equations using a database of matrices. CGE analysis proceeds on the basis that events in one sector of the economy will have follow-on impacts on the other sectors of the economy. In turn, the impacts on these other sectors may have noticeable feedback effects on the original sector. In effect, general equilibrium analysis captures the impacts of a policy change or specific event on all parts of the economy, by incorporating feedback from all those, while recognising economy-wide constraints. Using CGE models not only has the advantage that general equilibrium effects are taken into account, but also that the interaction of different meas-

ures can be studied and quantified.

Various CGE models have been built and applied to address a variety of policy issues. Each model has its own advantages as well as limitations. During the last twenty years or so, there has been an increase of general equilibrium models developed for developing as well as developed countries. The South African models are discussed in the following section.

3. The early models

In South Africa, early efforts started in 1993 with a small multi-sector model of Naudé and Brixen (1993) and concluded with the operationalisation of the Industrial Development Corporation's IDCgem.

3.1 Naudé and Brixen (1993)

The very first CGE model for South Africa was built by Wim Naudé and Peter Brixen (1993), then of Potchefstroom University and the University of Copenhagen respectively. They used a multi-sector CGE model of which the equations were derived from solving the constrained optimisation problems of four types of households, the government, the external sector and 11 sectors of production. A Social Accounting Matrix (SAM) for 1988 was used as a database to calibrate the model's equations. The model consisted of a system of simultaneous non-linear equations and was based on the work of Drud et al. (1986), Drud and Kendrick (1990) and Dervis et al. (1982). The model consisted of a set of demand equations, a set of supply equations and linkage equations that ensured that total supply equaled total demand without necessarily matching individual suppliers with individual demands (Pyatt, 1988).

This model was one of the first CGE models suggested for the South

African economy, and was therefore regarded as provisional as far as the choice of factors, institutions, sectoral disaggregation and mathematical representation of the relationships between them were concerned. Economic policy simulations with the above model were performed through the HERCULES software package. The results from each experiment were given by HERCULES in the form of a new SAM, which could be compared to the base 1988 SAM to identify the impacts of the economic policy experiment.

Naudé and Brixen (1993) used the above model in comparative static fashion to simulate the impact of a 10 percent increase in real government consumption, a 10 percent increase in export demand, a 10 percent increase in the world price for exports and imports, and a 50 percent reduction in import tariffs. Each of the four experiments listed above were repeated under four sets of closure rules. The results from the experiments were consistent on a number of points. First, the type of closure rule under which the experiments were performed was crucial for the results. Second, the special role played by the mining sector was distinguished. In many experiments the mining sector behaved differently from the other domestic sectors. Third, it was noticeable that the South African economy was particularly vulnerable to external shocks, no doubt due to the specific structure of the South African economy such as the dependence on foreign capital goods, coupled with the tendency for the government to expand expenditure when the gold price rises but not to cut back on programmes when the gold price falls. Fourth, the simulations showed that other aspects of traditional structural adjustment programmes, such as liberalising trade, should be considered. Fifth, the saving-investment closure, whereby investment is savings-driven, played an important role in the results that were obtained. Finally, although some of the simulated policies did have some effect in redressing the unequal

distribution of income, these effects were marginal. It was found that the dominance of the government sector was part of the structural problem facing South Africa. It was said that the government should become a part of the solution, rather than remaining a part of the problem of economic restructuring. The emphasis should be on avoiding a “bloated bureaucracy syndrome” (Hugo and Stack, 1992:69) while increasing the effectiveness of government expenditure through changing the composition of the budgeted expenditure.

3.2 *The National Institute for Economic Policy (NIEP) model*

The NIEP model was developed by the Macroeconomic Research Group (MERG), which was established in the early 1990s. Their goal was to create an economic blueprint for the incoming African National Congress-led government. Stephen Gelb, executive director of The Edge Institute, Bill Gibson of the University of Vermont and Lance Taylor, the original architects of the MERG model, developed a structuralist CGE model, which was then transformed into a structuralist-macroeconomic model with 1534 endogenous variables and 60 exogenous variables by Peter Brain of the National Institute of Economic and Industry Research in Australia. The model altered by Peter Brain was used intensively by MERG to formulate their quantitative policy recommendations. The model was also used for further studies regarding infrastructure and the impacts of implementing a tariff reduction schedule.

The model's underlying theoretical framework was neo-Keynesian structuralist and emphasis was on aggregate demand. The results from the model indicated that, for the Reconstruction and Development Programme (RDP) to succeed given the rate of population growth, living standards of the top 20 per cent of households needed to remain constant or improve marginally over the next four to five years after which it could improve in line with the growth rate. Activities which

would increase the stock of physical infrastructure, skill formation and physical capital formation, should be targeted by fiscal expansion and the reform of the tariff system should be gradual enough to encourage enterprises to adjust to international competition and enhance their export capabilities (Jerome, 2004).

3.3 *The Industrial Development Corporation's (IDC) CGE model*

The IDC model was developed in 1993 with the aid of the Impact Research Group of Monash University in Australia. The model was developed with the objective of assisting policymakers in quantifying the impacts of proposed economic policy measures. It was used to evaluate the effects of increases in government spending under different financing methods; the implications of capital flows and trade policy on the industrial sector of the economy; the effects of an increase in government spending on provincial gross products; and the implication of the adoption of Uruguay Round trade liberalisation measures (Jerome, 2004).

The IDC model is a CGE model and a trial product of the Australian ORANI-F model. The theoretical foundation of the IDC model was provided by neoclassical Walrasian general equilibrium theory, with optimising behaviour for individual actors and firms in the economy. All industries have a constant elasticity of substitution technology, although input proportions and behavioural parameters may vary between industries (Jerome, 2004). The model is calibrated to a SAM, which is disaggregated into 103 single-product industries, 2 classes of commodities, 65 categories of labour and 24 households.

The results obtained from applying the model indicate that the income distribution effects of an increase in government spending financed by domestic borrowing and foreign capital inflows are relatively small. The results recommended the adoption of counter measures to offset the real exchange rate appreciation. At this time

the IDCGEM was the largest and most frequently used CGE model in South Africa (Burrows, 1995), and was used to inform South Africa's GATT negotiations. The results indicated that the implementation of the GATT would stimulate both final and intermediate goods, and that by reducing domestic costs relative to international price levels it would stimulate exports.

The IDCGEM broke the ground for large-scale general equilibrium modeling in South Africa. Building from this base, the latter part of the 1990s saw a number of extensions that examined the fiscal adjustment and trade liberalisation that was underway at the time.

4. Extensions during the late 1990s

4.1 *The Development Bank of Southern Africa (DBSA) model*

The DBSA model was built by Bill Gibson and Dirk Ernst van Seventer in 1995 and originated from Gelb, Gibson and Taylor's work on the MERG model. The model also updated and revised Gelb, Gibson, Taylor and Van Seventer (1993). This structuralist CGE model was used to examine the consistency and impact of the new government's policies and to explain the effects of exogenous shocks on the economy.

The model was essentially a dynamic CGE model resting on a social accounting matrix and various real-financial interactions incorporating conventional macro-economic relationships. The DBSA model was structuralist in that real-world departures from the Walrasian ideal of competitive markets were recognised and integrated through the incorporation of structural rigidities (Jerome, 2004). These were modelled by assuming that the economy is less responsive to changes in relative prices, at least in the short run (Gibson and Van Seventer, 1996a). A real and a financial SAM were used to calibrate the model and parameters were either based on fixed coefficients of the underlying SAMs, or were determined by assumption. The real SAM was based on the SAM for the year 1988 compiled

by Van Seventer et al. (1992).

The model was used to evaluate the impact of changes in the volume and structure of trade on macroeconomic variables; the effect of contractionary fiscal policy on the economy; and outlines the elements of a growth strategy for the medium term. It examined: the implications of an increase in government investment by raising the ratio of the Public Sector Borrowing Requirement (PSBR) to GDP by about 0,5 per cent; a proposal to fund low-income housing expenditure by reducing the level of government; the effects of a policy that emphasises export growth; the impact of a possible devaluation on income distribution, inflation, growth and employment; and the macroeconomic consequences of different government expenditure scenarios.

The results obtained from the model's simulations indicate that the effect of export growth on macroeconomic variables depend on the way in which it is brought about. The core outcome of a devaluation of the exchange rate is to ease the balance of payments constraint through growth in non-traditional exports. As stated by Jerome (2004) "elements of a growth strategy should be the lowering of the marginal capital output ratio in various sectors through increased public sector spending and encouraging small and medium-sized enterprises". Under the assumption that the ratio of PSBR to GDP would decline, the implications of adopting a contractionary fiscal policy were examined. These policy implications were that an increase in private sector investment would not be sufficient to offset the PSBR decline completely, resulting in moderate growth with increasing unemployment and a decline in public investment. In public expenditure, switching from current to capital spending would result in a similar growth path, but with more inflation (Jerome, 2004).

4.2 *Horridge, Parmenter, Cameron, Joubert, Suleman and De Jongh (1995)*
In 1995 Mark Horridge and Brian

Parmenter of Monash University in Australia, along with Martin Cameron, Riaan Joubert and Areef Suleman of the IDC and Dawie de Jongh of the French Bank of Southern Africa and Witwatersrand University (1995) used the IDCGEM to analyse the effects on the economy of increases in government spending such as were at the core of the government's Reconstruction and Development Programme. The analysis concentrated on the implications of alternative methods of finance for the programme.

The results of their simulations indicated that, with no restraints on government borrowing or foreign borrowing, an increase in government spending (at constant rates) expanded GDP and real consumption. It induced an appreciation of the real exchange rate, which restricted exports and promoted imports. Industries producing non-traded goods, especially for government demands, expanded relative to export and import-competing sectors. The results also showed that provinces which were dependant on export sectors, tended to lose shares in GDP, unless as in the case of the then Northern Transvaal they had relatively large shares of government industries. The income-distribution effects were also found to be small.

The result further showed that with a constraint on foreign borrowing, any increase in government spending not financed by taxation crowded out private investment. Private investment was relatively import-intensive implying that an appreciation of the real exchange rate would be required to preserve the trade balance.

4.3 *Coetzee, Gwarada, Naudé and Swanepoel (1997)*

In 1997 the IDCGEM was again used to model two scenarios related to trade liberalisation and the depreciation of the Rand. This time the modelers were Rian Coetzee, Nason Gwarada and Josef Swanepoel of the IDC and Wim Naudé from Potchefstroom University (1997). The first scenario took into consideration the abolition of surcharges, the phasing-

out of GEIS (General Export Incentive Scheme), the current tariff reduction programme (TRP) and a 20 percent depreciation in the nominal effective exchange rate. The second scenario was the same as the first scenario except for the TRP. The TRP was accelerated by decreasing all tariffs by 5 percentage points (or less for tariffs lower than 5 per cent) starting in 1997.

This particular version of the ID-CGEM was a multi-sectoral CGE model consisting of a system of simultaneous non-linear equations. It contained 103 single-product industries, 2 margins commodities, 65 categories of labour and 24 households. The input-output database was compiled by DRI-WEFA SA (now IHS Global Insight Southern Africa) working from Van Seventer, Eckert and de Lange (1992). This included data for the occupational- and race disaggregation of employment and for the race- and income-level disaggregation of the household sector. IDCGEM was applied in a so-called comparative-static way, assuming that the envisaged changes and shocks were applied to the economy "overnight". Furthermore, the results represented a "worse-case scenario" given a sudden, as opposed to a phased-in, implementation of the shocks.

The simulation results indicated that an accelerated tariff reform programme reduced the inflationary impact of depreciation on producers and households. The results from the study using theoretical as well as empirically-based arguments, were that, while a depreciation of the South African currency amidst trade liberalisation might be in conflict with development, accelerated tariff reduction suggested by the macroeconomic strategy might ease this conflict.

By the end of the 1990s the ID-CGEM's dominance of CGE modeling in South Africa began to wane and the new millennium saw the emergence of new players in the field, along with a proliferation of modelling strategies.

5. Recent models

Since 2000 there has been an upsurge

in interest in CGE modelling in South Africa. This has been led by international researchers from the World Bank and IFPRI, but local modellers have also been playing an active role in building new models to answer to new policy challenges.

5.1 Humphreys (2000)

In 2000 Macartan Humphreys of the Center on Globalization and Sustainable Development, The Earth Institute at Columbia University used a CGE model of a small economy to give an appraisal of the impact of liberalisation on poverty in South Africa. The goods in the model were aggregated into three types; primary goods including mining and agriculture, industrial goods and services, which made the model restrictive. It also considered only three types of consumers: non-poor, poor and very poor; three factors (capital, skilled and unskilled labour); and nine goods (non-traded, import and export variety from each of the three sectors). Despite the fact that the model allows for unemployment, it is essentially Walrasian in character. The model uses a simplified version of the 1992 SAM with the addition of labour market and tariff rate data from other sources. Most of the parameters are borrowed from Devarajan and Van der Mensbrugghe (1999) and labour market information from Kingdon and Knight (1999).

The closure rule used in Humphreys' simulations was the classical closure rule in which a fixed savings rate was assumed for government and all consumers. Furthermore, to ensure that the investment-savings identity held, investment was adjusted. The circumstances assessed were gradual reduction in the tariff rate of each protected sector from 25 per cent to zero per cent in five per cent increments. The results from the simulations indicated that government revenue fell due to liberalisation, which resulted in a general fall in transfers from government to households and a reduction in government services. The growth of real income of non-poor and poor consumers, for whom these transfers

constitute a small share of income, was only somewhat affected by the drop in government transfers. The very poor on the other hand, experienced a more extensive growth of real income as a result of a drop in tariffs (Jerome, 2004).

5.2 The World Bank CGE model

The year 2000 also saw the building of a World Bank CGE model for South Africa and Channing Arndt of Purdue University and Jeffrey Lewis of the World Bank (2000) used this supply-constrained model to estimate the macroeconomic impact of HIV/AIDS on the economy of South Africa. Two scenarios, were created and compared: a hypothetical "no-AIDS" scenario in which the economy continues to perform as it has over the last several years, and an "AIDS" scenario in which the key AIDS-related factors affect economic performance (Jerome, 2004).

The World Bank CGE model is a Solow-type version of the standard neoclassical CGE model with profit-maximising producers, utility-maximising consumers and flexible prices that clear all markets except the market for unskilled labour, but lacks the distributional richness of a standard CGE model. The model is highly disaggregated with 94 productive sectors, 13 labour skill categories and 24 household types. "Institutional rigidities and imperfect markets are captured by the exogenous imposition of features such as immobile sectoral capital stocks, labor market segmentation, and a fixed exchange rate, which together limit a neoclassical interpretation of the models but permit their more realistic application to developing countries" (Jerome, 2004).

An aggregated version of a 1997 SAM built by DRI-WEFA, was used to derive the basic data input. This SAM has 45 productive sectors, and a household structure differentiated by deciles.

Fourteen productive sectors, including three service sectors of importance to analysis of HIV/AIDS, are contained in the model: medical and

health services, social services, and government services. There are five primary factors of production (professional, skilled, and unskilled labor, informal labor, and physical capital), five household categories representing income distribution quintiles, seven different government functional spending categories, and three government investment categories. Sectoral production arises from a translog production function. This production function establishes how capital and labour inputs are combined together in generating value added. Output is then produced according to a fixed-coefficients technology by combining the value added aggregate with intermediate (material) inputs. The assumption is made that producers maximise profits, which implies that each factor is demanded in order that marginal revenue product equals marginal cost. On the other hand, factors do not need to receive a uniform wage for labour or rental for capital across sectors. The ratio of the sectoral return to a factor relative to the economy-wide average return for that factor is fixed by distorting the sectoral factor market.

The standard CGE assumption that domestic goods are imperfect substitutes for traded goods is maintained on the demand side of the model. Sectoral exports are combined using a constant elasticity of transformation (CET) function to form domestic output and the assumption is made that sectoral exports are different from output sold domestically. In both intermediate and final uses, as with exports, sectoral imports and domestically produced goods are imperfect substitutes.

In their AIDS scenario Arndt and Lewis (2000) take a significantly pessimistic view by introducing a decline in total factor productivity (TFP) due to the HIV/AIDS virus, in addition to the loss of labour productivity resulting in an increase of the negative macroeconomic impact. Total factor productivity, which is attributable to a combination of the two factor inputs (labour and capital) in production,

refers to efficiency improvements (or declines). The authors justify the inclusion of this effect on the grounds that the epidemic will reduce the productivity of management and of capital (due to increased downtime linked to absenteeism), as well as lower morale amongst the workforce. While this seems conceivable, uncertainty remains as to why they couple the reduction of TFP growth to unskilled labour, in preference over skilled labour, given that the activities of the latter are involved.

5.3 International Food Policy Research Institute (IFPRI) models

Along with the World Bank, the other multilateral organisation that recently built a South African CGE model is the International Food Policy Research Institute. The intention was to reduce the initial cost of undertaking CGE analysis in South Africa. Despite the model being essentially neoclassical, it is adaptable to accommodate an extensive number of views on how the South African economy responds to exogenous shocks and the use of policy levers (Jerome, 2004).

The South African model is recursive dynamic and is therefore an extension of the standard IFPRI model. The neoclassical-structuralist modelling tradition originally presented in Dervis et al. (1982), was used to create the model and is formulated as a set of simultaneous linear and non-linear equations, which define the behaviour of economic agents, as well as the economic environment in which these agents operate. Market equilibrium conditions, macroeconomic balances, and dynamic updating equations are used to describe the economy (Jerome, 2004).

Using national accounts information and supply-use tables, a 1998 SAM for South Africa was compiled for the IFPRI model. The requirements of IFPRI's standard comparative static CGE model were used to make the SAM consistent. The economy-wide impact of a range of hypothetical policy levers, including: increased government spending; the

elimination of tariff barriers; and an improvement in total factor productivity under three adjustment rules labelled loosely as neoclassical, Johansen and Keynesian, can be simulated by using the above model. These adjustment options treat savings and investment differently. Under the neoclassical adjustment rule the economy is assumed to be savings-driven, while under the Johansen adjustment option the economy is assumed to be investment-driven and that savings rates are scaled to ensure that the level of savings and investment is balanced. Finally, the Keynesian adjustment approach assumes that both the level of investment and the savings rates are fixed, where savings will still adjust to balance investment in that higher income will generate more savings given a fixed savings rate.

The results indicate that in determining the expected impacts of policies, the assumptions made regarding the mechanisms of macroeconomic adjustment are important. To begin with, despite mixed results concerning changes in household income distribution, the effect of expansionary fiscal policy seems to be growth enhancing, while the Keynesian adjustment approach produces the most positive results. Furthermore, an elimination of import tariffs appears to have an increasing effect on the gross domestic product, with negative consequences for aggregate manufacturing and positive consequences for services. Lastly, an increase in total factor productivity enhances growth, while under neoclassical assumptions of the macroeconomic adjustment mechanisms the most positive results are derived (Jerome, 2004).

In the standard IFPRI model there is no explicit modelling of the financial market. The static model estimates the impact of a change in policy using comparative static analysis, and therefore there is no reflection of the path of adjustment over time, or of any dynamic feedbacks into the economy through changes in investment, technology or productivity. In acknowledgment of this defect, James Thurlow

upgraded the model in 2001 into a recursive dynamic CGE model, where he based the behaviour of agents on adaptive expectations (Jerome, 2004).

The structure of the static model is similar with the exception that two SAMs are compiled for the years 1993 and 2000. A number of equations that allows the regional disaggregation of international trade; an upward sloping factor supply curve; and factor-specific productivity adjustments, are in this way included in the IFPRI model.

The model has already been used in a number of studies. A range of topics are covered, including health and health policy; social security and public finance; and labour market and trade policies. The model was used for a number of studies, including a study done by Jyotika Ramprasad and James Thurlow (2003) to examine the impact of HIV/AIDS and the provision of anti-retroviral treatment, on the South African economy. James Davies (2003) also used the model to consider the effects of alternative labour market policies on future levels of employment and James Thurlow (2003a and 2003b) used the model to review the impact that trade liberalisation, reform, and the adoption of regional trading agreements might have on the South African economy.

Along with the multilateral models, local modellers have also showed increased interest in CGE since 2000. Three applications of new models came from the University of Pretoria.

5.4 De Wet and Van Heerden (2001)

Because the tax system in South Africa is currently structured as such that most of the tax burden falls on labour, the aim of Theuns de Wet and Jan van Heerden's model (2001) was to determine whether a fiscal reform that introduces a revenue neutral tax on the use of coal, could result in an increase in the overall welfare of South African citizens.

The model used by De Wet and Van Heerden (2001) is an applied general equilibrium model of the South African version of the ORANI-G model. The model distinguished between 45

sectors of production in South Africa, which includes the coal sector. Fourteen different households are distinguished along income groups, while capital, labour and land are included as primary factors of production. Distinction is also made between 4 different types of labour.

The results from the model indicates that an increase in the tax on coal would have positive, if marginal, environmental benefits for South Africa. Such a tax would, however, have negative consequences for the South African economy in the form of a lower level of employment, consumption and economic growth.

5.5 Kearney and Van Heerden (2001)

In related work at the University of Pretoria Marna Kearney and Jan van Heerden (2001), built a model in the Walrasian tradition based on the SAM adapted from Devarajan et al. (1994) and Ginsburgh et al. (1997). In the tradition of these models, it addresses the effects of fiscal policy, specifically the incidence of Value Added Tax (VAT) in South Africa. This closed economy model is highly stylised with no capital accumulation and fixed expenditure shares of the two distinguished income groups which each have a choice between two consumer goods.

The results drawn from the model indicates that a percentage increase in VAT would not affect the lower income groups negatively if the increased government revenue flowed to the lower income group. Furthermore, most necessities used by the lower income groups are exempted from VAT. Therefore, any policy measures aimed at promoting growth, the redistribution of income, employment and the general increase in the standard of living can consider an increase in VAT. In the simulation government revenue increased with almost 2,5 per cent through the increase in VAT.

Along with the models developed at Pretoria University, efforts were also underway in the Western Cape. The first is an example of sub-national CGE modelling.

5.6 McDonald and Punt (2001)

Scott McDonald and Cecelia Punt (2001) of the Universities of Sheffield and the Western Cape, respectively, used a CGE model to analyse the impact of increased agricultural export opportunities upon the economy of the Western Cape. Specifically, the focus is on grape and deciduous fruit production that has achieved appreciable productivity growth. The model was calibrated with a SAM for the Western Cape in 1993, in which agriculture (24 commodities and 9 agroeconomic activities/regions) and labour (11 skill classes and 4 racial classes) were extensively disaggregated.

The results from this model demonstrate that the economic benefits accruing from expanded export opportunities are not only influenced by capacity constraints but also by the patterns of interdependence within an economy. In the case of the Western Cape it is evident that the increases in exports of wine, table grapes and other deciduous fruits should have contributed positively to increases in employment and rural incomes, especially among farm-worker households. They should also have contributed to reductions in income inequalities. More importantly, the extent to which capacity constraints could be released would be an important determinant of the absolute magnitude of the benefits. This suggests that trade opportunities accompanied by productivity growth are likely to be complementary in the search for growth and reduced inequality.

5.7 Pauw and Edwards (2003)

In 2003 Kalie Pauw of the Department of Agriculture of the Western Cape Provincial Government and Lawrence Edwards of the University of Cape Town adapted the IFPRI model discussed above, to assess the economy-wide impact of a wage subsidy targeted at semi- and unskilled workers.

The IFPRI model is Walrasian and neoclassical in form, where the standard neoclassical model assumes full employment in all factor markets. This assumption is, however not val-

id for semi- and unskilled workers in South Africa and to model semi- and unskilled unemployment Pauw and Edwards (2003) assumed a fixed real wage and an unlimited supply of labour at this wage. All other sub-classes of labour (professional, skilled and informal workers) are considered mobile and fully employed at flexible wages.

The results from the model prove that under conditions of well-functioning labour markets (which is not completely the case in South Africa) a wage subsidy scheme could have positive effects on employment and various other economic aggregates. It is further found that increased consumption, investment, income, savings and employment can contribute towards higher output and GDP. They find that the method of financing as well as the scope of the subsidy can potentially have important indirect effects and should be considered carefully. However, wage subsidy schemes are only one of a possible array of policy options to reduce unemployment. Therefore, it is recommended that careful evaluation of the alternatives is important prior to the implementation of a wage subsidy scheme.

5.8 Van Schoor and Burrows (2003)

Also in 2003 Melt van Schoor and Le Roux Burrows of Stellenbosch University developed a reasonably complex CGE model that included the features of imperfect competition and returns to scale in production. The model is based on the standard IFPRI model. Thurlow and Van Seventer (2002) first implemented the model for South Africa and their 1998 SAM and other data (elasticities, parameters, etc.) were used by Van Schoor and Burrows for their model, since their data requirements were almost identical.

Van Schoor and Burrows (2003) however, present a CGE with imperfect competition and returns to scale. The results from their simulations show that the inclusion of these features has important implications for trade, such that trade could have

negative gains, depending on the particular closures chosen. Generally, the gains from trade were higher than in the same model without returns to scale and imperfect competition, at 1 per cent or 1.1 per cent changes in GDP, depending on the closures used. They also find that welfare gains are much higher if firms are allowed to enter and exit sectors in response to changes in availability of economic profits.

The applicability of their results are however hampered by the fact that most of the underlying data concerning competition and returns to scale were not available, and consequently had to be generated.

5.9 Van Heerden, Gerlagh, Blignaut, Hess, Mabugu, Chitiga and De Wet (2004)

The year 2004 saw the third contribution for the modeling team at the University of Pretoria. Jan van Heerden, Reyer Gerlagh, James Blignaut, Sebastian Hess, Ramos Mabugu, Margaret Mabugu and Theuns de Wet (2004) analysed the question of whether a developing country like South Africa stands to gain from taxing either energy consumption or greenhouse gas emissions.

In addressing this question, they consolidate and apply the theoretical concept of a double dividend using energy consumption and greenhouse gas emissions data for South Africa and a SAM, all for 1998, through the application of a CGE model.

The so-called UPGEM-model is formulated and solved using GEMPACK, a flexible system for solving CGE models and based on the ORANI-G-model of the Australian economy. The model is based on the official 1998 SAM of South Africa, published by StatsSA. This SAM consists of 27 sectors, which is split into 39 sectors for

the purpose of their paper, 12 household types and 4 ethnic groups.

Regarding the effect of taxing emissions on the environment, the results are very positive: all the tax combinations gave a positive environmental effect. The decreases in emissions per unit of real government revenue collected when the four forms of environmental taxes are implemented, are in all cases more than the increases that could be expected with the tax breaks given.

The tax breaks considered are a general decrease in the direct tax rates on labour and capital, and a general decrease in the indirect tax rate on final consumption. The implication of the study is that as long as an economic benefit from recycling taxes can be achieved, it will always be possible to reap a double dividend as well.

5.10 Naudé and Coetzee (2004)

Finally, the most recent contribution to CGE modeling in South Africa comes from an article by Wim Naudé of Potchefstroom University and Rian Coetzee of the IDC (2004). It uses a CGE model to evaluate the extent and causes of income inequality in South Africa after 1994. They extend the CGE-modelling approach in South Africa by incorporating dynamics into the comparative static CGE model used by the IDC. The 1995 SAM for South Africa developed by DRI-WEFA SA is used as database.

Naudé and Coetzee (2004) determine that the labour market is a broadcast instrument through which globalisation induces higher inequality through technological changes, higher unemployment and reduced wage income towards poorer or unskilled households. The labour market imperfections that they identify contribute to allocative inefficiency (the demand for high skilled labour outstripping the supply), dynamic inefficiency (the quality of the

CGE models ... provide unique insights into the working of economies and on the possible effects of macroeconomic policies.

South African labour force may be declining in relative terms) and a deficiency of social justice and sense of equity. In an era of globalisation all of these failures or inefficiencies advocate the importance of labour market and human resource development policies as an answer towards the inequality, unemployment and low growth experienced by South Africa.

Naudé and Coetzee (2004) state that "In South Africa, the elimination of racial discrimination and unionisation had reduced wage inequality, although the latter had through lowering wage employment indirectly contributed to higher household inequality". Furthermore, they find that wage setting ought to be made more flexible. The results from the model suggest that employment growth of up to 5.3% per annum on average may be realised under flexible nominal wage rates (constant or declining real wage rates) and that some of the adverse unemployment effects due to globalisation and technological upgrading may be avoided.

The results from the CGE model used by Naudé and Coetzee (2004) suggest that the welfare of African households will be affected unfavourably relative to that of other households by only between 1% and 3%. They find that by raising African households' average annual expenditure by between 1% and 3% over the next three years it could assist in softening the inequitable impact of trade liberalisation in South Africa.

6. Conclusion

CGE models are becoming more widely used by policymakers and academics in policy analysis and provide unique insights into the working of economies and on the possible effects of macroeconomic policies. CGE models have, however, only over the past twenty years received attention from economists in South Africa.

The first models were strongly influenced by the work of Naudé and Brixen (1993) and the structural approach to CGE modelling. Recent CGE models, though, are partly built

on this approach although many are related. Part of the explanation for this may be found in their difference in focus: extending only a small part of the model such that the model may answer the specific policy questions the model builder intends to address. This has resulted in various models that are sophisticated with respect to small subsections, while staying highly stylised in other parts of the model (Tissen, 1998). In future work researchers may also want their models to reflect the structural changes in the South African economy that has been taking place, while not forgetting the lessons from earlier models.

The structure of a model is closely related to the parameters that are used. To increase the policy relevance of South African models it is of great importance that the models are also capable of addressing medium- to long-run policy simulations. Therefore, it is crucial that the reliability of parameter estimates increases. Since building, applying, evaluating, and maintaining a CGE model of an economy is such a large responsibility and time consuming only fractions of individual careers have been devoted to the effort. Institutional effort and funding might be required, both for application and theory. Joint research programmes of modellers, econometricians, theoreticians, and computational economists might be necessary to sustain an effective large scale CGE model of the economy.

*A more detailed version of this paper, and the full reference list, is available as a Kindle e-book. Buy it here: <http://www.amazon.com/Policy-questions-CGE-answers-ebook/>

Selected references

- Arndt, C. & Lewis, J.D. 2000. The macro implications of HIV/AIDS in South Africa: A preliminary assessment. *South African Journal of Economics*, 68(5): 856-887.
- Burrows, L. 1995. The Structure of a CGE Model for South Africa. Paper presented at the Biennial Conference of the Economic Society of South Africa, Johannesburg, 7 September 1995.
- Cameron, M., et al. 1994. Simulations with IDC-GEM: A CGE Model of the South African Economy. Paper presented at the 23 Annual Conference of the Economic Society of Australia, Gold Coast,

- Queensland, Australia.
- Coetzee, Z.R., Swanepoel, J.J., Gwarada, K. & Naudé, W.A. 1997. A Minimalist CGE Model for Analysing Trade Liberalisation in South Africa. *Journal of Studies in Economics & Econometrics*, 23(1): 1-12.
- Davies, J. 2003. Microsimulation, CGE and Macro Modelling for Transition and Developing Countries. Paper presented at WIDER conference on Inequality, Poverty and Human Wellbeing, Helsinki, Finland, 30-31 May.
- Devarajan, S. & J. Lewis. 2000. Trade Reform in South Africa: Impacts on Households. World Bank, Working paper.
- De Wet, T.J., Van Heerden, J.H. 2002. General Equilibrium Analysis of the Effects of a Consumption Tax of CO₂ Emissions. *Proceedings: First annual conference of the Forum for Economics and Environment*, Cape Town, 11 – 12 February.
- De Wet, T.J. & Van Heerden, J.H. 2003. From Input-Output to Computable General Equilibrium (CGE) Modelling: Estimating the Effect on SMME Output Growth with Government Subsidies and other Policy Measures. ESSA.
- Gelb, S., Gibson, B., Taylor, L. & Van Seventer, D.E.N. 1993. Modelling the South African Economy – Real-financial interaction. Macroeconomic Research Group, University of Durban-Westville, Working paper.
- Gibson, B. & Van Seventer, D.E.N. 1996a. The DBSA macro model. Development Bank of Southern Africa, Halfway House, Development Paper no. 120.
- Gibson, B. & Van Seventer, D.E.N. 1996b. Trade, growth and distribution in the South African economy. *Development Southern Africa*, 13(5): 771-792.
- Hendry, D.F. 1980. *Econometrics – Alchemy of Science?* *Economica*, 47: 387-406.
- Horridge, J.M., et al. 1996. IDC-DGEM: A CGE Model of the South African Economy for Forecasting and Dynamic Policy Analysis. Paper prepared for the International Symposium on Economic Modeling, Oslo, 3-4 July.
- Naudé, W.A. & Brixen, P. 1993a. A Provisional CGE Model for South Africa. *South African Journal of Economic and Management Sciences*, 10: 22-33.
- Naudé, W.A. & Brixen, P. 1993b. On a Computable General Equilibrium Model for South Africa. *South African Journal of Economics*, 61(3): 153-165.
- Naudé, W.A., Coetzee, Z.R., Gwarada, K. & Swanepoel, J. 1997. A Minimalist CGE Model for Analysing Trade Liberalisation in South Africa. *Journal for Studies in Economics & Econometrics*, 21(1): 37-56.
- Naudé, W.A. & Coetzee, R. 2004. Globalisation and inequality in South Africa: Modelling the Labour Market Transmission. *Journal of Policy Modelling*, forthcoming.
- Pyatt, G. 1988. A SAM approach to modelling. *Journal of Policy Modelling*, 10(3): 327-352.
- Sims, C. 1980. *Macroeconomics and reality*. *Econometrica*, 48: 1-48.
- Van Heerden, J.H., & Kearney, M. 2002. A Static, Stylised CGE model applied to evaluate the incidence of Value Added Tax in South Africa. *Economic Society of South Africa: Bi-annual conference*, Johannesburg.
- Van Heerden, J., Gerlagh, R., Blignaut, J., Hess, S., Mabugu, R., Mabugu, M. & De Wet, T. 2004. On Using a CGE Model to Simulate Energy Policy in South Africa, Ninth Annual Conference on Econometric Modelling for Africa, 30 June – 2 July.
- Van Seventer, D.E.N., Eckert, J.B. & Roukens De Lange, A. 1992. The Structure and Compilation of a Provisional Social Accounting Matrix for South Africa. *Mimeo: Development Bank of Southern Africa*.

Reaching for the stars: the phenomenal growth of a rural Ugandan university

Felix Meier zu Selhausen, Department of Banking and Microfinance,
Mountains of the Moon University



Around 30 million years ago Africa was split apart by tectonic forces that created - the Great Rift Valley. Along the periphery of the Western Rift, which forms the long narrow network of African Great Lakes, a mountain range developed called the Mountains of the Moon. Today this snow-capped massif that separates the Congo and Uganda is known as the Rwenzori Mountains. Its peaks (Mount Stanley 5,109m) are the source of a small fraction of the Nile's water, and turn the surrounding area into a fertile green, ideal for growing tea, coffee, and cocoa. Since 2005, the latter mountain range lends its name to Mountains of the Moon University (MMU), located in Fort Portal in Western Uganda. The young university is the country's only non-profit

community university owned by various representatives of the region. This includes the region's districts municipalities, religious communities, and business companies. MMU's Chancellor and co-founder, Prof. Edward Rugumayo, was ambassador of Uganda in South Africa during the mid-1990s and since then is a close friend of Nelson Mandela. In 2012, the university counted more than 1,500 students. Its campus along the bottom of a dead volcano and the shores of a crater lake reminds more of a suitable setting for a wonderful safari lodge rather than an institution for higher learning. This is where I have been working since April 2011.

After my Masters studies in Economics and History at Utrecht University, I dreamt about working in

Africa for some time to gain some more practical work experience. At that time, I had an interest in both an academic and developmental career. Hence, the job description of the German Development Cooperation to work at a rural university in Uganda to strengthen both research capacities and teaching at the School of Business and Management Studies seemed very appealing. Given the university's rural setting and infant stage, the capacity of staff members to conduct research is of course not fully developed. Some lecturers used to be secondary school teachers before and "graduated" into university teaching, others have a Master degree but never had the opportunity to gain research experience. Probably Harvard University was scarcely more developed

in research after its first 7 years of existence in 1643. Things take time because both teaching and research capacities do not come over night but require an established framework to be able to develop. In order to give lecturers an incentive to start publishing some of their work, we developed an annual university yearbook and seminar which provides the opportunity for lecturers to submit and present scholarly articles.

The university is organized into five Schools, namely Agriculture, Business and Management Studies, Education, IT, and Public Health. The Business School attracts the largest number of students. About 40 different languages are spoken in Uganda, but in class everybody speaks English. Students come from relatively poor families. Therefore many courses take place on the weekend or during evenings so that students can earn money to invest it back into their university education. Students stay in hostels or rent a room in town where two students share one room and cook together.

The growth rate of the university has

been phenomenal in both students' intake and lecture rooms. The majority of MMU's students are from small villages in Western Uganda. However, some come from as far as neighbouring Rwanda, the DRC, South Sudan and Kenya. More than half of Uganda's population is under the age of 15 and there is no other country in the world with a higher fertility rate than Uganda (with the exception of Niger, Mali and Somalia). This, combined with the implementation of a policy of universal primary education (1996) and universal secondary education (2007), generates a strong demand for university education. Burundi and Uganda are the least urbanized countries in the world - only 13 percent of Ugandans live in urban areas. Hence, there is a strong demand for university education in particular in rural areas that MMU intends to satisfy. In other words, MMU gives poorer students from rural backgrounds the opportunity to study, given that many of them could not afford the comparatively higher living costs and university fees in the country's capital. Most

of the students are the first generation in their families to attend university, and as a result, after graduation they return as "heroes" to their villages but their parents also have high expectations that they will find a well-paying job after university.

At the end of their studies, students at MMU need to submit a Bachelor thesis, which is not the case for all departments at Uganda's famous Makerere University. Consequently, MMU is exceptional in Uganda, asking BA students to produce a research project centered on research questions found in their own community. Through that students foster computer skills and gain knowledge in research methodologies. The university is owned by the Rwenzori Community; therefore its research aims to be practical and beneficial to the people of this region. Since, the majority of people in Western Uganda work in the agricultural sector, research tends to focus on topics of climate change, environmental effects, water and sanitation, soil quality, financial inclusion, youth, HIV/AIDS, and gender. One recent project



aimed to find ways to improve savings opportunities for small scale tea growers and pickers that are organized in a large saving and credit cooperative. MMU developed a commitment savings product which gives farmers the opportunity to save for a particular purpose (e.g. fertilizer or school fees) with tight withdrawal restrictions to foster discipline in savings behaviour. Another recent project investigates the potential of group-based microfinance to empower women and erode gender constraints within a coffee growing region in the Rwenzori Mountains.

In my own lectures, I quickly realized that students are short of historical knowledge, and in particular do not have a comparative long-term perspective on economic development. Furthermore, Ugandan universities have suffered greatly from the relative poverty of Uganda's economy. Thus, government research funding is low and international development agencies tend to concentrate on research within a framework of their own strategies which are mostly oriented at the present and not on historical topics. The result is that African economic history has been written largely by non-Africans and is therefore not taught at sub-Saharan African universities. In addition, it is also widely acknowledged that producing new knowledge about a specific geographic area happens most effectively when conducted by people who know the language, environment, and intricacies of the culture. Against this background together with the recently founded African Economic History Network (AEHN) the idea arose to develop a course in 'African Economic History and Development' which could potentially be taught at any English-speaking university in Africa. MMU can act as "guinea pig" where the latter course will be piloted in 2013. Since, hardly any appropriate course material exists

for African universities on that subject and yet the course should be taught by local lecturers, often the best option is to publish a textbook which meets the demands and level of both students and lecturers. MMU is looking forward to welcoming scholars from the AEHN in 2013 to start and test the course as well as engaging them in prospective research projects involving the university archive. It would represent a unique initiative to promote interest, collaboration, teaching, and research in the economic history of sub-Saharan Africa.

It also happens that one of the most promising archival projects in East Africa is occurring at MMU. The university hosts the former colonial and



post-colonial Toro District archive, known as The Centre for African Developmental Studies. The Centre has the potential to research and create uniquely African knowledge and suggest how this can be applied to inform development in an African context. The archive team has been digitizing records over the past two years and contributes to preserving history. However, MMU has never actually rigorously studied its own digitized records mainly because historical research and its methodologies are less familiar to staff. In general, there is a need to strengthen teaching capacities

and to produce relevant and rigorous research. In order to achieve this, lecturers need to acquire more profound skills in research methodologies. MMU wants to tap into this by offering PhD programs in the future. MMU envisions doing this through collaborating with more established universities in Africa and Europe. One potential model could be an exchange program between South African universities and MMU through which Ugandan PhD students acquire analytical and statistical research methods in South Africa but then return to Uganda to conduct their research in their own communities.

Within this context, together with two students of MMU I am currently conducting a research project which aims at creating a socio-historical database of Uganda. For this purpose we digitize marriage registers from former Anglican missionary stations that date back to the late 19th century. The marriage records report unique information on spouses' age at the time of marriage, spouses' occupation, the occupation of their fathers, as well as literacy status. This information will shed light on the economic development of Uganda in terms of marriage patterns, occupational classifications and social mobility of citizens during the colonial and post-colonial period.

In sum, it has been an exceptionally interesting and rewarding experience to work at this young rural East African university and to see it maturing and developing in all dimensions described. I am hopeful that Mountains of the Moon University will attract and produce more and more graduates, PhD students, and lecturers realizing the advantage of doing practical research in the surrounding community. This could go hand in hand with collaboration and exchange between other African universities in the near future.

'A legacy of African scholarship' – Grietjie Verhoef

Congratulations with your appointment as president of the International Economic History Association. What are your main responsibilities?

It is indeed an honour to serve as the president of the International Economic History Association, but it should be seen in perspective. The position of President rotates between member organisations, and when a World Congress is hosted in a particular location, the representative of the hosting nation's local Economic History association, is offered the opportunity to take up the position as president. I am thus only serving in this position because the Economic History Society of South Africa won the bid to host the WEHC2012 in South Africa in 2012. My duties are to serve with my colleagues on the Executive Committee of the IEHA to co-ordinate the international activities of member organisation, to promote the study of Economic and Business history and to initiate collaboration among Economic and Business historians world-wide. We seek to encourage research collaboration and academic dialogue on the topical issues in the discipline. Our world congress every three years is an important opportunity for that purpose.

You served three terms as president of the South African Economic History Association from 2007 to 2012. How has South African economic history scholarship changed in that period?

The most notable change has been the broadening of the scope of Economic History research. Apart from the fact that more colleagues from Departments of Economics have become involved in the international debate on various aspects of Economic History, international collaboration in research has increased. The EHSSA has also initiated a regular series of workshops on various aspects of innovative methodologies in Economic

history, with the support of ERSA, which enabled South African scholars valuable interaction with leading visiting scholars from other parts of the world. Furthermore the official journal of the EHSSA changed its name to the economic History of Developing Regions, now published by Taylor & Francis. EHDR succeeded in attracting submissions from more international scholars, whereby the link between the South African Economic History community and other parts of the world has been enhanced. We look towards strengthening this in future.

Do you think the global economic crisis – and the emphasis on lessons from the Great Depression – has made more students aware of the benefits of understanding history?

Yes, those developments have indeed created a greater awareness, but much more needs to be done to instil a historical consciousness among South Africans. We seem to re-invent the wheel, while careful historical research could have been thoroughly enlightening! The most powerful teacher is history and success stories are to be seen in many similar environments, as well as failures.

Economic history papers in the top international journals seem to be increasingly quantitative. Is that a good or bad thing?

My personal opinion is that this observation is correct with respect to certain journals, but if one considers other non-quantitative journals, there is impressive growth there as well. Quantitative research output excludes a certain scholarly community and in the South African case, we might want to consider that strategy, given our small community. I would suggest that an attempt to promote the study of Economic History in our own country could benefit from a methodologically inclusive approach. Quantitative work is valuable and insightful, but it needs to communicate with the audience

targeted to enhance the discipline. I think the question is less whether the methodology is quantitative or qualitative, but whether the methodology is appropriate to address the social and economic issues we wish to address in our society.

Your own interest is in Business History, and you are based in the Department of Accounting at the University of Johannesburg. Tell us more about this interesting combination.

Accountants operate in a great variety of business dimensions. Business needs accountants to deliver financial information to facilitate sound business decisions. Accountants and Business historians work in exactly the same place in the economy – the one group is the technicians, the other the strategists, but neither of these are exclusive. The interesting dimension is the shared human dimension, the social nature of Accountancy. Burchell and Hopwood said that Accountancy is the framework of society. That is where Accounting Historians and Business Historians meet. The compilation of accounting information is embedded in social structures and values. Business History is engaged with the people and entities in that world. Accountancy should never be studied as if it is only technique – it is chosen technique and choice is determined by values.

What would you like to be your legacy as president of the International Economic History Association?

My term as President is an opportunity for African scholars to shift the focus more to the work on and in Africa as well as developing regions. I hope not to leave any personal legacy, but a joint legacy of African scholars emerging enthusiastically to submit our work internationally and to strengthen collaboration with the international community of Economic and Business historians.



The South African
Economic History Annual
is published annually by the
Economic History Society
of Southern Africa.

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Annual