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ECONOMIC POLICY-MAKING: NARROWING THE GAP BETWEEN THE WORLDS OF IDEAS AND ACTION

R. Parsons¹

INTRODUCTION

Since the advent of democracy in South Africa (SA) in 1994 there has been a dramatic upsurge of interest at both the academic and policy level in the country's economic performance. Although it is obviously also related to political developments of the period, this heightened interest is likely to persist, especially for as long as SA's economy is seen to be under-performing. The obvious political and practical importance of the issues involved as well as the intellectual interest of many of the socio-economic phenomena and policy challenges they offer, all suggest that the interest is likely to persist. This perception is reinforced by the fact that in 2014 SA celebrated the twentieth anniversary of its democracy, as well as holding its fifth successful general election in which socio-economic and governance issues dominated the campaign.

What constitutes good governance has generally vexed political philosophers, and more recently economists, for centuries. The American republican, John Adam, believed that of all the arts the only one not to have improved since the time of ancient Athens was that of politics. Citizens and their leaders so often blunder, knowingly and yet somehow seem unable to prevent it from happening. Perhaps this suggests that we should abandon Plato's question: 'who shall rule us' and focus instead of Karl Popper's question: 'how can we stop our rulers from ruining us'? Economists and economic analysts now know far more about what does *not* work, but need to improve their skills in explaining what *does* work.

Certainly in recent decades there has been ample academic literature, empirical evidence and 'growth diagnostics' available to us to answer at least some of the questions around good governance and the creation of shared prosperity. Yet the biggest puzzle in economic development remains why sustained economic growth is so hard to achieve. Only a handful of the world's over two hundred economies have discovered how to do it for the majority of their citizens, and a single successful formula remains elusive. Notwithstanding that, however, the growing interest in economic development over the years strengthens economics as a systematic discipline and we should build on the available insights.

As in other countries, tackling socio-economic challenges in a country like SA may also advance economics by extending the range of phenomena over which its current as well as new hypotheses can be examined and developed. However, the contribution of economics to policymaking in SA may be negligible, or even negative, if its pronouncements obscure rather than illuminate issues. The seamless rationality of armchair theoretical policymaking looks different from behind the desk of a decision-maker. The most effective and credible way in which economists can contribute to policy is by stating the basis of their arguments clearly and pursue it rigorously within their own sphere, on the clear understanding that there are many other factors besides economics to be considered in the framing of policy. The SA socio-economic situation remains fertile ground for economists wanting to expand their contribution to solving the policy dilemmas that exist, and in adding value to the solutions.

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Although the SA economic policy landscape may sometimes be unfamiliar territory to many academic economists, especially those whose research stands on its own merits and is not intended to render public advice, the factors and influences from which economic generalisations derive often stand out in clear relief. More research in this general area can potentially extend and strengthen the economic generalisations. This in turn will improve the prospects of successful assessments and prediction of outcomes of particular policies and projects, which is one of the most effective contributions economists can make to better decision-making. So what are some of the features of this terrain in SA?

It is not the intention here to become involved in a methodological discussion about what economics or economists should or should not do. In any field there is an ongoing relationship and interaction between its applied policy branch and its theoretical development branch. The evolutionary nature of economic methodology is thus a complex subject on its own and has generated its own academic literature. Most economists however, says David Colander (2001), care little about methodology; they are interested in getting on with what they do, not in talking about what they do. The approach here, therefore, is one which concentrates mainly on the links between economic research and policymaking, and *not* on how applied economics fits into the well-known categories of positive and normative economics, or 'the art of economics'.

SA's GROWTH PERFORMANCE

From a global perspective in investigating growth performance the extent to which economies can successfully handle external 'shocks' will depend on how well individual countries are able to respond to changing circumstances and their degree of resilience in doing so. How they are seen to be managing their short-term and long-term challenges is an important 'confidence' factor, and this is also true of SA. As a small open economy, SA remains highly dependent on global economic trends; but in assessing where the emphasis must fall in deciding the future policy in SA, it is necessary to distinguish clearly between the factors in the global economy over which a country like SA has little or no control and the factors over which the country does have control, such as its domestic policies. It must develop the flexibility and adaptability in its economy needed to address new opportunities and risks, in the light of shifts in the global and African economic landscapes.

Notwithstanding global economic trends, it is common knowledge that SA now faces bigger socio-economic challenges domestically. Countless 'diagnostics' and programs over several years have confirmed that SA's economic performance since 1994 has been sub-optimal, given its apartheid history. There is wide agreement among most economists that the goals of our society include the achievement of sustainable economic growth (ideally to more than double the recent average growth rate of 2.5% p.a.), to create new jobs and elevate living standards. In short, SA needs inclusive growth rates high enough to successfully address the triple challenges of unemployment, poverty and inequality.

We must nonetheless retain perspective in our analysis. Up to 2008, in the wake of the East Asian crisis in 1999, the SA economy embarked on a record economic expansion, which according to the South African Reserve Bank (SARB) only ended in November 2007. By this time it had lasted more than twice as long as any preceding period of economic expansion since World War II. It averaged 3.3% growth between 1999 and 2003, and 5.3% until 2008, and this remains a positive achievement in the early years of democracy, even if it fell short of expectations. In 2008 the twin impact of the serious power 'outages' and the global financial crisis hit and since then the SA economy has been struggling to recover a sustained growth momentum.

Hence as we analyse SA's present and future national 'balance sheet', it remains necessary to recall what has been achieved thus far in the 'big picture' of the post-apartheid era in order to maintain a realistic grip on what kind of economic direction is now required. Evaluating successes and failures over a twenty year period creates the necessary perspective and also confirms a high degree of economic resilience in SA. Yet resilience is not dynamism; survival is not the

same as unlocking SA's true potential. We need to investigate how to achieve a better economic performance, in which research can play a significant role.

Therefore, in order to recapitulate in a nutshell:

- Apart from a few short windfall-driven episodes, SA has remained a modest 3.0% - 3.5% growth performer (the 'low road'). It has not yet discovered within itself the magic to transform into 5% or 6% growth rates (the 'high road'), as some other leading emerging economies have done.
- Thus after a short, speculatively-driven consumption boom during 2005 - 2007 and a short sharp recession in 2009, we now find ourselves constrained in a 2.5% to 3% growth trajectory, with a significant loss of growth drivers and focused purpose reinforced by prolonged key strikes, labour unrest, electricity insecurity and policy uncertainty. These factors have had a negative impact on investor confidence and the exchange rate.
- Based on previous studies of the economy, most analysts believe SA's long-run growth performance under present constraints could not exceed 3.5% at best. Even at that positive growth rate the economy will barely show a net gain in employment, and current growth forecasts put SA's growth rate at only 2% to 3% over the next couple of years, so there is lost ground to be made up.

Against this backdrop, we must recall that an economic system is judged largely, though not exclusively, by its ability to organise the factors of production in such a way as to attain the maximum output of which they are capable. To suppose that SA's socio-economic challenges can be successfully addressed in any economy in which output and investment are weak or declining is unrealistic. It should frankly be recognised that no economic system is likely to survive in a country where public opinion is critical and effective, unless there is a general feeling that it is able in due course to 'deliver the goods' to as many people as possible. Although SA looks very different today compared to 1994, it still needs to give many more people a stake in the economy.

BUT WHY IS SA HERE AGAIN?

As previously indicated, from the outset in 1994 it was widely accepted that a strong and expanding economy was necessary to support the expectations of the new democracy. SA needed an economy which was more inclusive, more dynamic and in which the fruits of growth would be shared more equitably. In this context SA's economic performance was then already seen to be disappointing and inadequate, given the legacy of apartheid. This disappointment has been strongly reflected in the numerous socio-economic programmes and economic assessments designed to boost economic growth and transformation in SA over the past two decades.

These include:

- Reconstruction and Development Programme (1994)
- Growth for All (1996)
- Growth, Employment and Redistribution Strategy (1996)
- Jobs Summit (1998)
- Growth and Development Summit (2003)
- Accelerated Shared Growth Initiative for SA (2005)
- 'Harvard' Economists' Study (2007)
- OECD Annual Country Reports
- Various IMF and World Bank Reports on SA

- The Dinokeng Scenarios (2010)
- New Growth Path (2010)
- National Development Plan (2012)

to mention only a few. SA has not lacked public debate about its economic performance. Yet the period abounds with programs, projects and disappointments. Why do we keep falling short of our potential? Why are we here yet again? What is the gap? Each time SA preaches the 'high road' but is perceived to deliver only the 'low road', the challenges become more formidable and frustration escalates.

One serious flaw in many of the previous well-intentioned approaches to growth and development in SA was to completely underestimate – or only pay lip service to – the extent to which what was required from the public sector would exceed its capacity to cope with even basic functions. This failure to perform adequately, as in infrastructural development and at local government level, in turn has obstructed the efficient operation of the private sector. Thus the seeds of a 'vicious circle' have been sown and recriminations have abounded as to where the fault lies.

In this regard, of course, we know there are also important market or business 'failures' to be acknowledged and addressed, if the 'mixed economy' in SA is to operate more efficiently. To respect markets is not to deify them. Economic policy determines the boundaries of the mixed economy; it is conditioned by the existing institutions of the public and private sectors; how they interact with each other; and where the thresholds should be located. The business sector needs to be accountable where its performance has lagged, either by injecting more competition or through other appropriate remedial measures.

The attempts to restructure and implement changes to the economy along certain lines have also run into political headwinds from particular groupings. Political analyst Steven Friedman and others have reminded us that a successful reformer is one who is able to steer and bring policy change to fruition in a consistent way despite opposition from economic actors, interest groups and political forces whose interest or world-views may be threatened by it. Yet a set of policies that may seem inept or incoherent to many economic analysts may nonetheless serve the political economy purpose of holding together a governing coalition, even though they may have serious unintended economic consequences.

If we look back over the past two decades, there appears to have been an increasing emerging pattern of:

- Ambivalence of policy signals
- U-turns in policy
- Imbalances in policy decisions
- Preoccupation with macro policy at the expense of micro policy
- Poor coherence in policy
- Weak coordination in policy
- Undue stresses in social dialogue processes
- Excessive regulatory framework
- Persistent distrust of the private sector

The cost of this cumulative pattern has gradually risen and increasingly set a limit on SA's pace of economic development. These policy weaknesses are not unique to South Africa and are often reflected in the global competitiveness assessments of various economies. In this respect there are leaders and laggards and the 'winners' tend to be those economies which are seen to have

successfully addressed their challenges. Nor must we ever assume that the shortest distance between two points in policymaking is a straight line – it never is. In the world of ‘real politics’ there are always compromises to be negotiated and ‘trade-offs’ to be made. Nonetheless, given the increasing dissatisfaction with SA’s economic performance referred to earlier, together with the 2008 global financial crisis, this led to a decision in 2010 to take another top-level look at SA’s long-term development prospects and the constraints that exist.

ENTER THE NATIONAL DEVELOPMENT PLAN (NDP)

The National Planning Commission (NPC) was therefore appointed by President Jacob Zuma in 2010 to interrogate these developmental issues again. Consisting mainly of *independent* experts drawn from a wider spectrum of disciplines it was charged with advising the President on matters impacting on SA’s long-term development, and to draft a fresh assessment of the options available. After extensive consultation throughout the country, the NPC charted a new path for SA – by providing a vision for 2030 through the NDP.

This document was subsequently accepted by Parliament, endorsed by the ANC elective Congress in December 2012 and formed part of the ANC’s election manifesto in the 2014 elections. The NDP (2012) has come to enjoy broad support from most, though not all, key stakeholders in the economy. In August 2014 the Cabinet announced a medium term five-year implementation plan for the NDP - overall, the government is now looking for an ambitious growth rate of about 5% by 2019.

Briefly, what is the outline of the NDP? It is a capacious 500-page framework, which bears evidence of considerable research drawn from SA and abroad. The NDP is based to a large extent on existing programs and projects, but boldly extends them into new fields and within a longer term integrated context. The NDP offers a broad roadmap for South Africa; an overriding, long-term document that extends beyond the short-term electoral and business cycle to create a basis for future policy creation. If implemented consistently the plan should eventually come to include all future economic and social planning and regulations, providing a common thread underpins the battle to address the overarching socio-economic challenges in SA.

In implementing the NDP (2012) in the years ahead it will be necessary to strike a balance between conflicting advantages, disadvantages and risks of different courses of action involving value judgements, considerations of economic analysis, as well as assessing political and administrative possibilities. It needs to be seen as a plan for the country as a whole and not just a government plan, and there must be tangible evidence of its implementation. This is the fundamental challenge facing the political economy of development in SA.

The NDP (2012) outlines various socio-economic targets it would like SA to attain by 2030, which ultimately revolve around reaching an average growth rate of 5.4% by that date. With the tailwind of higher growth several other goals could be reached. These would be achieved through implementing appropriate socio-economic policies aimed at job-rich growth, including 11 million additional jobs over that period. The apex priorities in the NDP are job creation, reform of the education system and establishing a ‘capable state’. A decisive role is allocated to the private sector in employment creation and higher investment, with particular emphasis on the promotion of small business. Overall, the NDP seeks to create a ‘virtuous circle’ of growth and employment in SA, whilst realistically recognising the challenges that still lie ahead.

The NDP’s (2012) emphasis on ‘active citizenry’ participation can also create a built-in self-correcting process, provided that a high degree of social cohesion can be gradually developed around its main goals. The NDP visualises a mobilised, active and responsible citizenry. This, of course, does inevitably involve certain consequences for the way our political system operates, electoral reform, the degree of accountability that exists, and the need to strengthen local government in ways that promote responsiveness to citizens’ needs. These remedies are an essential element in implementing the ‘right’ solutions for SA based on accountability, representation and participation at various levels.

There are two particular dimensions to the NDP that should be singled out: SA's global competitiveness and the inequality of income and wealth in SA.

SA's GLOBAL COMPETITIVENESS

The NDP (2012) acknowledges that, in order to reach its socio-economic targets, SA needs to attain a larger share of world trade and investment to support its developmental goals. Yet the World Economic Forum (WEF) Global Competitiveness Index for 2014 shows that SA dropped another three places from 53rd to 56th. While the WEF annual survey may well be an imperfect and rough assessment of international competitiveness, it nevertheless remains true that SA was ranked 35th about a decade ago, but in recent years it has been steadily losing ground to emerging economies like Kenya and Mauritius. More importantly, these trends have also been reinforced by other surveys on the cost of doing business in SA, and these paint a converging picture of what has gone wrong in SA's overall global competitiveness in recent years.

In the latest WEF survey SA performs very well in areas such as governance and financial management in the private sector, but shows up negatively in key spheres like cooperation in labour-employer relations and the quality of mathematics and science education. The macro-economic environment has also deteriorated considerably in recent years. Unless remedial action is taken, there is a strong risk that the areas in which SA performs poorly will continue to sap its overall global competitiveness in the years ahead. The persistently large deficit on the current account of the balance of payments also strongly suggests that there is a structural problem impeding our export performance which seems beyond the capacity of a weak exchange rate to correct.

We also need to note surveys suggesting that SA business is increasingly investing outside the country and a large number of corporations have relocated their head offices abroad. In principle there is nothing wrong with SA business wanting to expand abroad or into Africa in a globalised world, but we should interrogate whether this is mainly the result of SA 'push' or whether it is largely global 'pull' (see also the comments below on adapting to changing world trade patterns). SA will not reach its desired higher job-rich growth rates unless it enjoys the support of a higher degree of both domestic and foreign direct investment.

Foreign investment permits a higher rate of domestic investment than domestic savings alone. We know foreign capital may also bring with it other scarce productive factors, such as technical 'know how' and business experience which can make an important, continuing contribution to economic development. Nevertheless, no country likes to depend on foreign capital when it can mobilise domestic capital for the same purpose. Savings patterns need to be critically monitored to see whether faster growth is sustainable. While the NDP also does not want SA to be too dependent on foreign capital, and indeed assumes that higher levels of investment will in future be largely funded by domestic savings, it does emphasise the need for the country to generally remain 'investor-friendly'.

There is also the question of whether SA's Industrial Policy Action Plan (IPAP) is sufficiently consistent with the NDP. This relates to SA's ability to successfully penetrate dynamic foreign markets to support growth and job creation. Is SA able to successfully secure a viable share of the new trade patterns emerging in the global economy? Have we got the balance right in our industrial policy? The concern stems from the reality that the value-added characteristics of production are no longer centered on the main manufacturing event, but are spread over the pre-manufacturing and post-fabrication events. The existence of this value-added feature of production is often called the 'smile curve'.

It is seen as particularly favourable to low- and middle-income economies like SA and is a process in which companies play a leading and definitive role, says Peet Strydom (2014). SA needs to adapt to changing international trade dynamics and turn them to good account in its export performance. At the policy level this remains highly relevant to decisions about the implementation of an appropriate industrial policy and the role of world trade in SA's future

economic development, as well as the economy's level of international competitiveness. In the long run we want to make the opportunities of globalisation more accessible and its dangers less threatening in unlocking SA's export potential.

INCOME INEQUALITY AND THE 'PIKETTY FACTOR'

Over two hundred and fifty years ago, when Adam Smith was trying to systematise his ideas about economic development, he entitled his analysis: *The wealth of nations*. Today if he were addressing the same theme, he would be more likely to include in the title a reference to poverty as well as wealth, given the subsequent literature and empirical evidence on the subject. The most challenging problem confronting economists basically remains what it was in Adam Smith's era: to bring to light the forces that determine the growth and development of countries – and how best to mobilise such forces to promote shared prosperity over time. Ideally, in this country it means we want to turn South Africans into a nation of victors over adversity and deprivation, rather than victims trapped on welfare, a goal to which the NDP also aspires.

On the issue of inequality a host of international studies suggest that globalisation has contributed to higher income inequality within countries, while simultaneously leading to less inequality between countries. Given its economic and political history, the profile of SA's unequal distribution of income and wealth is well-known and has been adequately captured in its high Gini-coefficient and other similar yardsticks. It has also been recognised that reducing poverty and dealing with inequality are not the same thing; in fact, too many inadequately-designed policies have actually increased inequality in many countries. These have formed the subject of important discussions both in SA and abroad.

This broad debate has again been highlighted by the recent publication of Professor Thomas Piketty's (2014) widely-read best-selling *Capital in the twenty first century*, which emphasises why the issue of inequality remains a persistent challenge, not only in SA. Interestingly, the book opens with a reference to the Marikana tragedy in 2012 as an example of 'distributional conflict' in a global context. Piketty's latest research on inequality trends has been both strongly praised and heavily criticised, ranging from being deemed 'Nobel Prize worthy' to being a proxy for 'a modern Marx'!

Yet it remains a serious piece of scholarship and provides an organised (if controversial) framework for thinking about the evolution of inequality of wealth and income. It is not necessary to agree with all of Piketty's (2014) findings to recognise the impact of his work on recent public and academic debate about inequality, and its appeal to many policymakers. It resonates at several levels. While there are no inexorable economic laws which pre-ordain the outcome, the fact remains that there is an inequality problem to be confronted in many countries. It does exist.

It is also worth noting that several of Piketty's (2014) assertions can be aligned with aspects of the NDP, such as:

- History has shown that only countries that are 'catching up' with more advanced economies can grow at rates of 4%, 5% or more. This 'catch up' is a process that by definition ends when 'catch up' is achieved and which can take many decades...to which the NDP subscribes as a SA scenario, with its initial goal as 2030.
- When economic growth is high and when real wages rise by 5% per annum it is easier for the younger generation to accumulate wealth and level the playing field with their elders....which is in line with the NDP analysis.
- The long run and the best way to reduce inequalities with respect to labour, as well as increase labour productivity and growth is investment in education. In the long-term education and technology are the decisive determinants of wage levels... which is consistent with NDP priorities.

- Escalating executive remuneration in some countries rather than in others suggests that institutional differences between countries are more important than technological change or productivity gains...to which the NDP refers.
- Economic growth on its own is incapable of satisfying ‘a more just social order’, without creating specific institutions for this purpose and not relying solely on market forces or technological progress...which is the main thrust of the NDP.
- Knowledge diffusion depends on a country’s ability to mobilise finance, as well as guaranteeing a stable legal order on which various actors can rely. It is therefore closely associated with the achievement of legitimate and efficient governance. These are the main lessons that history has taught about global growth and international inequalities... which are also NDP mantras.

So what are next steps? In assessing the implications of Piketty’s research we are reminded of pertinent remarks once made by Keynes (1936): 1 - 190.

“The ideas of economists and politicians, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves quite exempt from any intellectual influences, are usually slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back....sooner or later it is ideas, not vested interests, which are dangerous for good or ill”.

Keynes (1936) and some other leading economists have always seen economic events as ‘a battle of ideas’ which take root in soil that has been fertilised by social and economic trends, and by political events as well. Ideas offer a template when the circumstances are right and the vested interests are either supportive or can be overcome. Piketty’s research has now redefined the boundaries of the debate around growth and inequality at the right time, which largely explains the widespread response.

Aside from theoretical objections, his conceptual framework needs to be tested against the circumstances and policies of countries like SA. We need to disentangle valid arguments and genuine concerns about inequality from other ideological prejudices often cloaked in public interest rhetoric. This emphasises the need to vigorously engage with the new contours of the Piketty (2014) growth and inequality debate, and to influence that debate in constructive ways.

SHOULD ECONOMISTS INCREASE THEIR INFLUENCE IN SA?

It is perhaps necessary to remind ourselves that there was a time, both in SA and throughout the world, when the business of the private sector and government was transacted without the plethora of expert witnesses that is now considered necessary. Up to the Second World War, it was unusual to find anyone in government employment or in the private sector who carried the label of ‘economic adviser’. Today there are many different kinds of economic advisers, performing different functions and employed in all kinds of structures across the economy, as well as in international organisations. This has expanded the economics profession and the role of economics in policymaking dramatically over the decades, and which originally inspired the creation of the Nobel Prize in Economics in 1968.

In the light of these developments, what economists have come to increasingly have in common, if they are to discharge their duties effectively, is to be able to draw on the cutting edge of research, whether from academic institutions or from independent ‘think tanks’. The problem is not quantity but quality and focus. The trends outlined above give some idea of the extent to which the research landscape has been shifting and expanding. The research output of universities in particular remains an essential contribution to new thinking about policy, especially economic policy. The interaction between the worlds of ideas and action has assumed growing significance, and this ‘cross-fertilisation’ has become significant in its own right both nationally and globally.

What have SA economists been doing and have they been addressing relevant issues? Bluntly put, has the investment in intellectual capital yielded an adequate ‘return’?

One partially useful source of data is a recent article entitled: *What have economists been writing about in the SAJE since 1933* - by Lieb Loots (2012). The SAJE is the premier academic journal for economists in SA and the survey analyses the titles of the articles published in it from its inception in 1933 to the end of 2011. It concludes that over time the SAJE has ‘remained relevant to the issues that concern SA economists’ – but combined with a significant decline in macroeconomic contributions of a theoretical nature as well as in economic history, and reflect a large rise in applied macroeconomic articles. Even then, relevant practical areas of policy that paradoxically have shown a decline in the journal include labour, population, poverty, agriculture and mining. The decline could, of course, be explained by the subsequent rise of other specialist academic publications, which may have siphoned off the contributions which would otherwise have been made to the SAJE.

Another index of the general impact of SAJE articles, and indeed of articles in other journals, would be the number of citations received by them over the years, which would be a valuable barometer of the range of interest, at least academically. A refinement here would be to assess the general impact factor of citations; particularly to examine the role of ‘high impact’ journals, so to identify excellence and quality, not only quantity. It may also be that more funding should be allocated by government to ensure that the success in increasing overall research outputs of universities is sustained, and further incentivised. It could be that systems of research outputs at SA universities are outgrowing the available funding for research outcomes but these aspects would have to be pursued separately as part of a general review of financing higher education in SA.

A perusal of the 2013 Annual Report of the Economic Society of South Africa (ESSA) provides a glimpse of what economists have been working on recently, both through research topics which have won Founders’ Medals, as well as subjects on which presentations or papers were given at various branches of ESSA in the country during the year. The papers given at the regular ESSA biennial conferences over the years also need to be taken into account in a similar way to the SAJE articles referred to earlier. At a quick glance many of these topics seem to constitute a comprehensive list of policy-oriented subjects.

An example of an ‘outreach’ initiative from academic researchers to policymakers in SA is the ECON3x3 blog. It stems from the *Research Project on Employment, Income Distribution and Inclusive Growth*, which is based at the University of Cape Town and is supported by National Treasury. Its aim is to create a forum to make policy-relevant research more accessible. Since it started in 2012 there have been 41 posts (2 - 3 per month) on a wide range of topics. The average is around 4 000 reads per post, with the top reads apparently having been on SA’s high unemployment, the development of the middle class, growth and unemployment, and minimum wages in agriculture. There are several ways to interpret these pieces of evidence and as yet we do not have the full picture.

What needs to be explored in more depth is the extent to which the issues addressed were indeed relevant to key policy issues of the day, and where this was the case, to see whether enough was being done to bring those inputs to the attention of policymakers? Pending that research, do we nevertheless sense a gap? What drives the economic research agenda and how effective is its sphere of influence? Is it shaped only by the academic need to ‘publish or perish’? Does it suggest that more weight must be given to the efficacy of ‘outreach’ activities which seek to highlight the policy relevance of research to decision-makers in both the public and private sectors? There is indeed an important symbiotic relationship between academic excellence and the extent, form and content of external engagement.

This may have to be accorded a higher priority if there is a gap to be filled. Greater collaboration with external actors, other than intra-academic groups, in mutually beneficial interaction, grounded in scholarship, can undoubtedly add value to both policy decision-making and the research itself.

Apart from the ECON3x3 blog mentioned earlier, an advanced and visible example of this interaction is probably the SARB. Yet these initiatives probably need interaction at other levels of decision-making. It must be stressed that this evaluation of the impact of economic research in SA on policy throughout remains exploratory and illustrative, and offers a valuable agenda for future research.

In recently officially launching the WTO Chairs Programme at North West University, the Deputy-Director General of the WTO, David Shark (2014) again stressed:

“Academics are in a position to approach issues with a breadth and depth of analysis which is simply not a practical possibility for many others, such as politicians for example.....they are not bound by the silos of specific responsibilities which exist in government, thereby enabling them to take a broader view of holistic issues like economic welfare... Freedom from day-to-day policy-making means they are better placed to take the long view - an essential virtue for those dealing with economic development, which as we know is not achieved overnight.”

The message remains that economists should not abdicate their responsibilities or retreat into their professional ‘shells’, but rather that they need to demonstrate anew that what they have to offer remains appropriate to issues of policy and can enhance decision-making, especially in their own domestic economies. This work needs to be forged at a time when there may, as Paul Krugman (2009) and others often assert, still be an intangible perception of scepticism hovering generally above macroeconomics in the aftermath of the 2008 global financial crisis. We should recall, though, that it is macroeconomics, rather than microeconomics, that have been accused in recent years of allegedly not having foreseen the crisis.

In the final analysis the real antidote to such negative perceptions, wherever they may exist, is to continue promoting research and analysis which adds value to the economic insights required for effective policymaking by demonstrating their relevance. This remains their potential attraction to policymakers, whether at macro- or micro-level. Many academics may need to overcome their temperamental aversion to what often constitutes the dynamics of policymaking. While it is true that ‘good economics does not always make good politics’ if the politicians get it wrong, they must not be able to say that, as Dennis Robertson (1952) once described it, having asked the economics professors for a fish, they were handed a serpent.

A number of related policy issues are on the SA national policy agenda which, on the face of it, seem to be largely driven by other social disciplines and to which academic economists do not appear to be making a sufficiently visible contribution. These include issues like a national minimum wage, land reform, nuclear power, road pricing, inter-generational fiscal transfers and infrastructural financing, where the potentially rich inputs of economics do not seem to be making their presence sufficiently felt in policy debate and decision-making. For example, the Panel appointed by the Gauteng Premier in late 2014 to review e-tolling apparently received overwhelming inputs from interest groups but none from academia. The e-tolling debate seems to have been lopsided all along. Yet this debate has important implications for the future financing of infrastructure and, incidentally, the ‘user pay’ principle for most infrastructural development was endorsed by the NDP.

CAN THE GAP BE NARROWED?

It is not clear whether the perceived gap emerges from an unwillingness to use the research where it exists, whether there is ignorance of what research is available because of poor communication, or whether research has simply not taken place in the relevant areas of policy? The fact that there may often be ‘behind the scenes’ advice given is not a satisfactory response. It remains clear that the almost complete ignorance of many decision-makers of the inevitable unintended consequences of what is often being proposed in legislation and regulation offers a fertile ground for rigorous economic analysis and research. The commitment to regulatory impact assessments needs to be expanded. This in turn can also draw on the broad framework of the NDP to examine to what extent policies and projects are indeed compliant with the economic roadmap to 2030,

and to which SA is ostensibly committed. A specific responsibility has been allocated to the Office of the Presidency to examine whether new and existing legislation is compliant with the NDP.

In these assessments there is also a large body of international economic literature available on the major role of institutions in successful economic development. We need to investigate the history of institutions, says Niall Ferguson (2012), to understand the complex dynamics of convergence and divergence that characterise today's world. The strong message is that development without efficiency constraints cannot endure as such institutions and structures are intrinsically brittle. With SA just having celebrated its twentieth anniversary of democracy, and against the background of much praise for its constitution as one of the best in the world, we need to evaluate our key institutions afresh in relation to SA's sub-optimal economic performance. Even the best institutions can never be foolproof and may erode under the weight of corruption, racism, careerism or patronage.

Economists are well equipped to assess the degree to which the success or otherwise of the NDP hinges on institutional reform, given how SA's institutional framework has handled the stresses and strains of the past two decades. In their magisterial study *Why nations fail* Daron Acemoglu and James Robinson (2012) also contend that promoting shared prosperity is not just a question of 'good' economics – it also requires 'good' politics. The policymakers and bureaucrats who are supposed to act on well-intentioned advice may be as much part of the problem, and many attempts to rectify a situation may backfire precisely because those in charge are not grappling with the institutional causes of poverty or inequality. The authors persuasively argue that, while economic institutions are critical for determining whether a country is poor or prosperous, it is politics and political institutions that decide which economic institutions exist.

What has been called the 'trust deficit' in SA often also inhibits the capacity to adopt reforms or change institutions for the better. Policy coordination and coherence at various levels will depend to a large extent on the degree to which the trust deficit can be reduced among the key stakeholders involved. The NDP (2012) has identified a lack of trust between government and the private sector as one of the factors explaining the difficulty of achieving greater policy coherence in SA. A low-trust society like SA in effect imposes a 'tax' on all forms of economic activity, apart from its potential threat to social stability in a worst-case scenario. SA needs more 'consensual stability' in its decision-making.

The NDP (2012) emphasises that it is imperative to build the climate of 'social cohesion' needed, and to reduce polarisation, if SA is to get superior outcomes and better delivery. This may well include the level of credibility assigned to academic and other similar research in a low-trust society, given SA's history. Investing in 'social capital' and building trust are globally closely associated with stronger economic performance. Here, too, there is a substantial range of economic literature relevant to the SA situation to draw upon, and to which SA economists can contribute.

Though these considerations may apply generally to academic research in SA, two other key factors remain important if economic scholarship is to play its rightful part in policymaking and enlarge its sphere of influence. The first is that the research cohort in SA is ageing and there are already widespread concerns that within a decade or so most of the top researchers will have retired or left the field. We need to ensure that the intellectual capacity exists to receive the research 'baton', as and when this reality occurs. We need to do an audit of the gaps that have been identified in economics and decide how best to close them. The need for continuity in good quality research both inside and outside universities remains a first concern.

The second is, as far as possible, to define the results of economic research and analysis in more accessible language for both policymakers and the public. That economics as a social science has a considerable conceptual apparatus with an appropriate terminology cannot be serious grounds for complaint. There is, however, no reason why academic writing on policy is frequently incomprehensible. The inevitable and increasing use of mathematics in economics is a partial explanation but it can be overcome. While it is probably true that jargon and modeling partly evolve to enable experts to communicate with each other in shorthand at the highest level, it is

usually possible to simplify economic language without necessarily losing intellectual rigor.

Past and present top level English-writing economists who are testimony to effective communication include Adam Smith, John Stuart Mill, John Maynard Keynes, Dennis Robertson, Milton Friedman, John Hicks, Paul Samuelson, James Tobin, Paul Krugman, Gary Becker, Amartya Sen and Joseph Stiglitz. The history of economic thought suggests that, if an economist wishes to persuade, it helps to communicate clearly and effectively on the relevant issues. Good communication also makes it possible to utilise reputable business and financial publications to reach a wider constituency with the outcomes of research. Only for a few good economists has ambiguity of expression been a positive asset.

Coupled with this, where a serious economic debate is needed, there must also be certain agreed-upon minimum standards of competence, which is not always the case in SA or even elsewhere. Unfortunately, the opportunity costs of economic discussion are low. Unless participants have mastered the basic ideas and terminology of economics, there can be no serious discussion and the opportunity to enlarge areas of agreement could be lost. If everybody can always have his or her say, irrespective of expertise, then serious argument will be lost in clamour. This differs from constructive discussion in the same way as a melee from a boxing match. In a boxing match, the performance of the contestants can be assessed and in a melee it cannot. Therefore competent boxers command respect and participants in a melee do not.

Policy must therefore not be robbed of the valuable insights that come from relevant and informed theorising and modeling. Policymaking is based on an implicit or explicit vision of how the economy works. Ultimately, theory lies behind that vision and theoretical advances help to sharpen policymakers' vision. There is also scope for the historical approach case studies which are the raw materials from which certain suggestive principles might be derived. In the historical approach, says David Colander (2001), there is a build up from examples to principles, rather than building down to cases from principles developed in models. There needs to be a twin-track approach to economic research allowing for the inevitable differences of professional opinion that will emerge from time to time.

CONCLUSION

At the present juncture the juxtaposition of global and domestic economic trends, on the one hand, and the advent of the NDP (2012) framework in SA on the other, creates a good opportunity to re-examine the relevance between the research agenda and the economic policy agenda in SA. While certain economic research must be done for its own sake, we should nonetheless assess to what extent research is making an impact on policymakers where that is its purpose - and in what ways it can be strengthened. As we move further into the twenty-first century, developments both in SA and elsewhere are identifying new research avenues to explore. In some ways, says David Colander (2001), the economics profession has come full circle back to the more descriptive and institutional approach that was common more than a century ago – it is just that the policy tools are becoming more sophisticated.

We know that countries differ considerably in the quality of their policy structures and in the cost to the economy of the burden caused by the accumulation through time of policy mistakes or misjudgments. Perhaps the most important task of economists and researchers, whether inside or outside a university, is to help reduce this cost when it is large, and at the very least keep it from growing when it is small. We need be satisfied that the nation's economic research agenda is effectively focused to maximise its influence in policymaking, given the magnitude of the challenges facing decision-makers in both the public and private sectors. Circumstances may only create a brief window of opportunity for reform.

Yet, we need to remind ourselves that the challenge of development is only superficially an economic one, as important as that is to SA's national agenda. In a deeper sense it is an educational one. While the external assets of modernisation are essential, what ultimately matters is the

population's intellectual and spiritual endowment. Where these attributes emerge – knowledge and experience, skill and self-discipline, the power to take a long view, willingness to be guided by reason and observation, to negotiate and compromise, readiness to look for new and improved ways of doing things, responsiveness to opportunity and adaptability to change – then a country like SA has the makings of a 'virtuous circle'. Development in SA will indeed require the physical apparatus, but it also needs to take place in the *minds* of people.

Above all, there must emerge, as a continuing element in the life of SA, a group of political, business, labour, academic and administrative leadership who can be depended upon to both create a responsive climate of opinion as well as push the momentum of development – thus facilitating the 'right' choices upon which the future of the country depends.

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AN EVALUATION OF RELATIONSHIP MARKETING STRATEGIES UTILISED BY EASTERN CAPE TRAVEL AGENTS

G. Fisher¹

ABSTRACT

This article focuses on relationship marketing strategies utilised by Eastern Cape travel agents. To evaluate the current relationship marketing strategies being used, a conceptual framework for relationship marketing was identified and an empirical study using mail questionnaires was undertaken.

A mail survey was selected because of the relatively low cost involved which also eliminates interviewers and field supervisors, facilitates central control, and promises anonymity to respondents. A predicted low response rate was remedied by follow-up action entailing telephone calls and e-mails.

The study findings concurred with the literature review that relationship marketing is important. The tourism industry has been persuaded to acknowledge and apply relationship marketing to a greater degree. This was the result of a changing environment landscape (Palmer & Mayer, 1996; Antia & Frazier, 2001; Christopher, Payne & Ballantyne, 1991), which included: an increase in internet use, suppliers (mainly airlines) restructuring commission and economic climate downscaling. Furthermore, smaller travel agents joined larger consortiums and greater emphasis was placed on business versus leisure travel. This move allowed structural bond formation to take place resulting in long-term relationships.

From the evidence collected during the study the following conclusions were reached: relationship marketing is growing in importance throughout the industry, highlighting the importance of internal marketing and often the client's first contact is with frontline staff, telephonically or in person. Managers have realised that relationships with all role players (personnel, clients, suppliers, competitors) have to be managed to ensure that they become long-term. To enhance long-term capability, travel agents acknowledge that they need to form partnerships with preferred suppliers.

Further study to include all members of the distribution channel (particularly customers) is recommended to obtain a holistic view of the tourism industry environment.

Keywords: Relationship Marketing; Retention Strategies; Service Marketing; Commission Restructuring.

INTRODUCTION

Relationship marketing has always been part of the travel, tourism and hospitality industry, however, few practitioners realised its significance until recently. All industry role players are now approaching relationship marketing with greater enthusiasm and acknowledging its importance.

Different authors perceive relationship marketing in different ways. For example, Holloway and Robinson (1995) conclude that it is important to explore relationships between travel agents and principals (suppliers) as this affects distribution channel effectiveness. Davidoff and Davidoff (1994) maintain that the relationship between travel agent management and supplier management is critical when establishing preferred supplier relationships. Touminen, Rajala and Moller (2000) suggest that relationship marketing can be seen as a reciprocal long term relationship between two parties, and Kotler, Bowens and Makens (1999) acknowledge its growing importance.

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Peppers, Rogers and Dorf (1999) note that relationship marketing can also be referred to as one-to-one marketing, or customer relationship management (CRM). Berry and Parasuraman (as quoted by Zeithaml & Bitner, 2000) identified a framework based on relationship marketing retention strategies built around financial, social, customisation and structural bonds.

The development of relationship marketing

According to Christopher *et al* (1991) marketing over the past few decades has evolved in order to concentrate on different areas. In the 1950s the focus was on consumer marketing, in the 1960s it shifted to industrial marketing and the 1970s saw the emergence of nonprofit and societal marketing. Service marketing expanded in the 1980s and relationship marketing developed in the 1990s.

The industrial and service marketing stages can be regarded as the foundation-forming stages of relationship marketing since industrial marketing was developed around building interactive marketing relationships, while service marketing focused on long term relationships. These focal points are closely related to the key concepts of relationship marketing.

Gummesson (1999) defines relationship marketing as a combination of relationships, networks and interactions. This important definition highlights relationship marketing management: managers need to manage these relationships, networks and interactions. Sheth and Parvatiyar (2000) identified the two-dimensional focus of the management function: firstly, a narrow approach involving data base management of clients and secondly, a broader approach that includes effective internal relationships. Peck, Payne, Christopher and Clark (1999) support the inclusion of internal marketing.

Travel industry perspective on relationship marketing

As early as 1989 Davidoff and Davidoff (1994) identified the importance of relationships in the industry which were forecast to grow in significance. However, few role players paid attention to relationships until the mid 1990s when certain carriers (airlines) introduced commission restructuring.

Commission restructuring is responsible for the growth of relationship marketing as a discipline. Travel agents could no longer sell the services of all carriers, but were obliged to form relationships with preferred carriers. This led to strong bonds with the preferred carrier and in return travel agents could earn higher (override) commission.

This change also forced many independent travel agents to form consortiums. Consortium formation has many benefits for its members, the most important being relationship formation. However, it is as important to maintain and retain relationships.

Relationship marketing retention strategies

The ultimate aim when using relationship marketing strategies is to retain customers. Berry and Parasuraman (as quoted by Zeithaml & Bitner, 2000) developed a framework using different types of retention strategies, namely: financial, social, customisation and structural bonds.

Financial bonds tie the customer to the firm mainly through financial incentives such as lower prices for greater volume purchases or lower prices for customers who have remained loyal to the organisation over a period of time. Examples in the travel, tourism and hospitality industry are frequent flyer, frequent client and frequent guest programmes. Suppliers (principals) in turn offer intermediaries override commission for loyalty.

According to Zeithaml and Bitner (2000) social and interpersonal bonds allow marketers to build long term relationships. Service offerings are customised to meet customer needs and marketers manage the process to ensure that they stay in contact with their customers. Regular contact facilitates the development of social bonds.

Customisation strategies extend beyond social ties and financial incentives, although there are common elements entrenched in all three. Customisation strategies encourage customer loyalty through detailed knowledge of individual customers. Travel agents assign travel consultants to specific accounts/customers to achieve this.

Structural bonds are formed when client services facilitate the entire service delivery process. Structural bonds are common in the travel industry. Davidoff and Davidoff (1994) emphasise that certain travel agents are linked to preferred principals (airlines). These airlines offer technological support in the form of hardware and software and the use of the technology binds the travel agent to the airline.

Industry relationship marketing strategies

It is clear from the above that relationship marketing has been applied throughout the industry in different forms. Although the application might not have been fully understood it was applied. However, over the past decade things have evolved as indicated. Kleinman (2002) notes that the Marriott Hotel group is aiming to strengthen its presence in the leisure market through relationship marketing. It plans to achieve this through strategic communication and its Rewards loyalty programme.

A further development in the travel sector is the resurgence of several travel companies embarking on relationship marketing programmes. Eurostar (tour operator) offers packaged tours and improved communication to its customers. The Thomson Group has used the same approach and now has three subsidiaries - Thomson Travel, Thomson Holidays and Portland Direct. To strengthen relationship marketing the Group claims to be redefining its systems to streamline and simplify communication.

This idea is shared by the Indian Hotel Industry (IHI). Farooqi (2001) believes that direct marketing and loyalty programmes should form the basis of relationship marketing. The IHI is planning to use promotions and special offers to lure its existing database of customers back to its chain of hotels.

Wong (2002) acknowledges that managing customer relationships is critical. The emphasis is on the entire industry. The interpersonal nature of services and their intangibility encourages customers to form relationships with individuals and organisations on whom they can rely. The interpersonal nature of relationships places the focus on employees, who play a major role in shaping the service experience.

Payne, Christopher, Clark and Peck (1995) agree that for many service firms internal marketing is perceived as a pivotal relationship marketing strategy. Using internal marketing to enhance relationship marketing is confirmed by Delta Airline's promotion to motivate employees. Their advertisements made reference to Delta employees as 'professionals', and included pictures of actual employees - an example of advertising to external and internal audiences simultaneously.

METHODOLOGY

This section briefly distinguishes between quantitative and qualitative research, explains the rationale for data collection, supplies details of the research methodology and briefly describes the questionnaire. Furthermore, it includes the questionnaire administration process and the sample identification.

Two widely used research philosophies are quantitative and qualitative. Quantitative research focuses on the effect one variable has on another. The relationships between variables are then quantified (Altinay & Paraskevas, 2010). Statistical methods are used to determine relative frequencies and elements are quantified. On the other hand, qualitative research focuses on determining experiences and emotions and is designed in a probing manner. Respondents introduce their perspectives, rather than focusing on pre-determined areas (Altinay & Paraskevas,

2010). After consideration the quantitative research method was used due to time constraints and the need to limit the scope of the study.

The rationale for data collection was inspired by the realisation that additional information was needed regarding the topic. As with many research projects, the study was guided by the thoughts of Lamb, Hair and McDaniel (1998) who perceive research as a process of planning, gathering and interpreting data relevant to a marketing decision. The findings of this interpretation should be communicated to management for decision-making.

The research methodology adhered to the generic format of literature review and secondary data collection, followed by primary data collection. The primary data was analysed by a statistician from the Nelson Mandela Metropolitan University. Prior to the analysis, during the questionnaire construction, the statistician assisted with the coding of the questionnaire. During the analysis stage all the data was captured on a spreadsheet and the data tabulated. This led to findings from which conclusions and recommendations were formulated.

During the primary data collection phase, researchers have many different data collection methods at their disposal, for example, experiments, observation and survey (Chisnall, 1991). Surveys can comprise personal interviews, telephone interviews, e-mail interviews and mail interviews.

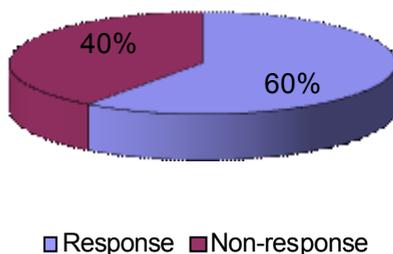
After consideration of the available methods, the mail interview was decided upon for several reasons. The mail interview is relatively cheaper than other methods and to a large degree, eliminates interviewers and field supervisors. The process is managed from a centralised point and assures the respondents' anonymity. Baines and Chansarker (2002) identify an additional benefit: the respondent answers more objectively because of the additional time available in which to respond. However, the disadvantage in the present study was a low response rate. It was remedied by follow-up telephone calls and emails.

According to Martins, Loubser and Van Wyk (1999), questionnaires can vary in shape and size. Factors affecting the design of the questionnaire are: information required, target group and survey method. An attempt was made to keep the questionnaire as simple as possible since it was administered as a mail survey. Furthermore, scaled questions were used to ensure that they were understood. The questionnaire was pre-tested on a group of five travel agents and no further adjustments were required.

The entire population of travel agents in the Eastern Cape served as the focus group for the study. These agents were identified by using the Braby's electronic directory listing of all travel agents in the area. This group comprised a total of 50 travel agents who then served as the sample.

Initially the response rate was slow. To improve the response rate travel agents were reminded by follow up telephone calls. Some travel agents also operate under the same brand name but in two different towns, with the result that only the 'head office' replied. This resulted in a lower than anticipated response rate of 60% (30 completed questionnaires), (see Figure 1).

Figure 1: Response rate of Eastern Cape travel agents

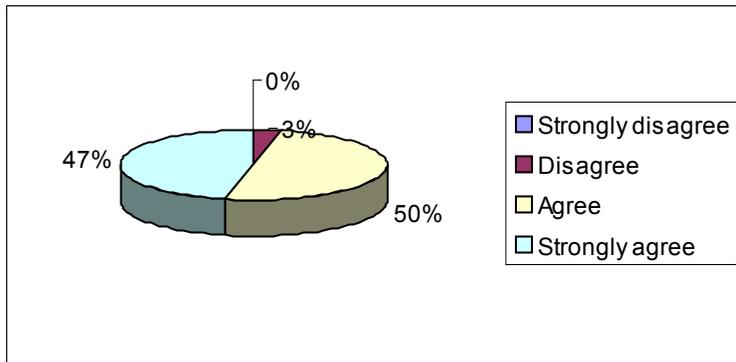


FINDINGS

The findings were presented in the following sequence: firstly, the importance of relationship marketing, secondly, the perceptions of general relationship marketing strategies and finally, the appropriateness of relationship marketing.

It was clear that Eastern Cape travel agents acknowledged the importance of relationship marketing. Travel agents saw the value of long-term relationships with suppliers and customers alike. Ninety seven percent of respondents either agreed or strongly agreed and only 3% disagreed (Figure 2).

Figure 2: Enthusiasm about long term relationships



Furthermore, the importance of managing the relationship marketing process was acknowledged. Although this study did not focus on internal marketing and its link to relationship marketing, this was also acknowledged. Respondents acknowledged the importance of internal marketing and the effective management of personnel. Finally, the majority of respondents agreed that relationship marketing has always played a role and been applied in the tourism industry, although it was previously not perceived in these terms.

The respondents' perceptions of general relationship marketing strategies were captured in responses to questions/statements concerning the following: bond formations, namely, financial, social, customisation and structural bonds. Financial bonds with preferred suppliers were seen as very important and resulted in a win-win situation for both the travel agent and the supplier. The supplier benefited through having greater control of the distribution channel resulting in greater turnover and fewer retail outlets. Although they have been applied for many years, social bonds were recognised as an important aspect of relationship marketing. These allow relationships to develop and travel agents are able to 'tailor-make' offerings for their clients, resulting in satisfied customers and repeat business. Table 1 confirms the above by focusing on the perceptions of general marketing strategies.

Customisation bonds allow one-on-one solutions that fit the individual customer's needs. They are based on customer loyalty which is encouraged through detailed knowledge of individual customers. Lastly, structural bonds were perceived as being very important as evidenced by the many smaller agencies entering into agreements to form consortiums. Being part of a consortium had many positive benefits for all members, particularly smaller agencies that could be financially challenged.

Lastly, consideration was given to the appropriateness of relationship marketing. Many travel agents felt the need to form relationships with preferred suppliers. Furthermore, the focus should be on managing the process, which would in turn include the internal market.

A high standard of service delivery could be maintained by attracting, keeping and motivating quality staff.

Table 1: Perceptions about general relationship marketing strategies

Please indicate your agreement with each of the following statements	Strongly Disagree	Disagree	Agree	Strongly Agree
	Number of respondents			
Commission restructuring could result in relationships with preferred <i>suppliers</i> .	0	0	12	18
Relationships could be strengthened by travel agents forming consortiums.	0	1	12	17
Future trends could force travel agents into maintaining good relationships with <i>suppliers</i> .	1	3	12	14
Certain airlines are offering travel agents higher commission in exchange for loyalty.	2	1	20	7
Our agency assigns a specific consultant to certain accounts in order to let social bonds develop.	0	4	17	9
Our agency is committed to satisfying customer needs and wants.	0	0	7	23
The internet could be used to customise offerings for specific customers.	0	4	21	5
Certain principals offer services to travel agents, which could result in better relationships.	0	1	25	4
Override commission is a financial bond to strengthen relationships with <i>suppliers</i> .	0	1	14	15

CONCLUSION

Different authors and researchers have different perceptions of relationship marketing. Notwithstanding this, the study clearly indicated that relationship marketing is growing in importance. Practitioners are moving away from a transactional perspective to a relational perspective. Travel agents realise that building good relationships with suppliers could be advantageous for both the agency and the suppliers. Relationship marketing is being acknowledged as necessary to establishing, maintaining and enhancing relationships.

The management aspect of relationship marketing, which consists of a complex web of internal and external elements, is thus emphasised. Travel agents acknowledged that they were enthusiastic about managing the relationships formed with their suppliers. Furthermore, it was acknowledged that the staff had to be managed as well, which included ensuring that all are committed to relationship marketing and all departments work in harmony. This trend is developing in the travel, tourism and hospitality industry.

Most of the travel agents agreed that they are utilising some form of relationship marketing. This trend has come about due to commission restructuring and has resulted in consortium formation. These consortia bind travel agents together in a complex web of networks which is supported by relationship marketing. Retention strategies keep travel agents and suppliers committed ensuring that relationship marketing will develop and grow.

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AN EVALUATION OF THE BAE/SAAB SOUTH AFRICAN ROYAL MANUFACTURING PROJECT IN VIRGINIA, FREE STATE PROVINCE: A CASE STUDY OF THE IMPLEMENTATION OF THE SOUTH AFRICAN DEFENCE OFFSETS

M. Brookes¹, R. Haines² & G. Wellmann³

ABSTRACT

This article reports on the findings of an ex-post evaluation of the South African Royal Manufacturers (SARM), an 'offset' which forms part of BAE Systems/SAAB consortium's National Industrial Participation Programme (NIPP) obligations resulting from their participation in South Africa's 1998 Strategic Procurement Programme (popularly referred to as the 'arms deal').

SARM was a gold chain manufacturing plant, located in the Free State mining town of Virginia and funded by loans from the BAE Systems/SAAB consortium, the South African state-owned Industrial Development Corporation (IDC) and Harmony Gold Company. The factory was founded to answer to the need of offsets, gold beneficiation and corporate social obligations. The business failed after amidst allegations of theft of gold and the sudden lay-off of approximately 500 poor black rural women. The company's liquidation appears to be on the backburner indefinitely.

The evaluation investigates what went wrong with SARM; exploring this question both in the context of the National Industrial Participation Programme and the push for beneficiation of South African mined metals; and how the lessons learned from SARM can be utilised in the future.

Keywords: Consortium; Offsets; Gold Beneficiation; Social Obligations.

INTRODUCTION

Offsets are becoming increasingly more important in government procurement, and particularly in the international arms trade, and very few (if any) governments are willing to take the plunge to get rid of them (Hadjiminas, nd). South Africa is no exception, and offsets are now firmly entrenched in the government's procurement policies, and will no doubt continue to form part of the country's procurement landscape for the foreseeable future.

South Africa's Industrial Participation (IP) became obligatory on 1 September 1996 and the National Industrial Participation Programme (NIPP) was adopted by Cabinet in April 1997. This policy makes it mandatory for all government purchases in excess of, or equivalent to, US\$10 million to include the foreign supplier's implementation of economic projects in South Africa. These projects would be 'offsets' and their value should equal or exceed 30% of the value of the deal. The purpose of this policy is to create socio-economic empowerment in terms of jobs and economic investment.

There are two different types of offsets: direct and indirect offsets. Direct offsets include goods and services directly related to the equipment purchased. Indirect purchases are services and goods that are unrelated to the specific equipment purchased.

In its 1998 Strategic Procurement Programme South Africa purchased warships and military aircraft from various European-based companies in an effort to re-equip its navy and air force, creating in the process what has been termed a 'complicated beast' (Holden, 2008: xi). The arms deal remains steeped in controversy, with the biggest controversy being the use of offsets as part of the deal. Local and international media and academic criticism of the inclusion of offsets as

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part of the arms deal include the over-optimistic foreign direct investment claims by obligors; instances of promised investment that failed to materialise; the disappearance of a number of projects that were on the initial offset project list; and the filing of claims of export earnings by obligors without any significant foreign investment in local firms (Haines, 2006). At the time of the signing of the arms deal, offsets were estimated at between R104 billion and R110 billion (US\$20 billion), as well as the creation of approximately 65 000 jobs over an eleven year period (Modise, 1999; Business Times, 7 March 1999; Haines, 2004; Crawford-Browne, 2002a, 2007; Feinstein, 2007; Holden, 2008). The South African government has divided the IP for the arms deal into two categories:

The Defence Industrial Participation (DIP), which requires the foreign company to buy directly from, or procure business for SA defence companies – thus a direct offset; and the National Industrial Participation (NIP), which requires a separate set of contracts and investments in the civilian market – thus an indirect offset.

The DIP is administered by the Department of Defence and Armscor, while the Department of Trade and Industry (DTI) administers the NIP Programme (DTI Policy Document on Industrial Participation Programme).

The IP programme has various objectives, including sustainable economic growth; establishment of new trading partners; foreign investment into South Africa; exports of South African 'value-added' goods and services; job creation; human resource development; technology transfer; and economic advantages for previously disadvantaged communities. Apart from working to fulfil these objectives, the NIP programme also endeavours to support the development of South African industry (DTI, 2001).

Much remains to be investigated regarding offsets' theoretical, potential and actual economic benefits and costs. In particular, there are few empirical studies on the actual implementation and economic impact of offsets in the recipient country. Brauer and Dunne (2009) found that a literature search for the period from 2004 and 2009 yielded no new empirical research on international arms trade offsets. In South Africa, several macro-level studies have been conducted looking at the industrial participation programme over the past few years (see Dunne and Haines, 2001; Hosking, Haines & Banks, 2002; Hosking & Haines, 2003; Haines, 2004; Haines & Wellmann, 2005), but micro-level studies on the National Industrial Participation (NIP) projects are still somewhat scarce although the literature is growing. There has been some small-scale research on specific NIP projects and geographical regional NIP projects (Dunne & Haines, 2001; Haines, 2002, 2003, 2004; Haines & Wellmann, 2005), as well as work done by journalists, but little has been done in the way of an evaluation of a particular NIP project, apart from an evaluation of the Augusta Westland Filk Gold Chains in South Africa NIP project (see Wellmann, 2004).

At approximately the same time as the arms deal was designed and concluded, South Africa's legislation guarding the country's mineral wealth and mining operations changed significantly and the local beneficiation of minerals became a legislated obligation, and is monitored through the Mining Charter, which forms part of the 2002 Minerals and Petroleum Resources Development Act (MPRDA). In South African legislation, beneficiation means conversion of the extracted minerals and metals into value-added products throughout the value chain (Jourdan, 1993; MPRDA, 2002). In terms of precious metals and minerals, jewellery is the most common, although not the only, end product. In terms of all the provisions captured in the Mining Charter, the provision on beneficiation is unique in that: (i) it is the only provision that does not have to be met in full in order for mining companies to qualify for conversion to new-order⁴ mining rights; and (ii) it is also the only provision which can be used by companies to offset commitments on historically disadvantaged South African ownership, allowing companies to offset a proportion of this requirement against their beneficiation activities.

⁴In line with the new legislation that gives the state control over the access to minerals in South Africa.

These changes in mining legislation had mining companies searching for ways and partners to beneficiate its products, while at the same time the arms deal obligors were searching for investment opportunities. It is thus not surprising that since 1999, six NIP precious metal beneficiation-related projects have been established. Of these six, only two are still operational.

SOUTH AFRICAN ROYAL MANUFACTURERS (SARM)

The South African Royal Manufacturers (commonly referred to as SARM), a gold chain manufacturing plant, was one such beneficiation project that was also an offset project. In official documents and press releases, SARM was primarily identified as a NIP project, and secondly, as a gold beneficiation project. It was founded in 2001 and was located in the Free State mining town of Virginia. Funding for the business was provided by the BAE Systems/SAAB consortium as part of their industrial participation obligation, as well as a loan obtained from the South African Industrial Development Corporation (IDC); while land and buildings, as well as gold loans, were provided by Harmony Gold Company.

SARM started production in May 2002. The factory aimed to export two tons of locally produced 10-, 14- and 18-carat gold rope chain on an annual basis. On 12 March 2003 the company released a press release that announced that it had already exported finished and semi-finished products to the value of US\$3 million to North America since the start of operations, and that they aimed to export US\$15 million worth of gold rope chain in the first year of full-scale production. It could not be confirmed whether this was achieved. DTI reported in 2004 that exports had reached up to 400kg of gold rope per month. It projected sales of US\$37 million for the 2004 financial year and sales up to US\$350 million by 2011 (DTI, 2004: 26).

The company closed abruptly in early December 2004⁵ leaving all workers unemployed. The SARM Managing Director and CEO were arrested on 14 February, 2005 on charges of fraud and theft. Reports have subsequently revealed that Mr Perez and Mr Diaz were also directors of a USA-based company called Mega Gold.⁶ In contrast with official and media reports that Royal Chain Canada Inc. was the international outlet for SARM, Mega Gold was SARM's only overseas buyer (The Star, 16 February 2006). The fact that Valentino Diaz was also listed as Royal Chain Canada Inc.'s vice president of sales should have been a red flag to IDC, Harmony and BAE/SAAB before the business was even formalised.

Mr Diaz and Mr Perez appeared in the Johannesburg Magistrate Court on 16 February 2005 on the charges of theft from SARM and were granted bail of R500 000. The court case was postponed to 10 March 2005 and transferred to the Virginia Magistrate Court. On 10 March the case was transferred to the Welkom Regional Court and postponed until 9 May 2005. In June 2006 the trial started, but the Scorpions indicated that they were not ready to proceed, leading to the case being removed from the court roll and Perez and Diaz free to leave the country.

EVALUATION

An ex-post evaluation of SARM was conducted with the aim of assessing the project's effectiveness and efficiency, and to contribute to the debate on the South African NIPP as well as military offsets in general. SARM was evaluated in the context of the 1998 arms deal; the South African NIPP; the decentralisation of government and the powers, obligations and needs of local government in the country; the increasing need for companies to be good corporate citizens; the fast changing mining industry and mining legislation; and the drive for local beneficiation of minerals and metals.

⁵Some reports indicated that it closed in November 2004 (Business Day, 27 May 2005). Although it was not possible to get an exact closure date from key informants or the focus group discussions, the focus groups participants were adamant that the factory was shut overnight during the 'last days of November and early days of December 2004' period.

⁶There is a company called Mega Gold listed in Florida, USA.

The methodology used included a review of all available documentation, articles that appeared in the press, as well as conducting three focus group discussions with workers who were employed by SARM.

The importance of this specific offset deal lies in that it encapsulates all the possible pitfalls of offset projects, i.e. rushing into a huge financial deal without conducting due diligence and in so doing opening up the possibility of illegal activities such as theft and corruption; sourcing the majority of the funding from local sources, instead of the obligor; awarding of credits for failed projects; and exposing the lack of monitoring and auditing of these projects, as well as the lack of political will to investigate the failure of such projects. The project also highlights the lack of understanding of terms such as 'sustainability' when implementing economic projects that are linked to socio-economic policies.

EVALUATION FINDINGS

The evaluation findings are reported in terms of the NIPP's objectives.

Direct foreign investment

One of the main objectives of the NIPP is to encourage direct foreign investment into South Africa, with the main catalyst of this type of investment understood to be the NIPP obligors, while the vehicle for such investment would be a business venture that would be beneficial for the country. DTI guidelines indicate that business proposals linked with NIPP and offsets should be made on the principles of mutual benefit and good business sense (DTI, 2001).

In terms of offsets and projects linked to offsets, it is critical to ask how the offset activity is being financed. Only if it is fully financed by capital raised outside the weapons purchasing nation, is it actually bringing in fresh capital. In the case of SARM, only approximately 50% of the investment was foreign. SARM received US\$9 million from BAE Systems/SAAB, while 40% of the complete funding package came from the Independent Development Trust (IDT). Harmony Gold provided most of the machinery, as well as the buildings that housed the business. The cash injection received from BAE Systems/SAAB was viewed by the consortium as start-up funding made available through a rotating loan facility that could be drawn down over a five year period, and the loan would be refunded to the BAE Systems/SAAB consortium through profits made from export sales (Personal communication, Mr Linden Birns, 5 July 2005).

Ownership documentation dated 2004 does not list the BAE Systems/SAAB consortium as an owner, although it does indicate that the IDC owned a 40% stake. The remaining 60% of the company was indicated to be owned by its managing director and its CEO, with 30% belonging to Royal Chain Canada Inc. Although 60% of the ownership appears to be foreign, the foreign ownership technology transfer is not linked to an offset obligor in any way.

In terms of the South African Industrial Participation policy, foreign investment also includes technology transfer into the country. Technology transfers can play a significant role in increasing the factory's competitiveness and the quality of their output, while on a broader social level, builds the indigenous manufacturing capacity. Research has shown that in many cases technology transfers do not provide sufficient input to develop or sustain indigenous manufacturing capacity (Cawthra, 2000; Martin, 1996; Struys, 2002). The limitations of technology transfers are not limited to the NIP programmes. Haines (2006) reports that within the DIP, trends include limited technology transfer; concerns about leaching of local technology and loss of local intellectual capital; as well as little or no planned domestic conversion of imported technology as part of the offsets.

Apart from labour, input costs required for jewellery manufacturing in South Africa are expensive as all machinery to mass produce jewellery is manufactured overseas and needs to be imported, which makes the purchase foreign exchange dependent.

It is not clear whether South Africa is receiving state-of-the-art technology through the NIPP initiatives, but it is highly unlikely. In a forced situation, i.e. where companies are forced to cooperate rather than because it makes good business sense, as is the case with the NIPP projects, the transfer of technology cannot be sustainable. The reason for this is that the transferring company will not stop advancing in its own knowledge and technological prowess, and it would be most unlikely that they will enhance the receiving company's knowledge and technology to be on par with their own because the receiving company still essentially remains a market competitor.

In the case of SARM it is not clear where the technology came from, Canada or India. It could be India, because SARM took over the premises from which the failed Oro-Maska business venture operated and which was funded in part by Harmony Gold Mining Company and presumably SARM used the machinery available on the premises.

In 2004, the Mining Weekly periodical reported that SARM was starting to use casting methods to complement the chain processes, and that machinery had been installed (Mining Weekly, 16 April 2004). The Free State Development Corporation also reported that SARM had successfully negotiated with an Italian investor to form a joint venture worth R120 million, which would create 50 to 60 jobs. This was not reported anywhere else and Harmony Gold Mining Company did not respond to enquiries about this matter. It is possible that this joint venture had produced the gold casting machines. Mining Weekly further reported that technicians were brought in from Peru to operate the machinery and that a person had been sent to Italy for training. It is not clear if this person was South African or Peruvian. The focus group participants were unaware of any South African employees being sent overseas for training. Even though it was reported in Harmony Gold Mining Company's annual reports and several media articles that the investors in SARM had transferred technology, skills, and management expertise to SARM; this could not be verified.

Establishment of new trading partners and exports of South African goods

For offsets to carry genuine economic impact, world demand for the underlying products must be increased (Miramon, 1985). Even though the high gold price led to a drop in the demand for gold jewellery internationally in recent years, this is not considered to be a serious or long-term condition and there still appears to be sufficient demand worldwide.

Clusters are important vehicles for access to global value chains for new enterprises (Nadvi & Barrientos, 2004). Compared to the two successful offsets projects that are also precious metal beneficiation projects, Filk Gold Chains of South Africa and Silplat, SARM was lagging behind. Both these companies produce gold products for local and international markets, and are well positioned within international clusters. SARM was not producing for the local market and thus its main challenge was to be globally competitive, but its business was not well positioned within linkages and clusters, because the company only had one market outlet: Mega Gold in the USA. In contrast with early media reports that Royal Chain Canada Inc. was the international outlet for SARM, Mega Gold was SARM's only overseas buyer (The Star, 16 February 2006). Mega Gold is not a well-known entity in the international jewellery trade, and does not appear to have any international trade linkages.

Linkages between the existing beneficiation projects appear to be non-existent. Indeed, within the Strategic Defence Programme project portfolio, contact between the main obligors, and the resulting offsets projects, appears rudimentary, at best. The Department of Trade and Industry (DTI) appears to be dealing with obligors on an individual basis instead of clustering those involved in similar offsets initiatives together (Haines & Wellmann, 2005).

Job creation

The number of jobs created in the jewellery manufacturing sector depends on the type of manufacturing engaged in. Manufacturers, who primarily use machinery, require fewer employees

to manufacture jewellery compared to those manufacturers who use cast methods or who make hand-made jewellery. Hand-made jewellery is labour-intensive and requires more workers than either of the other two methods.

SARM produced primarily hand-made gold rope, which is labour-intensive and can lead to creation of a large number of jobs. Differing figures regarding how many jobs had been created at SARM have been mentioned. Harmony Gold Mining Company reported in its annual reports that SARM created 700 jobs, DTI reported in 2004 that it was 500 jobs, the Mining Weekly reported in February 2005 that 600 jobs had been created, and in April 2005 Mining Weekly reported that there were in actual fact only 200 permanent jobs and that some contract workers had been employed.

SARM reportedly brought eight workers from Peru with the understanding that they would be used to provide on-the-job training for local employees (Mining Weekly, 16 April 2004). The local employees were semi- and unskilled workers from the Virginia area. The focus group participants, who are all ex-SARM employees, were not sure how many people worked at the factory, but none of the participants or their colleagues with whom they have contact, were permanently employed. They were all employed on short-term contracts. At the time of SARM's closure, these contracts were suspended and because they were not permanent employees, they did not qualify legally to be retrenched nor could they qualify to go through the retrenchment steps as legislated in the labour legislation.

According to the focus group participants, they were told that once the liquidation process was completed and once the creditors were paid, and provided that there were any funds left, the workers would benefit. When asked whether they were being kept informed about the liquidation process, they said no. They did report that when the factory shut down, they were told that should it re-open they would be re-hired. When asked whether they had any continued contact with Harmony Gold Mining Company, or a representative from SARM, who would provide them with updates and keep them informed, they said no. This confirms that Harmony Gold Mining Company does not interact with community stakeholders on a regular basis, as required for good corporate citizenship. The behaviour of good corporate citizens with regards to their employees encompasses a broad range of operational issues. These include fair pay, a safe work place, equal opportunities, the promotion of diversity and support for employee development (Tuffrey, 2003). SARM fell short on several of these aspects.

Those focus group participants who were lucky enough to find alternative employment took those jobs. Unfortunately these are in the minority and the majority remains unemployed.

Skills development

South Africa's legislative and moral drive towards affirmative action makes it necessary that firms give particular attention to developing their internal human capacity through both skills development and stable employment policies. The development of human resources should be seen as more than just job-related skills training, but also as a means of resolving social pathologies. It can enhance broad political stability and is a way of re-equipping those whose existing skills are redundant or lacking. This is crucial in the light of continued reduction of gold mining in the country.

The South African gold mining industry employs substantially more people than in other gold mining countries because it is involved in labour-intensive, deep-level, hard-rock, underground mining. Nevertheless, the gold mining industry is declining by approximately 8% annually in South Africa and due to continued mine closures the numbers employed in the gold mining industry keeps falling (Virtual Metals, 2007). Companies do not function in isolation from the society around them. It is estimated that each mining job has between seven and twelve dependents. Thus the wider social and economic damage, not just in South Africa but also in neighbouring countries in the region, is substantial. Workers who have lost their jobs due to mine closures or downscaling, and whose skills are redundant, need to be re-skilled. Many of the

women who moved to areas near mines post-1994 have either only worked as domestic workers or remained unemployed. Effective local economic development also requires that local skills are retained and utilised. It would make sense that when a jewellery manufacturing facility is established within a traditionally gold mining area, such as Virginia, the retrenched miners and their female relatives would be given first option to be employed. SARM rightfully targeted the unemployed women in the Virginia area for employment.

The South African metal industry, which includes the jewellery manufacturing sector, faces considerable challenges related to skills and craftsmanship (Mr Roger Baxter, Chief Economist, Chamber of Mines, interviewed on 6 July 2005). Within the jewellery manufacturing sector, businesses are faced with the options of (i) either training low-skilled workers through a training programme, which might mean a delay in production until all skills are acquired; or (ii) hiring skilled workers from the limited pool existing within the country; or (iii) importing skilled workers from abroad. SARM would have faced the same options.

As SARM was not built on an existing factory with skilled labour in place, the decision was made to bring foreign skilled workers into the country to work at the factory. DTI news releases reported that local SARM workers had been given comprehensive skills training (DTI press release, 12 March 2003). Mr Perez of SARM was quoted in Mining Weekly as having approached government for re-imbusement of training expenses: "We are preparing a submission to the Department of Trade and Industry and the Department of Labour to recover part of the cost incurred in training" (Mining Weekly, 16 April 2004). This implies that training did occur and that SARM was registered with the mining Sector Education and Training Associations (SETA). None of the enquiries about SARM sent to the Mining Qualifications Authority SETA were acknowledged or answered. The women in the focus groups said they were given on-the-job training.

Assuming the acquired skills are both relevant and transferable, the kind of human capital investment involved in raising workers' skills through training programmes, is a real contribution to development. In SARM's case the skills acquired by the women would only become relevant for the majority of the women if another similar factory opens within the area, which has not happened yet. Only five (29%) of the 17 ex-workers participating in the focus groups, have managed to find other work. None of these jobs involved factory-related work or were relevant to the training they received from SARM.

Sustainable growth

The sustained success of a local business will influence the overall sustainable economic growth in the local area in which it operates. This happens through its continued creation of work opportunities for the local population, the provision of services to the local economy, and the payment of taxes to the local and national government.

In heavily mined areas such as the Free State goldfields, mine-sponsored development projects are important vehicles for stimulating local economic growth and development. The sustainability of these projects are crucial and it is becoming more internationally accepted that arrangements must be in place to continue the life of projects after initial project funding from the mining company ceases.

In terms of mining areas, local government and mining companies have a shared responsibility for the sustainability of the community post mine-closure. Possible partnerships between the mine and the local authority must be established and in operation during the life-of-mine so that the transition to alternative economic activities is a continuous process. Any projects proposed by the partnership should form an integral part of the municipality's Integrated Development Plan (IDP) and should assist mining companies with the integration of their development plans with those managed by local municipalities. The most important condition for long-term success and sustainability for offset projects is that the project is designed to suit a specific economic

or regional policy initiative. The more tailored an offset activity can be to existing policies or strategies, the better the prospects for success in terms of long-term policy goals. Just as important is the local development plans. The more an offset project fits into the existing IDP, the more likely it is to be supported by other local government initiatives, which can add to its success and sustainability.

Linkages of mining companies' local economic development initiatives with the local government planning and IDPs are thus extremely important and can ensure that such ventures are compatible with surrounding development initiatives. There appears to be limited co-operation or partnerships between Harmony Gold Mining Company and the Matjhabeng Municipality. None of the three Harmony Gold jewellery factories over the years are mentioned in the municipality's IDPs (Matjhabeng Municipality 2002, 2003, 2004, 2005). Nel and Binns found that in Matjhabeng "formalized partnerships do not figure prominently in local economic development initiatives" (Nel & Binns, 2002: 267). Instead it appears as if Harmony Gold Mining Company more frequently works with the provincial structures instead of the local authority structures.

Provincial governments are also important as the bulk of government fiscal allocation is at the provincial level. Provinces are required to compile Provincial Growth and Development Strategies (PGDS), which is in effect an IDP at provincial level. Close scrutiny of the Free State PGDS revealed that although the importance of mining as a proportion of the provincial GDP was recognised, mining as a development partner was not addressed as a significant matter. Any development suggestions that deal with mining are at best *ad hoc* in nature. No mention is made specifically of offsets or beneficiation projects, although two of the failed Harmony Gold factory initiatives, VDO and Oro-Maska, were funded by the state-owned Free State Development Corporation.

There is no evidence that Harmony Gold Mining Company or any of the other SARM partners conducted any social impact assessments, or that they engaged and consulted with the broader Virginia community when SARM was conceptualised or implemented. There is also no evidence that Harmony Gold Mining Company or any of SARM's owners and investors engaged with the community regarding SARM since the closure of the business.

NIPP Credit Award System

The evaluation's findings raise the question of how acceptable the NIPP credit award system is for exported products. The NIPP credit system measures each credit as equal to one US dollar of the NIP obligation amount. Certain types of projects, such as research and development projects, are awarded greater credits. Credits are awarded accumulatively over the NIP obligation period and based upon successful performance. Export credits are awarded on the basis of the total value of the exported product, rather than on the value added by the investment. This can result in severe distortion when dealing with gold beneficiation. Export credits are claimed on the full value of the export rather than on the value-added. For a high-value commodity like gold, this can lead to bloated calculations. Thus: if the gold price is US\$400/ounce, and the beneficiated costs are US\$100/ounce, the credit would be calculated as if the total value of the credits were US\$500/ounce.

In order for credits to be awarded, economic activity must be shown as clearly generated by the offset obligation to prove that it would not have happened anyway without the offset. This is nearly impossible to measure and ascertain especially in situations where the business already exists prior to the offset intervention and the offset's aim is to enlarge its existing activities. Also problematic is the rule that companies can claim full offset credits for investments they claim to have 'facilitated' from other sources, such as local banks, IDC or FDC. Many projects are majority-funded by the IDC or local banks, with little investment from the foreign arms company, yet they can claim full offset credits.

In 2004 it was reported that the BAE Systems/SAAB consortium achieved 149% of its investment milestone which included SARM. Whether the credits will be adapted to reflect the failure of SARM could not be confirmed by Mr Dion Harold of DTI (Mr Harold, DTI, interviewed on 23 June 2005). The NIPP 2005/2006 Annual Report did not comment on the failure of SARM or how this will affect BAE Systems/SAAB's credits. It did however indicate that the BAE Systems/SAAB consortium had met a milestone with US\$2.3 billion worth of credits.

CONCLUSION

The evaluation findings conclude that there is really no reason why SARM should have failed and revealed several lessons that can be applied to offsets of this nature.

The first of these lessons are that there is a tendency by offset obligors to start 'greenfields' projects instead of building on already existing 'brownfields' projects. SARM was a 'greenfields' project, while the two other NIPP projects against which SARM can be compared, OroAfrica and Silplats, are 'brownfields' projects that were built on existing and successful jewellery manufacturing enterprises. Both of these enterprises continue to operate successfully.

The second lesson from this evaluation is the necessity for strict financial accountability in these projects. Financial capital is not only crucial to the survival of the business, but also to the sustainability and growth of the other capitals (social, human, manufactured and natural). Financial accountability is thus crucial. Both the successful beneficiation initiatives, OroAfrica and Silplats, performed extensive due diligence studies and they both have monitoring systems in place with all the required checks and balances to keep the businesses healthy even in difficult financial times such as in recent years (Wellmann, 2005). There is no evidence of financial accountability in the management of the SARM.

The third lesson is the need for the implementers of offsets projects to embrace the triple bottom line and to balance the need for short-term competitiveness and financial gain and in doing so earning a moral 'licence to operate'. Hew (2006) argues that offsets fall into the realm of corporate social investment, linking the idea that offsets can be a vehicle for socio-economic projects and as a vehicle to reduce poverty and inequality in developing countries.

While offsets can be viewed as corporate social investment, SARM was described by Harmony Gold as part of its corporate social investment in the Virginia area. SARM thus played the role of being both an offset project with BAE Systems/SAAB as the obligor, while being at the same time a corporate social investment initiated by Harmony Gold.

SARM was established with outdated business principles within a modern South African legislative and trade environment. There is no evidence that SARM embraced the triple bottom line, a concept that puts equal value on the economic, social and environmental aspects of a company.

A further twist in the SARM case is that the project is also a gold beneficiation project. There are numerous legal advantages to starting precious metal beneficiation factories, for example, being able to 'exchange' credits for beneficiation against implementing BEE obligations, and being able to 'write off' against tax infrastructure 'donated' to factories.

Hew's (2006) assertion can be agreed with that offsets can be successful on condition that the offset programme is productively conceived and implemented and utilises the appropriate resources, but there is no proof that these conditions currently exist in South Africa. The DTI is responsible for ensuring that the NIPP is carried out properly, but there is not an efficient system for monitoring these types of investments in South Africa. According to Mr Dion Harold of the DTI, there is no monitoring and evaluation system in place for these projects, and that projects are monitored on an *ad hoc* basis. The lack of, or the insufficient, monitoring and evaluation of such projects means that lessons from the failure of one project cannot be transferred to new initiatives. Mr Harold also indicated that there is a high turnover in staff in the unit that monitors the NIPP. He had replaced the previous manager dedicated to the BAE Systems/SAAB consortium projects

and was not even aware of SARM at the time of our interview several months after he filled the post. He was unable to provide information that was project specific.

The fourth lesson is the necessity for strict monitoring and evaluation processes in any Industrial Participation programme and/or project combined with the need for regular independent evaluations.

The fifth lesson points to the necessity that foreign direct investment should be one hundred percent foreign investment, and not local investment masquerading as foreign investment. SARM had limited foreign direct investment, and indeed most of the investment in the business was sourced from local funders. When the project failed, the main local funder, the state-owned IDC, lost a large sum of money that could have been invested in a more successful venture. Foreign direct investment has many benefits and when it is successfully harnessed it can create employment with high added value. However, in an offset set-up, the foreign investor's activities need to be monitored closely to ensure that the investment is focussed on delivering what it has set out to do. Unfortunately, without the capacity to apply conditions to foreign investors or to monitor them, the South African government has limited scope to promote technology transfers and linkages with domestic producers and to develop a competitive advantage.

Foreign direct investment, whether as part of NIPP or not, often takes the form of large projects with potentially damaging social and environmental effects. It is recommended that an independent body be commissioned to monitor and assess the socio-economic and environmental impact of such projects. This will force companies to interact with the various affected stakeholders, such as the broader local community, the local government, employees, trade unions, owners, shareholders, customers, business partners, suppliers, and government. It will also heighten transparency and accountability.

In conclusion it is clear that there would have been no technical reason for SARM to have failed. The company was not constrained by the availability of gold material, working capital or infrastructure. Having all these available actually gave the factory an advantage over other jewellery manufacturers. Its failure, however, highlights (i) the lack of due diligence by IDC, the state-owned entity that provided a large part of the funding; (ii) the lack of operational monitoring and evaluation of the NIPP; (iii) an incidence where 'foreign direct investment' was not all it proposed to be; (iv) the confusion that guides NIPP credit calculations and awards; (v) the general lack of understanding of sustainability of projects linked to socio-economic policies; and (vi) the lack of political will to investigate the failure of these types of projects.

In contrast, the continued success of the OroAfrica and Silplats ventures highlight that if conceived well with a proper due diligence investigation in place, combined with real foreign direct investment and a genuine interest by the foreign investor to share international markets (if there are actually existing markets to share); and provided the company produces good quality products to international standards, small individual offset projects can be successful. There is still a need to assess the variety of offsets projects beyond just beneficiation projects linked to the 1998 arms deal to establish how many are indeed relatively successful.

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MEASUREMENT OF EXECUTIVE REMUNERATION AND CORPORATE GOVERNANCE IN SOUTH AFRICA

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ABSTRACT

For several years, and especially since the onset of the global financial crisis, executive remuneration which forms part of the agency problem and is also an integral part of corporate governance has attracted much attention in several forums such as the media and parliament in many parts of the world. Consequently, this has resulted in important reviews, legislation, and codes of conduct such as King Codes I, II, and III. The concern over executive remuneration is particularly relevant in South Africa since the South African Companies Act 2008 seeks to reaffirm companies as a means of promoting the economic welfare and development of the country by encouraging efficient, transparent value-additive corporate management and high standards of corporate governance. Discussions, reports, and investigations into executive remuneration have so far failed to examine the relationship between executive remuneration and corporate value addition, and so the question of whether or not executives are excessively remunerated cannot be factually sustained. This article highlights the use of the corporate valuation model for measuring the value added to companies by corporate executives. The model can further be compared with executive compensation, in particular performance-based pay. In the absence of measurement, it is not possible to contend whether corporate executives are being over or under-paid.

Keywords: Corporate Governance; Executive Remuneration; King Code I, II, III; South African Companies Act 2008.

INTRODUCTION

For several years and especially since the onset of the global financial crisis (GFC), several institutions including the media have been reporting and questioning levels of executive remuneration, which have broadly been suggested to be excessive. Lefifi (2012) reported that executive pay was under scrutiny with the Public Investment Corporation (PIC) investigating about 100 companies listed on the Johannesburg Stock Exchange (JSE), among them was Investec Bank. Neate (2012) reported a shareholder revolt over executive remuneration which resulted in 46% of the Financial Times Stock Exchange's 100 Index (FTSE 100) executives having their basic salaries frozen. This resulted in the British prime minister calling for more active shareholder participation to curb excessive executive remuneration. Similarly, Kaplan (2012) queried whether corporate executives in the United States of America (US) were overpaid.

Executive remuneration is an integral part of corporate governance (Brigham & Ehrhardt, 2011; Cyert & March, 1963; Jensen & Meckling, 1976; Machlup, 1967; Coase, 1937; Alchian & Demetz, 1972) has attracted much discussion in several institutions around the World since the GFC. As a consequence, a number of important reviews have been undertaken such as the FSF, the UK Corporate Governance Code 2010 (UKCGC 2010), the Turner Review 2009 (TR 2009), and the Walker Review 2009 (WR 2009). Specific provision has also been made in legislation, for example the UK Companies Act of 2006 (UKCA 2006), implemented over four years because of its complexity, deals specifically with issues in this regard. In the US, two major pieces of legislation seek to improve corporate governance relating to executive remuneration, namely the Sarbanes Oxley Act 2002 (SOX) and the Dodd Franks Act 2010, also known as the Restoring American Financial Stability Act 2010 (DFA 2010).

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The concern over executive remuneration is particularly relevant to South Africa since the South African Companies Act 2008 (SACA 2008) seeks to reaffirm companies as a means of promoting economic welfare and development of the country by encouraging efficient, transparent value-additive corporate management. The purposes of SACA 2008, particularly Section 7 of Act 71 include *inter alia*: promotion and development of the South African economy by encouraging entrepreneurship, enterprise efficiency, transparency, and high standards of corporate governance; promotion of innovation and investment in South African markets; reaffirmation of companies as a means of achieving economic and social benefits; creation of optimum conditions for the aggregation of capital for productive purposes, and for the investment of capital in enterprises and the spreading of economic risk; creation and use of companies in a manner that enhances the economic welfare of South Africa as a partner within the global economy; and, encouragement of efficient and responsible management of companies. If the remuneration of South African corporate executives exceeds the value that they add to companies, then serious questions arise as to whether the legally enshrined purposes of SACA 2008 can be delivered by such existing positions; whether it is possible to contend with corporate executives being overpaid; and whether the economic rationale for incorporation becomes suspect because corporate executives deflect economic resources from all other stakeholders including the state, workers, creditors, and shareholders. However, the discussion of executive remuneration needs to proceed in a non-partisan context in which the value-added by executives is compared with their remuneration. This requires measurement of the value-added by such executives.

Discussions, reports, and investigations into executive remuneration have so far failed to investigate the relationship between executive remuneration and corporate value addition, and so the question of whether executives are excessively remunerated cannot be factually sustained. This article proposes the use of the corporate valuation model (Brigham & Ehrhardt, 2011) as a basis for estimating the value added by corporate executives, thereby providing a quantitative basis for addressing this seemingly common problem. This approach is based on audited financial statements and thus focusses on the intrinsic value and not market prices which can be substantially influenced by manic and depressive market conditions that contribute to market bubbles and slumps. Thus, the purpose of this article is to present, explain and illustrate an approach to the measurement of value added by corporate executives by drawing data from audited financial statements and applying this data to the corporate valuation model. At no stage does this article seek to address the question of share distribution of the value added by corporate executives. This is a separate matter and needs to be addressed elsewhere.

This article commences with a brief overview of recent reports, investigations and legislation into corporate governance of which the agency problem and executive remuneration comprises a significant part. It is followed by a presentation, explanation and illustration of the corporate valuation model to estimate the value added by executives.

BRIEF OVERVIEW OF RECENT REVIEWS AND LEGISLATION

King Codes I, II, and III have had a notable bearing on corporate governance in South Africa, and extend beyond the requirements of the South African Companies Act of 1973 (SACA 1973) (King Code, 2002). With the enactment of SACA 2008, and changes in international governance trends, King Code III became necessary and was written from a business governing perspective (Institute of Directors, 2009).

Not only have King Codes I, II, and III sought to improve local corporate governance, but at the international level such as in the US, the DFA 2010, and SOX 2002 specifically seek to improve corporate governance, in part by ensuring sound executive compensation practices. For example, Section 951 – 956 of DFA 2010 focusses on accountability and executive remuneration and Section 10B, 14 and 16 of the Securities and Exchange Act of 1934 of the US. by requiring annual shareholder approval of executive compensation by means of a non-binding vote (Section 951), independence of compensation committees (Section 952), disclosure of pay versus performance linked remuneration (Section 953), recovery of erroneously awarded compensation (Section 954),

and disclosure of hedging by employees and directors (Section 955), and excessive compensation by holding companies of depository institutions (Section 956).

In the UK, FSF 2009 enunciated nine normative principles as part of a specific drive to ensure sound executive compensation practices. The FSF 2009 reported that more than 80% of market participants in the UK believed that compensation practices at large financial institutions were instrumental as part of several combined factors contributing to the GFC. The FSF 2009 grouped its nine principles into three categories, namely effective governance of compensation, effective alignment of compensation with prudent risk taking, and effective supervisory oversight and engagement by stakeholders. In comparison with DFA 2010, FSF 2009 has notable similarities and both are largely procedural and normative, although FSF 2009 in some respects goes further than DFA 2010 with regard to risk, return and time horizons.

The operationalisation of King Codes I, II, III, DFA 2010 and FSF 2009 require valuations that conform with SACA 2008, SOX 2002 and Rule 702 of the Federal Rules of Evidence of the US (Rule 702) especially with regard to the *validity, reliability* and *unambiguous interpretability* of financial metrics if the purposes of SAC 2008 are to be achieved. In terms of SOX Section 807 & 1348 concerning securities fraud, theories, models, criteria and decision rules that are unstated, lack empirical validity, are not epistemologically rigorous, defy sound research methodology, are an abstraction from reality and cannot be satisfactorily operationalised may be construed as an attempt to commit a false or fraudulent pretence, particularly in the case of an expert professing expert knowledge, skills and competence. The corporate financial valuation model (Brigham & Ehrhardt, 2011), enables the estimation of value added by executives in a way that complies with King Codes I, II III, DFA 2010, FSF 2009, SACA 2009 and UKCA 2006 by drawing from audited corporate financial statements thereby facilitating the operationalisation of the normative prescriptions of the aforementioned reviews, reports and legislation. In so doing it satisfies the requirements of sound research methodology and rigorous epistemology of metrics (Cooper & Emory, 1995; Sekaran, 2000; Cavana, Delahaye & Sekaran, 2000). These metrics need to be *valid, reliable* and *unambiguously interpretable* (Cooper & Emory, 1995; Ghauri, Gronhaug & Kristianslund, 1995; Davis, 1996; Sekaran, 2000; Cavana *et al*, 2000). An operational performance metric that is used by unions, politicians, statisticians, actuaries, managers, analysts, bankers, consultants and other professionals, needs to satisfy the minimum requirements of sound research methodology and sound ethics, and be compliant with the respective statutes.

The corporate valuation model which makes use of intrinsic financial information to generate a valuation that can be compared with market prices, and which complies with the requirements of sound research methodology and rigorous epistemology and statute, is presented, explained and illustrated in the following sections.

MEASUREMENT OF VALUE ADDED BY CORPORATE EXECUTIVES

Corporate governance is the set of rules and procedures that ensure managers employ the principles of value-based management. Accordingly, value-based management focuses on the managerial goal of maximising the intrinsic value of a firm for its shareholders as well as other stakeholders. The corporate valuation model which is the present value of expected future free cash flows enables management to operate within a value-additive based framework by focusing on the intrinsic value of the firm. The intrinsic value of the firm is determined by the value of its operations (Brigham & Ehrhardt, 2011), namely:

$V_{ops} = PV \text{ of expected future free cash flow} \dots\dots\dots (1)$

Where

V_{ops} = the value of operations

PV = present value of expected future cash flow

In other words,

$$\underset{\text{Where}}{V_{\text{ops}}} = \sum_{t=1}^{\infty} \frac{FCF_t}{(1 + WACC)^t} \dots\dots\dots (2)$$

WACC = weighted average cost of capital of all the firm’s financing components

To accommodate growth, the value of a firm’s operations can be rewritten as adapted from Brigham & Ehrhardt (2011):

$$V_{\text{ops}} = \frac{FCF_0 (1 + g)}{WACC - g} \dots\dots\dots (3)$$

Since FCF is determined by capital that is already invested, sales and the growth in sales, as well as the profitability of sales in relation to the capital required to generate those sales, equation (3) can be re-written as:

$$\left[\frac{\text{Sales}_N (1 + g)}{WACC - g} \right] \left[\text{OP} - WACC \left(\frac{\text{CR}}{1 + g} \right) \right] \dots\dots\dots (4)$$

Equation (4) comprises two main components, **Capital_N**, the monetary amount of operating capital already invested in a firm, as well as the value that management has added or subtracted

to the firm. The term $\left[\frac{\text{Sales}_N (1 + g)}{WACC - g} \right]$ shows the present value of the growth in sales

discounted at a firm’s WACC. Since an increase in sales often necessitates an increase in capital

requirements over and above the cost of sales, the term $\left[\text{OP} - WACC \left(\frac{\text{CR}}{1 + g} \right) \right]$ is needed

because it shows the difference in operating profitability (OP) and the firm’s discount rate or cost of capital (WACC) multiplied by the firm’s additional capital requirement to finance the growth in sales. Thus this term shows the return over and above the cost of capital earned in relation to the additional capital investment needed to fund the growth in sales.

Having presented and explained the corporate valuation model, it is now possible to illustrate the application of this model to estimate the value created by corporate executives.

Consider the financial data of a hypothetical company, Teufelslied Limited (Teufelslied). Table 1 shows the income statement Table 2 shows the balance sheet, and Table 3 shows the calculation of free cash flow.

Table 1: Teufelslied Limited - Income Statement as at 30 June 2012 (R million except for per share data)

	2011	2012
Net Sales	739,50	845,00
Costs (excluding depreciation)	629,00	704,00
Depreciation	30,00	32,00
Total operating costs	659,00	736,00
EBIT (earnings before interest and tax)	76,00	109,00
Less: Interest payable	15,00	16,00
EBT (earnings before tax)	61,00	93,00
Tax (28%)	17,08	26,04
Net income before preference dividend	43,92	66,96
Preference dividend	8,00	8,00
Net income available for ordinary dividend	35,92	58,96
Ordinary dividend	0,00	24,00
Addition to retained earnings	35,92	34,96
Number of ordinary shares	100	100
Earnings per share	0,3592	0,5896
Dividends per share	0,00	0,24

Source: Brigham & Ehrhardt (2011)

Table 2: Teufelslied Limited - Balance Sheet as at 30 June 2012 (R million)

	2011	2012
Assets		
Cash	20,00	26,00
Marketable securities	72,00	78,00
Accounts receivable	88,00	94,00
Inventory	195,00	196,00
Total Current Assets	375,00	394,00
Net buildings, plant, vehicles	450,00	458,00
Total Assets	825,00	852,00
Liabilities		
Accounts payable	28,00	31,00
Notes payable	95,00	38,00
Accruals	51,00	60,00
Total Current Liabilities	174,00	129,00
Debentures and term loans	165,00	166,00
Total Liabilities	339,00	295,00
Equity		
Ordinary shares	270,00	270,00
Retained earnings ^a	116,00	186,88
Preference shares	100,00	100,00
Total Equity	486,00	566,88
Total Liabilities and Equity	825,00	851,88

^a : Retained earnings 30 June 2012 = R(116.00 + 35.92 + 34.96 = \$186.88)

Source: Brigham & Ehrhardt (2011)

Table 3: Teufelslied Limited - Calculation of Free Cash Flow (R million) as at 30 June 2012

	2011	2012
Required net operating working capital ^a	224,00	225,00
Required net buildings, plant, vehicles	450,00	458,00
Required total net operating capital	675,00	683,00
Required net new investment in operating capital ^b		8,00
NOPAT (net operating profit after tax) ^c	54,72	78,48
Less: Required investment in operating capital		8,00
Free cash flow		70,48

^a: Required net operating working capital₂₀₁₁ = (cash + accounts receivable + inventory) – (accounts payable + accruals) = R(20 + 88 + 195) – R(28 + 51) = R224,00

Required net operating working capital₂₀₁₂ = (cash + accounts receivable + inventory) – (accounts payable + accruals) = R(26 + 94 + 196) – R(31 + 60) = R225,00

Source: Brigham & Ehrhardt (2011)

^b: Required net new investment in operating capital₂₀₁₂ = change in total net operating capital from previous year = R683.00 – R675.00 = R8.00

^c: NOPAT (net operating profit after tax) = EBIT*(1 – tax rate);

$$\text{NOPAT}_{2011} = 76(1 - 0.28) = \text{R}54.72;$$

$$\text{NOPAT}_{2012} = 109(1 - 0.28) = \text{R}78.48.$$

If Teufelslied has a WACC of 10.00% with free cash flow as at 30 June 2012 of R70.48 million, and a growth rate of 2.50% from 30 June 2012 onwards. The horizon value (also known as the continuing or terminal value) can be calculated by modifying equation (1) for growth, thereby creating equation (5):

Figure 1: Horizon value:

$$V_{\text{op}}(\text{30 June 2012}) = \frac{\text{FCF}_{(\text{30 June 2012})}(1+g)}{\text{WACC}-g}$$

$$V_{\text{op}}(\text{30 June 2012}) = \frac{\text{FCF}_{(\text{30 June 2012})}(1+g)}{\text{WACC}-g} \dots\dots\dots(5)$$

$$V_{\text{op}}(\text{30 June 2011}) = \frac{70,48(1,025)}{(0,10 - 0,025)} = \frac{72,242}{0,075} = \text{R}963,226 \text{ million}$$

$$\text{Present value of } V_{\text{op}}(\text{30 June 2012}): V_{\text{op}}(\text{30 June 2012}): \frac{963,226963,226}{1,10 \quad 1,10} = \text{R}875,66$$

Source: Brigham & Ehrhardt (2011)

The value of operations of R875.66 reflects a growth rate of 2.5% from 30 June 2012 onwards and is discounted at Teufelslied's WACC of 10.00% because the period of operations up to 30 June 2012 does not assume a growth rate of 2.5%. The horizon value of Teufelslied's of R875.66 million is the intrinsic value of this company based on the management of its investment in operating assets. This is the monetary amount Teufelslied could expect to receive for its operations in a market that was neither manic nor depressive, and since it does not include the value of non-operating assets an adjustment to include non-operating assets must be made.

Since the value of a firm comprises the value of operations, plus the value of its non-operating assets adjusted for prior charge capital in the form of debt and preference shares, an adjustment must be made for Teufelslied's non-operating assets. Specifically, the value of Teufelslied's operations (as calculated above) and non-operating assets is R953.66 million (R875.66 + R78.00). The value of Teufelslied's equity in the form of ordinary shares is its total value, in this case \$953.66 million, minus debt (in the form of notes payable, debentures and term loans), minus the value of preference shares whose legal claim, as in the case of creditors, ranks above that of ordinary shares. There is no need to make an adjustment for accounts payable and accruals because they were taken into consideration when calculating FCF. Thus, the intrinsic value of Teufelslied's ordinary shares as at 30 June 2012 is (R953.99 million – R38.00 – R166.00 – R100.00) = R649.66 million, and in a non-manic non-depressive market would be the market price of Teufelslied's equity.

The value of Teufelslied as at 30 June 2012 can be presented in terms of: the investment decision, namely operating and non-operating assets, the financing decision, namely the value of ordinary shares, preference shares, and debt, and, value added by management by means of the intrinsic value of ordinary shares, book value of ordinary shares, value of preference shares and the value of debt.

This is shown in Figure 1.

Figure 2: Teufelslied Limited - Structure of Investments, Financing and Value Added by Executive Management as at 30 June 2012

R(million) 953.66

R78.00 mil. Non-operating assets ¹	R649.66 mil. Market value of equity*	R192.78 mil. Value added
R875.66 mil. Operating assets		R456.88 mil. Book value of equity
	R204.00 mil. debt	R204.00 mil. debt
	R100.00 mil. Preference shares	R100.00 mil. Preference shares
Market value of Investment	Market value of Financing	Book value of sources of financing and value added

¹. Non-operating assets in the form of marketable securities.

*: The 'market value of equity' is none other than the market *price* of equity, and seldom, if ever, corresponds to the intrinsic or book value of equity.

Source: Brigham, & Ehrhardt (2011)

Figure 1 shows that for the financial year ended 30 June 2012, a market value of investment of R953.66 million of which operating assets comprised 91.8% (R875.66 / R953.66) was financed at 68.1% from equity at market value (R649.66 / R953.66), 21.4% from debt at market value (R204.00 / R953.66), and 10.5% from preference shares at market value (R100 / R953.66), and was accompanied by value added of R192.8 million.

Since the value added by management is R192.78 million for the financial year ended 30 June 2012, it can be argued that the maximum pool from which incentive-linked compensation and bonuses can be drawn is R192.78 million. The issue of how much of the R192.78 million should be distributed by way of incentive-linked compensation and bonuses, and how these payments should be allocated within this year, the following year, and in subsequent years, needs to be considered in combination with principles 4, 5, 6, and 7 of the FSF (2009) because these principles attempt to align incentive-based compensation and bonuses with the risks taken to deliver value added of R192.78 million. As already stated, this issue does not form part of the purpose of this article.

CONCLUSION

The continuing discussion about the level of corporate executive remuneration in many institutions worldwide is taking place in the absence of the measurement of executive remuneration in comparison with the value added to corporations by these executives. This article attempts to measure the contribution of corporate executives by drawing from the corporate valuation model so that a basis for comparison of value added with remuneration paid can be made. Once this is done then the matter of excessive executive compensation can be discussed in a more meaningful way. Thus the purpose of this article was to present, explain and illustrate an approach to the measurement of value added by drawing from audited financial statements in an attempt to focus on the intrinsic value of the company as well as reasonably ensure that valid, reliable and unambiguously interpretable criteria that form the basis of sound research methodology with regard to metrics, was observed. As shown in the article a raft of recent legislation, reviews and reports in South Africa and internationally seek to address the issues of executive remuneration as part of the quest to improve corporate governance. No metric can or will be entirely satisfactory but some measurement is preferable to no measurement at all. This forms the basis of this article. At no stage has this article sought to answer the important question of the fraction of executive value added that should be paid to respective executives. The sequels to this article should be empirical surveys to measure and compare value added with executive remuneration, screen and rank the findings and investigate the impact of these rankings on capital formation and the economic growth and development purposes enunciated in the South African Companies Act 2008.

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IMPROVING THE QUALITY OF HEALTHCARE THROUGH STAFF MOTIVATION: RESULTS FROM SELECTED PRIVATE HOSPITALS IN ILORIN, NIGERIA

R.A. Gbadeyan¹, U.A. Raheem² & A.A. Abdullahi³

ABSTRACT

In most countries, private hospitals play significant roles as alternative health care providers to the government owned hospitals. There is a general problem in delivering quality health care services due to the inadequate management of resources in the health sector. The objective of this paper is to examine the determinants of staff motivation in private hospitals. Thirty private hospitals were selected as the sample out of the 58 facilities in operation during the period of study. An average of 15 staff were provided with a questionnaire in each of the selected hospitals; while a total of 446 out of 450 respondents completed and returned the questionnaire. The questionnaire instrument designed for the study was a structured and closed-ended answer type, with sections focussing on: factors for staff motivation, demographic characteristics of respondents; quality of health workers and their performance. The data was analysed using E Views software package. The result revealed that Promotion, Salary, Security and the Work itself are significant motivating factors for the health workers in the selected private hospitals. The paper recommends that the problem of health workers' poor remuneration should be addressed in the private health sector. This is because de-motivated staff would not perform well in organisations. Health workers need to be given adequate financial and non-financial incentives in order for them to perform well

Keywords: Motivation; Private Hospitals; Quality, Expectancy Theory & Health Workers.

INTRODUCTION

The perceived failure of healthcare services especially in the public sector in many countries in recent times has been a cause for concern. This is due to their inability to articulate meaningful goals or develop the means to achieve them (Enthoven, 1985; Griffiths, 1984). This is in contrast to the widely held belief in perceived success in the private sector, because of its innovation and responsiveness to demand (Preker, Mckee, Mitchell & Wilbulpolprasert, 2006). In a similar vein, private hospitals are known for their efficient and effective delivery of healthcare services to users. This might explain the reason for private practitioners providing a significant amount of care in developing countries (Peabody, Taguiwalo, Robalino & Frenk, 2006).

There is a preponderance of private hospitals in most of the cities while public hospitals are more sparsely distributed across the country (Productivity Commission, 2009). This concentration of private hospitals in cities would enable users to have access to their services and receive desired health outcomes. In most of the rural areas where private hospitals are scarce, public hospitals provide some level of accessibility to the community.

The African continent faces serious human resources crisis in the health sector (Mathauer & Imhoff, 2006; WHO, 2006; Dovo, 2005; Kober & Damme, 2006; Auliffe & Maclachan, 2005), which prevents most countries on the continent from initiating and sustaining credible health services (Leshabari & Muhondwa, 2008). This is despite several reforms developed to address health problems on the continent (United Nations, 2007; Lethbridge, 2004; Dussault & Dubois, 2003). There has been more commitment to the health sector in most of the low and middle income countries, in the form of increased funding through the Global Fund for AIDS, Tuberculosis and

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Malaria (Preker, 2006). This development therefore calls for an urgent need to address the issue of the human resource crisis in the health sector in order to bring about improvement in the quality of the health of individuals.

The quality of performance in health facilities depends on the available human resource mix and their motivation (Dieleman, Cuong & Anh (2006). There are different elements required to deliver effective care which include: human resources (in particular, trained staff); physical resources (such as pharmaceuticals and technology); intellectual resources and the organisational or social resources that bind them together (Preker *et al*, 2006). This deficiency in the quality of care is attributed, not to the failure of professional compassion or lack of resources, but to gaps in knowledge, inappropriate applications of available technology, inadequate management of available resources and the inability of organisations to change (Institute of Medicine, 2001; Murray & Frenk, 2000; Berwick, 1989; Preker *et al*, 2006).

This paper is aimed at examining the determinants of motivation amongst health workers in private hospitals in developing countries, using the example of Nigeria. It also examines the quality of health workers in the selected hospitals and its effect on their performance.

LITERATURE REVIEW

Definition and framework

A private hospital is defined as a privately owned and operated institution, catering for patients who are treated by a doctor of their own choice. Patients are charged fees for admission and other services provided by the hospitals and relevant medical and paramedical practitioners. A public hospital on the other hand, is defined as a health provider facility that has been established under state or territory legislation as a hospital or as a freestanding day procedure unit. Public hospitals are operated by, or on behalf of, the government of the state or territory in which they are established. Public hospitals provide hospital services free of charge to all eligible patients (Productivity Commission, 2009).

According to Bennett (1992) 'Private' providers as those who fall outside the control of government. Private ownership includes both profit and non-profit providers. Under this arrangement, healthcare facilities are owned by individuals who seek to make profits, private employers, religious missions and other non-governmental organisations (Hanson & Berman, 1998).

Health Care Providers are individuals or a group of practitioners. However, ownership is usually considered the key characteristic of determining whether a provider is private or public. A public provider can, therefore, be defined as those who are owned by the government or under the control of government. In relation to the healthcare system in Nigeria, this definition can be said to be relevant except for where it is stated that public hospital services are provided free of charge to the patients. In Nigeria today, patients pay hospital charges though at lower rates compared to those charged by the private hospitals.

Quality as a concept is described as "optimising material inputs and practitioner skill to produce health" (Peabody *et al*, 2006: 1293 - 1307). The Institute of Medicine (2001: 1 - 337) defined Quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge". Scholars in health research have shown since the 1990s that quality of care can be improved rapidly but it is argued that to improve clinical practice - and thus quality of care - quality must be defined and measured, and appropriate steps must be taken (Silimper, Franco, Veldhuyzen van Zanten & MacAulay (2002). Three elements of quality are given by Peabody *et al*, (2006) namely:

Structure – referring to stable, material characteristics (infrastructure, tools technology) and the resources of the organisation that provide care and the financing of care (levels of funding, staffing, payment schemes, and incentives).

Secondly, the Process – which is the interaction that takes place between caregivers and patients

during which structural inputs are transformed into health outcomes.

Lastly, the Outcomes – which are measured in terms of health status, deaths, or disability – adjusted life years, patient satisfaction or responsiveness to the health care system (WHO, 2006).

This definition provides a systematic explanation to quality of health care delivery from three perspectives: input, process and output. It assumes that for quality health care to be achieved these key elements must be considered.

The most commonly used and easiest method of measurement in studies of quality in developing countries is the Structural measure (Peabody *et al*, 2006). On the other hand the Institute of Medicine (2001) provided these six elements of quality:

- (i) Patient safety - are the risks of injury minimal for patients in the health system?
- (ii) Effectiveness - is the care provided scientifically sound and neither underused nor overused?
- (iii) Patient centeredness - Is patient care being provided in a way that is respectful and responsive to a patient's preferences, needs and values? Are patient values guiding clinical decisions?
- (iv) Timeliness - Are delays and waiting times minimised?
- (v) Efficiency - Is waste of equipment, supplies, ideas, and energy minimised?
- (vi) Equity - Is care consistent across gender, ethnic, geographic, and socio-economic lines?

If the answers to all these questions are in the affirmative it means that a quality healthcare service is provided. A look at the definition above provides a more expansive view of the quality of healthcare. Consideration of the key elements in the definition above would help in determining the quality of healthcare services offered to patients which is the definition of quality adopted by this study as it allows a better understanding of the patients' health status.

Staff in hospitals (either private or public) work as a team towards achieving a qualitative healthcare service to the people. This is why it is very important that motivation must cut across all the different cadres of health workers in hospitals for good quality health care services to be achieved.

Motivation is defined as human psychological factors that cause, channel and sustain human behaviour in a particular committed direction (Stoner, Freeman & Gilbert (2011). This is one of the earliest concepts used to describe human attitude to job performance in an organisation. The motivation theory examines what drives or makes people work. Modern approaches to motivation theory have been categorised into five types: needs theory, reinforcement theory, equity theory, expectancy theory and goal-setting theory (Stoner *et al.*, 2011; Landy & Becker, 1987). This study adopts the needs theory because of its popularity amongst management scholars and is briefly discussed below:

Needs theory – The theory focuses on what is required by people to have a fulfilled and successful life (Stoner *et al*, 2011). The following are popular needs theories under discussion: Maslow's hierarchy of needs; Existence, Relatedness and Growth (ERG) theory; McClelland's needs theory and Herzberg's theory. All these theories focus on satisfaction of some needs by individuals in order to become fulfilled in life. The need theories are applied to individuals in the workplace to determine those factors that make them perform well in the organisation.

Herzberg's theory explained that the factors that contribute to workers' job satisfaction are called satisfiers. Examples are: achievement, recognition, responsibility and advancement or promotion. Those that can lead to job dissatisfaction are called dissatisfiers or hygiene factors (these include salary, working conditions, company policies etc.). However, Maslow's theory received more attention from managers than any other theory of motivation (McClelland, 1961; Herzberg, 1966; Maslow, 1970; Alderfer, 1972; Stoner, *et al*, 2011). The Maslow theory ranked human motivation in a hierarchy of five needs which includes: the basic psychological needs, followed by safety and security needs, belongingness needs, esteem needs and self actualisation, which is the highest

need. According to Maslow (1970), individuals satisfy the most basic needs before he/she desires to satisfy the next higher needs.

Preker *et al* (2006) observed that less attention has been given to the management service industries in general and health care services in particular. This may be as a result of important differences existing between healthcare services and other organisations. According to Shortell and Kaluzny (1983) the differences are:

- (i) Defining and measuring outputs is difficult.
- (ii) The work involved is more variable and more complex than in many other organisations.
- (iii) Much of the work is of an emergency nature and cannot be easily deferred.
- (iv) The consequences of error can be severe.
- (v) Activities by different groups of staff members are highly interdependent, requiring a high level of coordination.

These differences further revealed reasons for the difficulty in managing hospitals or health-care facilities more so than other types of organisations. The blurring of boundaries between hospitals and the rest of the healthcare system is another important reason for the difficulty in managing hospitals due to emergence of many innovative models of care. There is a shift towards managing patients through a complex combination of short inpatient stays and visits as an outpatient to specialist clinics and diagnostic facilities. There is a contrast between the rapidly changing demands on hospitals and the structural rigidities of hospitals as a result of laboratory functions being replaced by testing kits used at the bedside, diagnostic equipment being used in primary care and a new generation of primary care workers acquiring greatly augmented skills (McKee & Healy in Preker *et al* 2006). There are many constraints to effective delivery of health care services (Hanson, Ranson, Oliveira-Cruz, & Mills, 2003); the identified constraints to success include:

Accessibility – this is in terms of the distance of facilities to the people and its responsiveness to the needs of persons with disabilities. There may be inadequate demand for services or physical, financial, or social obstacles to their use. Health services can only operate effectively when people have access to services and resources are available to provide the services (Preker *et al*, 2006).

Shortage of resources – This may be as a result of a shortage of staff, drugs and equipments. It is therefore necessary to purchase the needed drugs and equipment for effective healthcare delivery to be achieved (Preker *et al*, 2006).

Policy on the health sector – this may be a weak system of management that is unable to take into account the changing health needs of the people and the changing demands on healthcare providers. According to Preker *et al*, (2006) management weaknesses include inadequate pharmaceutical regulation and supply, ineffective training of health professionals, the inability to engage with civil society, and a failure to put in place incentive systems to facilitate effective healthcare.

Policies in other areas also affect the health sector, such as when a weak, outdated civil service system implements obsolete regulations; when there are inadequacies in infrastructure or weaknesses in the banking system (Preker *et al*, 2006).

Environmental constraints – this is when the delivery of effective care is affected by the physical environment such as climate and population dispersion (Preker *et al*, 2006).

Weak governance – this is another important constraint to effective health care delivery when the weak governance operates within unsupportive policy frameworks compromised by corruption, weak rule of law, political instability, weak public accountability, and the lack of a free press (Preker *et al*, 2006). A study has shown that, in many middle income countries, it is impossible to start a simple business because of the failure of legislative reform or clearly defined property rights (De Soto, 2000).

This tendency allows economic activity in middle income countries to be informal or marginally illegal, a situation that is of particular concern to healthcare, given the numbers of unlicensed and incompetent health providers which can endanger the public (Preker *et al*, 2006).

METHODOLOGY

There are 58 Private health facilities in Ilorin that could be described as functioning (Akanke & Monehin, 2004) and thirty private hospitals were selected as the sample, out of the 58 facilities in operation during the period of study. These hospitals were selected based on the number of years established, number of patients on admission and their staff strength. The sample consists of 43% private hospitals established in less than 5 years, 31% established between 5 - 10 years, 19% established between 11 - 15 years and 7% established for 16 years and more. The selected private hospitals are those with not less than 15 staff and with not less than a daily average of 10 or more patients on admission. Questionnaires were administered to an average of 15 staff in each of the selected hospitals considered for the study. The research instrument was a structured and closed-ended answer type questionnaire, having three sections which focused on: factors of motivation for staff in the selected private hospitals, demographic characteristics of health staff in the selected private hospitals and quality of health workers and their performance. The quality of health workers is measured in terms of their training, qualification and effectiveness of services provided to patients. A total of 446 out of 450 respondents completed and returned the questionnaire, thus representing a 99.11% response rate for the study. The categories of health workers considered for the study are: doctors, nurses, attendants, laboratory technicians and health records staff. A stratified multi-stage sampling was used to select the respondents for the study. This was done by selecting respondents randomly from the different categories of health workers in the private health facilities. Permission for conducting this study was sought from the management of the facilities used for the study and approval obtained.

Statement of hypotheses:

- H₁: Salary is not one of the significant determinants of motivation for health workers in private hospitals.
- H₂: The quality of health workers used in private hospitals has no significant effect on their performance.

RESEARCH FINDINGS

In the study, there are 41% male respondents and 59% female respondents. This breakdown reveals that out of the 41% male respondents the proportion of staff that are doctors is 34.4%; 23.5% are nurses, 15.3% are attendants, 13.7% are laboratory technicians and 13.1% are health records staff. The proportion of female respondents indicates that 9.2% are doctors, 45.5% are nurses, 24.2% are attendants, 5.8% are laboratory technicians and 15.3% are health records staff. The total number of each category of health workers that participated in this survey reveals that 19.44% are doctors, 36.57% are nurses, 20.72% are attendants, 9.03% are laboratory technicians and 14.24% are health records staff.

In the selected private hospitals there were no respondents who were pharmacists. This is probably due to the fact that in most of these hospitals, nurses are involved in dispensing drugs and medication to the patients. The medical directors of these private hospitals are interested in minimising their overhead costs by engaging nurses or other health workers who earn less and carry out the duties of pharmacists. This absence of a pharmacist in the selected private hospitals contributed to a greater proportion of the pharmacy or patent medicine stores in the area of study, being owned by qualified pharmacists. Only a few of the pharmacy and patent medicine stores are owned by non-pharmacist and businessmen.

Factors motivating health workers in private hospitals

These variables are briefly described as follows:

Achievement – This measures the success achieved in their career by the workers in terms of properties acquired or benefits enjoyed in the organisation.

Promotion - This is the movement of workers to higher ranks in the organisation. It is considered one of the motivating factors in organisation.

Relationship with others - The kind of relationships that exist between workers in organisation in terms of whether they are good or bad is also a reliable measure of workers' motivation in organisations. A good relationship motivates workers while bad relationships create dysfunction in organisations.

Salary and Wages - This is the reward for labour which is used to measure workers' motivation. A high paying job attracts more employees than a low paying job.

Security - This measures workers' stability of tenure in the workplace. Employees that are conservative prefer jobs with a low pay and higher security like civil service jobs rather than a highly paid job with lower security like jobs in the banking sector. Status is the prestige the workers enjoy for doing a particular job. For instance, people that are medical doctors enjoy more respect than those who are drivers, security men or roadside labourers.

The work itself - It measures the joy workers derive from doing a particular job. There are workers that attach emotional commitment to performing a particular task e.g. doctors, musicians, lawyers, lecturers etc. The workers like doing the work regardless of the salary earned from doing that job. The workers also derive a sense of fulfilment as a result of doing that job or profession.

Recognition - This measures the relevance of a worker in his place of work. There are some workers that make important contributions to the organisation's productivity while there are some that are not regarded as important to the organisation. The employees that are recognised will be missed when they are absent from work or indisposed in the organisation while those that are not recognised will be the first to be dismissed if there is a crisis or problem in the organisation. The recognition given to some employees therefore, serves as motivation to those workers.

These factors have been used in past studies on motivation (McClelland, 1961; Herzberg, 1966; Maslow, 1970; Alderfer, 1972; Stoner, *et al*, 2011). This study will examine how the factors above have motivated health workers in the selected private hospitals. The hypothesis is to examine if salary is not one of the significant determinants of motivation for health workers in private hospitals. An Ordinary Least Square regression was run to test the hypothesis stated above using E Views Version 7.

The result of the analysis is shown in Table 1 below:

Table 1: Motivating factors for health workers in private hospitals

Dependent Variable: MOTIVATION					
Method: Least Squares					
Date: 09/11/13 Time: 19:06					
Sample: 1 446					
Included observations: 446					
Variable	Co-efficient	Std. Error	t-Statistic	Prob.	
ACHIEVE	0.079722	0.068375	1.165939	0.2443	
PROMO	0.358557	0.029786	12.03770	0.0000	
RECOG	0.020350	0.037720	0.539507	0.5898	
RELATION	0.126215	0.137747	0.916283	0.3600	
SALARY	0.350067	0.029973	11.67941	0.0000	
SECURITY	-0.091634	0.031961	-2.867061	0.0043	
STATUS	0.181015	0.100429	1.802429	0.0722	

WORK	-0.364349	0.089641	-4.064538	0.0001
C	0.287824	0.061934	4.647303	0.0000
R-squared	0.570302	Mean dependent var		1.192825
Adjusted R-squared	0.562435	S.D. dependent var		0.394960
S.E. of regression	0.261261	Akaike info criterion		0.173377
Sum squared resid	29.82838	Schwarz criterion		0.256119
Log likelihood	-29.66313	Hannan-Quinn criter.		0.206001
F-statistic	72.49908	Durbin-Watson stat		1.455553
Prob(F-statistic)	0.000000			

Authors' output (2013)

The dependent variable is Motivation while the independent variables are: Achievement, Promotion, Recognition, Relationship with others, Salary, Security, Status and the Work itself. The result revealed that Promotion, Salary, Security and the Work itself are significant motivating factors for health workers in private hospitals while Achievement, Recognition, Relationship with others and Status did not constitute as significant factors for motivation of private health workers. The respondents agreed that Promotion has a strong influence on health workers in the selected private hospitals (Prob value = 0.0000). This is because Promotion means more income and more responsibility in the place of work. Salary is another factor that has a strong influence on health workers (Prob value = 0.0000). The respondents believe that the high labour turnover rate in the private health sector is due to poor salaries. There are respondents who agreed that security is another important factor (Prob value = 0.0043) which motivates health workers. This category of respondents believes that when there is stability and harmony in the work environment this can result in motivation amongst workers in the organisation. The health workers would want to work in a place where their job security is guaranteed rather than work in high paying hospitals where there is no job security. In this study about 26% of health workers fall in this category who have worked in particular hospitals for no less than 10 years. The work itself serves as the last factor identified in the study as having strong influence on health workers.

There are some respondents who derive motivation from the job they are doing not minding the amount they receive remuneration. The respondents in this category are medical doctors and nurses; they constitute 48.4% of the total respondents surveyed for the study.

The Adjusted R Square for the study is 0.5624 showing that 56.24% of the variance in motivation is accounted for by the eight explanatory variables considered for the study.

Quality of health workers and performance

This study examines whether the quality of health workers used in private hospitals has a significant effect on their performance. Quality is measured in terms of how effective the services of health workers are performed, the quality of training the health workers have received, the academic qualifications obtained by the health workers and membership of professional associations to which they belong. Analysis of Variance statistical technique was used to test the hypothesis at 95% significant level, the result is shown in Table 2 below:

Table 2: Effect of quality of health workers on performance

Performance of health workers	Quality of Personnel		Total
	Qualified	Not Qualified	
High Performance	297	0	297
Low Performance	19	130	149
Total	316	130	446

Table 3: ANOVA

Quality of Personnel	Sum of Squares	df	Mean Square	F	Sig
Between Groups	75.530	1	75.530	2022.993	.000
Within Groups	16.577	444	.037		
Total	92.108	445			

Authors' Output (2013)

In the study, Performance is the dependent variable while Quality of health workers is the independent variable. Table 3 reveals that 70.9% of the personnel are qualified and from this group 94% are high performance while 6% are low performance.

The table further reveals that all the unqualified health workers are low performers. This means that quality has relationship with performance; hence most of the qualified health workers are high performers. The data reveals that out of the total number of unqualified staff, Nursing has 34.6%, followed by Health Records Staff (26.9%); Attendants (15.4%); Laboratory Technicians (15.4%) and Doctors (7.7%). Only the security unit's entire staff is qualified, probably because there is no formal education required before somebody can be employed for the job.

The highest proportion of unqualified staff amongst nurses is due mainly to employment of auxiliary nurses trained by some private hospitals and the employment of Community Health Extension workers as nurses by some of the private hospitals. In regards to Health Records and Laboratory Technician Staff, holders of secondary school certificate form the bulk of the unqualified staff. There are cases of unqualified staff amongst the doctors and most of the unqualified staff members are Nurses and retired health workers who did not attend medical school. The unqualified attendants are those without formal education. Table 2 is the result of analysis of variance showing the effect of quality health workers on performance. The table reveals that the quality of health workers employed in the selected private hospitals has significant effect on their performance.

The null hypothesis of no significant effect is rejected and the alternative hypothesis that quality has a significant effect on Performance is accepted.

RECOMMENDATIONS

The following recommendations are suggested for health workers' motivation to be increased in private hospitals:

Owners of most private hospitals should endeavour to employ qualified staff to perform the necessary skills and functions in accordance with their competence.

The various professional regulatory bodies should also ensure regular monitoring and control over their members through standard quality assurance and control. The various professional bodies should ensure that their members are issued valid licences to practise.

Ensure that pharmacy departments at private hospitals are manned by qualified individuals.

The medical directors of these private hospitals should encourage pharmacists to work in their hospitals by offering them reasonable salaries.

Private hospitals could also employ pharmacists who are on internship, housemanship or completing their national service at a much lower overhead cost as this would improve the functionality of pharmacy departments.

The problem of poor remuneration should be addressed in the private health sector. This is because ill-motivated staff do not perform well in organisations. Qualified health care workers are usually attracted to hospitals where they would be adequately motivated.

Universities, Teaching Hospitals and Colleges of Health Technology should train more skilled health workers in the various medical professional programmes run by the different institutions,

which would contribute to reduce employment of unqualified staff in the health sector. If these recommendations were heeded, the problem in the health sector in developing countries, especially in respect to motivation in private hospitals would be at least partially addressed. The private health sector occupies a significant role in health care delivery to the people and hence the health care workers should be adequately motivated for effective performance to be achieved.

CONCLUSION

Health workers in private hospitals have shown in the study that when motivated, their level of performance increased. Motivation is necessary for workers' performance to become more effective. There are numerous factors that can be used in motivating workers which include: Achievement, Promotion, Recognition, Relationship with others, Salary, Security, Status and the Work itself. In this study the results revealed that Promotion, Salary, Security and the Work itself are significant motivating factors for health workers in private hospitals while Achievement, Recognition, Relationship with others and Status did not constitute as significant factors for motivation of private health workers in the selected private hospitals. It has also revealed that quality has a relationship with performance; hence most of the qualified health workers in the selected private hospitals are high performers. Qualified and competent staff when employed by Private hospitals can only be retained if adequately motivated. The importance of adequate motivation of staff cannot be over-emphasised. The health workers therefore, need to be given adequate financial and non-financial incentives for them to work and perform well in most of these private hospitals.

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INFRASTRUCTURE, INDIGENISATION AND THE BLACK ECONOMIC EMPOWERMENT POLICY IN ZIMBABWE: RETHINKING THE ROLE OF THE STATE

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ABSTRACT

The role of the state and other players in the provision of infrastructure in its diverse forms in the current 'indigenisation' process in Zimbabwe remains unclear and undefined. In light of this problem, this article seeks to review the significance of infrastructure provision and its maintenance in the current socio-economic dispensation, to assess the centrality of infrastructure development and maintenance in the specific goal of economic indigenisation and black economic empowerment in Zimbabwe and to evaluate the role of the state in a changing policy environment. The Indigenisation and Economic Empowerment Act (Chapter 14:33) of 2007 is not clear about infrastructure provision yet the utilities and infrastructure sector is one of the most affected sectors in the Zimbabwean economy. Roads, civil aviation and railway networks across the country have not seen major improvements and modernisation and are deteriorating dismally.

Keywords: Infrastructure Provision; Indigenisation and Empowerment; Economy; Sustainable Infrastructure.

INTRODUCTION

Conventionally, the role of the state is to regulate the implementation of public policies and to provide public infrastructure such as roads, public buildings and dams. Given the limited economic potential for returns in infrastructure the private sector is not interested. There are basically two competing ideologies in public infrastructure provision. One view argues that infrastructure spending is a function of decision-making by politically motivated local officials responding to both external and internal pressures. The other view contends that investment in infrastructure is the result of rational reactions to changing economic and demographic conditions. Based on these arguments, public infrastructure provision is largely a function of resource availability and demand for public services pressed upon government (Bruce, Carroll, Deskins & Rork, 2007). Sustainable financing of infrastructure projects requires access to debt and equity finance, adequate pension funds, return-seeking investors, access to long-term credit, favourable cost of capital and instruments for sustainable funding. Often, infrastructure spending goes hand-in-hand with measures such as tax incentives and regions and sub-regions have to compete to attract economic activity. This article critically reviews the significance of infrastructure development and its maintenance in an economy aiming at empowering the majority of its residents. It is qualitative in nature and explores literature from various sources. Reference to examples drawn from Zimbabwe and other areas of significance to this article are cited. The role of the state in infrastructural provision is also not spared and forms the basis for argument in the article. Globally, infrastructure is the engine to economic growth whilst underinvestment in infrastructure is a cause of concern. The 2010 World Economic Forum predicted a looming deficit of infrastructure development adding up to over \$2 trillion each year in the next 20 years.

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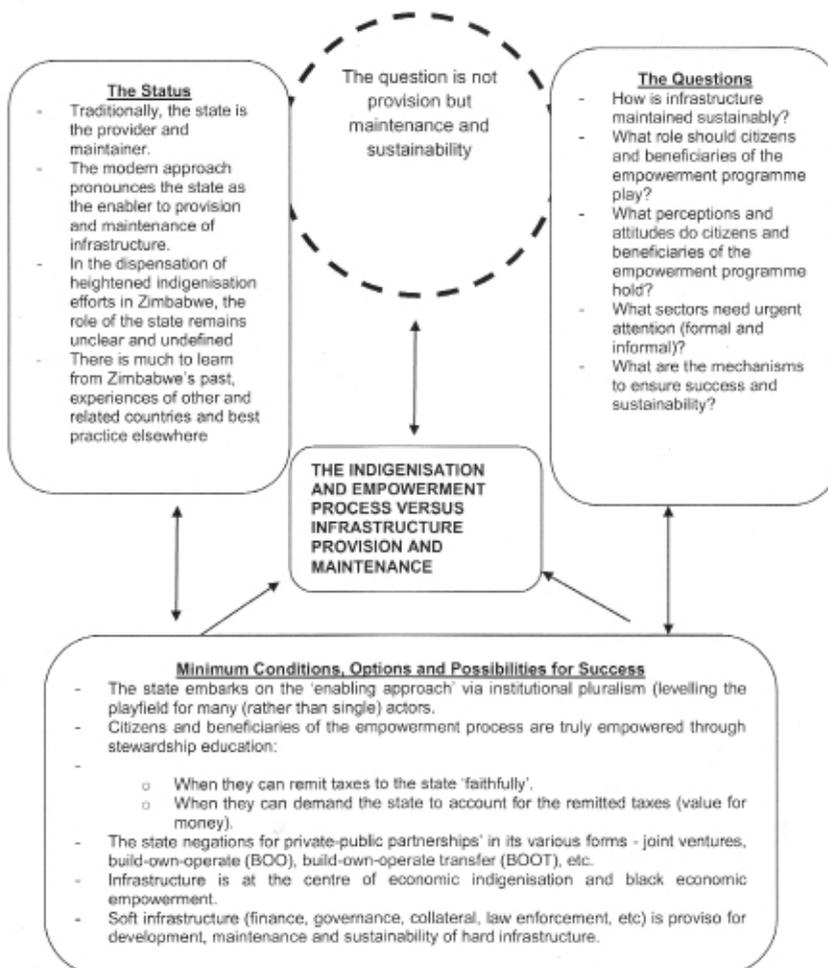
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CONCEPTUAL AND ANALYTICAL FRAMEWORK

Given its capital intensive nature and high investment risks, public infrastructure has traditionally been owned, operated and financed by state institutions. This is because construction, operation and maintenance of public infrastructure and the community's capacity to fund these activities are closely related to the quality of economic growth (Alabi & Ocholi, 2010). However, in the current fiscal environment, state and local infrastructure spending is mostly at risk (Bell, Brunori, Hanson, Choi, Metcalf & Yuan, 2006). State and local governments find it difficult to raise revenues required to provide the level of quality of services demanded. At the same time, demographic and economic trends are increasing the demand for goods and services provided by both state and local governments. As a result, the role of the state in providing infrastructure especially in Zimbabwe has been diminishing over the years(See Figure 1).

Figure 1: Interrogating the infrastructure question in the Zimbabwean indigenisation and empowerment drive



The private sector seems to have overtaken the role of the state resulting in poor and inadequate infrastructure required to drive the nation to greater heights. Important at this juncture is to differentiate between the state and the government. The government is a narrow concept hence an element of the state. The central government comprises of various ministries and departments.

Under it is the local governments (Bell *et al*, 2006). Local government is the administrative body of a small area, either a city or town. It can elect officials, enact taxes, and do many other things that a national government would do, just on a smaller scale. Local government often directs community development processes, such as the building of clinics, schools, roads and houses in their areas of jurisdiction (Maruta, 2012). A state is usually defined by four aspects namely population, territory, government and sovereignty (Carvalho, 2013). It includes the whole range of public institutions of government including the executive, legislature and judiciary. Aristotle defined the state as a body of citizens adequate for purposes of life. Thomas (2004: 6) defines it as a set of political institutions that govern in a delimited territory. The state has the mandate to direct resources to investment of social services (e.g. health, education and welfare) and infrastructure projects (Maseng, 2010). Decentralisation and delegation of infrastructure provisioning to local government is important for efficiency in service delivery.

The European Commission (2005) defines a small enterprise as one with 10 - 50 employees and a micro enterprise is defined as one with less than ten employees. In Zimbabwe, a micro enterprise is business entity with less than ten employees and a small enterprise refers to an enterprise with between 10 and 50 employees (Mabhungu, Masamba, Mhazo, Jaravaza, & Chiriseri, 2011). Overall, small and medium-sized enterprises (SMEs) occupy a key and strategic role in revitalizing economies. Small and medium-sized enterprises (SMEs) They have emerged as vehicles towards attaining indigenisation and economic empowerment in various countries. Although there is no universally accepted definition of SMEs, different countries define them differently, usually according to assets in a business entity, turnover, number of employees and management characteristics. SMEs are envisaged as effective instruments of employment creation and economic growth, which ultimately lead to poverty alleviation for the entrepreneurs themselves as well as their employees. SMEs play important roles in promoting economic activity in a society or nation including improved quality of life for its citizens (Goriwondo, nd). Colonial regimes, for example apartheid in South Africa, restricted black citizens from meaningful participation in the economy. The implementation of black empowerment programmes may have resulted in the alleviation of poverty through the widening of livelihood options for citizens.

INFRASTRUCTURE PROVISION AND MAINTENANCE

Infrastructure like a baby is easy to produce but difficult to maintain. Tambekong (2006) alludes that overcrowding in trading markets and small business outlets is evidence of the continuous deterioration in the quality of infrastructure. A number of management-related factors influence demand for public infrastructure provision. In particular, infrastructure provision is affected by pricing mechanisms including user fees, conditions for adjustment of user charges, changes service delivery systems (for example, shifting responsibility from public to private sectors), and changes in resource management (Bruce *et al*, 2007). Definitions of infrastructure range from all public capital investment, to specific investment in the construction, repair and maintenance of fixed capital assets or facilities (such as roads, bridges, airports) (Bell *et al*, 2006). For Bruce *et al* (2007) the term 'infrastructure', implies productivity associated with public expenditure. Infrastructure services such as power, transport, and telecommunications are central to economic development. They represent, if not the 'engine', then, the 'wheels' of economic activity (Tambekong, 2006:110).

Two essential categories of infrastructure are required to sustain economic growth - hard and soft infrastructure. Hard infrastructure is the hardware that transmits or stores services for example, telecommunications, power and water. Soft infrastructure includes aspects of governance, financial systems and information systems. A well-established and developed infrastructure has a high proclivity towards attracting investment. Through some virtuous cycle, investment leads to job creation, job creation leads to poverty reduction, hence improved quality of life of citizens. On the contrary, poor infrastructure deters private investment, both domestic and foreign, opening up a Pandora's box of poverty (Robinson, 2006).

There are three major sources of financing commonly associated with infrastructure: intergovernmental revenue, the bond market and interest costs (Bruce *et al*, 2007). Demand from new and expanding industry often places additional pressure on governments to provide public infrastructure. However, infrastructure investment is often a response to private sector pressure, expectations of future economic growth, and stimulation of economic development. Governments often provide new public capital in exchange for enhanced economic growth within the community.

Public-private partnerships (PPPs) are concessionary arrangements between public sector and private players especially in infrastructure development projects. These partnerships can take place as structured collaboration between the government and the private sector. In Nigeria, for example, a partnership was fostered between the Ministry of Agriculture, Water Resources and Rural Development with United Nations Children's Fund (UNICEF) and the United Nations Development Program (UNDP), in the financing and maintenance of water supply (Carvalho, 2013). Public-private partnerships represent the fastest growing tool for infrastructure finance. In their simplest form, PPPs combine public ownership and private operation of public facilities. Private firms may take on the finance, design and construction of public infrastructure, while the central and local governments are responsible for tax collection and ensuring that legal requirements are observed (Bell *et al*, 2006). PPPs have the potential of bringing in third party participation in the form of a private sector player who can help in the finance, design and even maintenance of public infrastructure. This form of infrastructure finance has legal constraints in the sense that partnerships must be closely monitored to ensure good quality output of the infrastructure investment projects.

At the centre of infrastructure, provision is local government taxation. In Zimbabwe, these include rates, rents, licence fees and parking charges. Taxation is traditionally the source of finance for the provision and maintenance of services and infrastructure in cities and towns, however for capital expenditure local authorities have no option but to strive to be innovative (Chirisa, 2013: 222; Bell *et al*, 2006). Tax regimes comprise central and local government taxes. However, recently, there has been poor coordination between the two regimes. The existence of many types of taxes has contributed to higher rates of tax evasion and duty exemptions. This has adversely affected the government revenue base, which, in turn, may have crippled infrastructure provision. Although local tax revenue remains the key source for infrastructure financing, it is rarely collected hence the serious infrastructure backlog.

The taxation system may facilitate the provision of incentives for venture capital funds, private sector participation in infrastructure development like the Build-Operate (BO), Build-Transfer (BT), Build-Operate-Transfer (BOT), and Build-Own-Operate Schemes (Godana & Hlatshwayo, 1998). A joint venture is characterised by mutual control or management of the enterprise, the right to participate in the profits and joint property interest in the subject matter of the venture (Chetwin, 2007). Joint ventures continue to increase popularity in many countries (Chetwin, 2007). In the United States, joint ventures are covered under the Partnership Law. BOOT (build, own, operate, transfer) is a public-private partnership (PPP) project model in which a private organisation conducts a large development project under contract to a public-sector partner, such as a government agency.

CASE STUDIES

In Cameroon, women's empowerment has a long history (Alasah, 2006). Here, empowerment means equal opportunity for both men and women to access common property, resources and services without any form of discrimination. It further means giving them the opportunity to participate in decision-making and the holding of important positions to influence development (Alasah, 2006: 75). The 1990s saw the promulgation of laws on freedom of association which enabled many women to form Common Initiative Groups (CIGs), some of which have become very successful today. The major constraints that Cameroonian women face in the process of empowerment and sustainable development include male domination and a traditional custom and

legislation that exist, simultaneously overlapping and contradicting. A low literacy rate among women, especially computer literacy, is also seen as a major setback to their empowerment and sustainable community development.

Nigeria initiated black empowerment policy programmes from the 1960s (Sanchez, 2008). In this period, the government's perception of foreign owned companies was laden with distrust. Leaders perceived the process of indigenisation as a way of asserting the nation's right to exercise sovereignty over natural resources in their territory, regulate foreign participation, and exercise the right to naturalise such investments. From 1969, the government forced Nigerian equity ownership as a mechanism to retain profits in the country and mandated Nigerian ownership and management control, particularly over manufacturing firms. It was a policy designed essentially to 'promote an indigenous capitalist class'.

Nevertheless, in reality, these indigenisation efforts did not broaden the basis of Nigerian participation in the economy. Technical, entrepreneurial and managerial expertise among average Nigerians remained relatively limited, while an élite of Nigerian business people and the Nigerian government benefited from that transfer as admitted in the 'Report on Vision 2010 Economic Direction'. A study conducted by Alabi and Ocholi (2010) in Kogi State in Nigeria has revealed that weaknesses of infrastructure provision were attributed to lack of private sector involvement in infrastructure provision. Thirty percent (30%) of the proposed infrastructure development projects were not implemented due to lack of funding (Alabi & Ocholi, 2010). The Federal Government allocated a large proportion of the budget to infrastructure revitalisation rather than the development of new ones in Kogi State, Nigeria.

In South Africa, apartheid restricted the black population from actively participating in the economy. The black communities were underdeveloped whereas wealth accumulated to the racial minority. However, with the attainment of democracy in 1994, the South African economy has undergone serious restructuring with black economic empowerment (BEE) being adopted as a broad-based strategy directly affecting both national and international companies operating in South Africa. The central goal of the empowerment drive here is to overcome the racial and social divide left by the apartheid regime through the advancement of blacks within the economy (Sanchez, 2008). However, BEE policies in South Africa have been criticised for benefiting only a few individuals. However, the BEE drive in South Africa does not involve eliminating white entrepreneurs from the business community, but rather integrates blacks into the mainstream economy.

ZIMBABWE'S INFRASTRUCTURE AND EMPOWERMENT HISTORY

Empowerment in its broadest sense can be seen as increasing power - to marginalised groups those who are farthest down the ladder of poverty and those who have the least access to knowledge, decisions, networks and resources. Economic empowerment is a broad policy goal while indigenisation is the instrument for achieving the goal. The latter is understood as the requirement of non-indigenous companies to dispose 51% of their shares to the black majority in Zimbabwe (Masungure & Koga, 2012). Moreover, it is the practice of transferring privately owned economic assets into public ownership, a notion of helping poor community groups to move out of poverty (GoZ, 2007). In more succinct terms, the Indigenisation Act alludes to the possibility that indigenisation and black empowerment can be a deliberate involvement of indigenous Zimbabweans in the economic activities of the country, to which hitherto they had no access, so as to ensure the equitable ownership of the nation's resource.

Ideally, state ownership of assets is by definition indigenous ownership (Godana & Hlatshwayo, 1998; Zindiye, 2008; Government of Tanzania, 2003). In Zimbabwe, black empowerment after independence in 1980 has been a focal aim. The drive started with redistribution of land to black farmers and correcting the imbalances of colonialism. In recent years, the black empowerment programmes have covered other sectors such as mining and manufacturing. The state, through its various programmes, has been a regulator of the processes, creating a conclusive policy environment. For example, in the mining sector, the establishment of community share ownership

trusts in various provinces of the country such as Manicaland, Masvingo and Matabeleland, among others, is evidence of this initiative. Central government has stressed construction of schools and rehabilitation of dams in the rural areas as examples of infrastructure development projects.

Specifically, the indigenisation policy prescribes that indigenous Zimbabweans have to own at least 51% of the shares (Zhou & Zvoushe, 2012).

There are several supportive institutions to the empowerment drive in Zimbabwe including the Ministry of Small and Medium Enterprises and Cooperative Development (MSMECD), the Ministry of Local Government, Public Works and National Housing and the District Development Fund (DDF). The MSMECD is responsible for increasing economic growth and empowerment through the development of micro, small and medium enterprises and cooperatives in Zimbabwe. Its vision is to “be the ‘nerve’ centre for economic growth and empowerment through the development of SMEs in Zimbabwe”. To achieve this the ministry aims to create an enabling environment that promotes a vibrant sector (Goriwondo, nd :1). The Ministry of Local Government, Public Works and National Housing has a Department of Infrastructure Development Services (DIDS), which is responsible for the funding of infrastructure development projects. DIDS coordinates the activities of the NGOs and liaises with the District Development Fund for development and maintenance needs. The DDF is responsible for the development and maintenance of non-commercial water supplies in communal and resettlement areas and research and development of appropriate technologies. Development funds for water and sanitation are channelled through the Rural Capital Development Fund (RCDF) for minor activities. Major capital items are funded through the Public Sector Investment Programme (PSIP).

In the immediate post-independence era, focus of the growth centre policy was on rural areas. Centres were identified in the communal areas and would receive public sector investment to improve physical and social infrastructure (Wekwete, 1988: 1). The infrastructure developed included water reticulation, internal roads, electricity, sewerage and other community services. The Growth Pole Strategy was complemented by the Small Enterprise Development Cooperation (SEDCO) in 1983 whose major objective was to encourage and assist the establishment of cooperatives and small commercial and industrial enterprises. At local government level, local authorities have been working in conjunction with the Department of Physical Planning to improve investment conditions at the growth points. Therefore, this could be termed the ‘infrastructure phase’, but policy has now shifted towards the stimulation of economic activity. This shift is logical but it is also a realisation that infrastructure on its own will not necessarily attract investment (Wekwete, 1988).

The GoZ established growth points to create towns in the rural areas, to promote employment (Wekwete, 1988). Growth points received state support to invest in energy, communications, water supply and social and administrative infrastructure. They are centres of economic activity artificially created or stimulated in disadvantaged regions with the intention of having them become natural centres of economic growth. They are centres of expanding industries which trigger a chain reaction of production and promotion of associated services with the ultimate goal of improving the quality of life. It is envisaged that by declaring promising and resource-endowed centres as growth points, the cumulative causation process would ignite the process of economic development, whose spread effects would improve the quality of life in the periphery (Manyanbare, Mhishi, Svotwa & Sithole, 2009). Growth points can be boosted through the construction of new roads, railways, airports, as well as the introduction of efficient telephone links, power supplies, postal services, the modernisation of education facilities, the siting of new warehouses, retail premises, the reform for trading, land ownership, and tax laws. The growth points can be re-engineered through capital investments to stimulate employment opportunities.

A report by the Portfolio Committee on the Status of Small and Medium Enterprises (SMEs) in Harare revealed that SMEs are facing a number of challenges in as far as infrastructure is concerned (Parliament of Zimbabwe, 2010). For example, the Mupedanhamo Traders Association (MTA) is wracked with overcrowding, lack of basic sanitation like toilets hence a

health hazard given the area's susceptibility to cholera outbreaks. The Mupedzanhamo Traders Association has complained about the city council charging exorbitant rates that other traders are struggling to pay. The council is reportedly charging \$63 per table which widows, the elderly and other marginalised groups of the community are finding difficult to afford. In Glen View, SMEs face inadequate business shelters, i.e. traders and manufacturers do not have proper sheds to protect their finished products from rain. In Msasa, Luxury and Leather Zimbabwe, face water and electricity shortages. The sector has been affected by laws such as the Statutory Instrument 216 of the 1994 (Use Group Regulations). There are also stringent regulations imposed by Environmental Management Agency (EMA) (Parliament of Zimbabwe, 2010). Beneficiaries of the initiatives of the Ministry of Small to Medium Enterprises and Cooperative Development are required to pay taxes to the Zimbabwe Revenue Authority (ZIMRA) and the Harare City Council. However, the duty charged by ZIMRA has been criticised as being too high, resulting in the smuggling of goods into the country.

CONCLUDING REMARKS

The passing of the Indigenisation and Economic Empowerment Act has seen the successful implementation of the policy programmes as a precursor to the launch of Community Share Ownership Schemes (CSOS) in the various provinces of the country. Under the CSOS, private companies operating in these areas are expected to comply with indigenisation regulations by ploughing back into the communities where they operate. Such schemes have been launched in Shurugwi, Marange and Hwange, among others. However, community development is meaningless without the requisite infrastructure: construction of schools, hospitals, roads and rehabilitation of dams to promote irrigation. The success of the indigenisation and empowerment policy in Zimbabwe lies with strong political will and active participation of the state, business and civil society in the country. More immediately, the key infrastructural areas of energy and power development, roads, rail, telecommunications, water, and sanitation will require urgent attention. The participation of the private sector in infrastructure provision and maintenance is critical for sustaining economic development. Development of markets, sourcing and channelling of capital and technical assistance to SMEs, education and training for entrepreneurs, development of infrastructure such as factory shells, incubation units for the promotion of SMEs' activities, are the pillars of the drive. Domestic institutions should capitalise on their strengths for effective cooperation in this sector. In Zimbabwe, the Indigenisation and Economic Empowerment Act speaks of the empowerment of individuals rather than community development. The legislation provides the Minister with the discretion to decide on who to put on the indigenisation scheme. However, in the BEE Act of South Africa, the Minister consults with stakeholders (Matunhu, 2012). Public policies can cultivate the culture of responsibility. In Zimbabwe, infrastructure development reflects the dual structural segmentation of the economy between the formal sector and the informal sector. Zimbabwe ought to align the informal sector with its empowerment programmes since it has become the livelihood network for most urban residents in the country. Various statutes, for example, the Banking Act (Chapter 24:20), Reserve Bank Act (Chapter 22:15), Exchange Control Act (Chapter 22:05) are necessary in the development of both the hard and soft infrastructure of the country. Local authorities ought to create adequate trading places for SMEs to decongest existing markets. The Zimbabwe Electricity Supply Authority (ZESA) should also charge tariffs that are commensurate with the size of business. Indigenisation involves a transfer of power and wealth from a capitalist system to the previously marginalised people.

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INNOVATION IN E-LEARNING: CHALLENGES FOR UNIVERSITIES

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ABSTRACT

The increasing use of technology and its benefits to the e-learning environment specifically in institutions of higher learning has been a topic of recent discussion. The focus on higher learning institutions, its academics and students is the focus of this discussion. Universities currently facing the prospect of dealing with large student numbers and class groups are increasingly seeking ways in which this technology could transform their institutions into e-learning centres thus enabling them to overcome the challenges they face. Against this background the questions being raised are the following: are sufficient strides being made by universities to change their learning environments to incorporate the benefits of e-learning? Is the university management directing policies and the necessary resources toward transforming their institution into an e-learning centre? Are students and lecturers sufficiently trained to adapt to the e-learning environment? This paper takes a look at the current state of e-learning in institutions of higher learning, both across the world and in South Africa. The paper concludes by suggesting some of the areas that are challenges to universities which they need to overcome in order to reap the real benefits of e-learning.

Keywords: E-learning; Technology; Environment; Higher Learning; Universities.

INTRODUCTION

The University of South Africa (Unisa) could be regarded as the forerunner in distance education in South Africa. For Unisa to remain in this position it needed to address the challenges of dealing with large numbers of students, as well as those students residing in different towns, cities, countries and those travelling around the world. With the use of technology and the provision of the necessary resources and infrastructure Unisa was able to adapt to these increasing demands.

While Unisa has managed the transition from a distance education institution to an e-learning institution, the growth of e-learning in a large number of other universities has been somewhat slow or non-existent. The challenges of the country e.g. poverty, unemployment, a poor schooling system combined with a range of other economic and social problems also contribute to the ability of universities to provide the necessary education and training in order for e-learning to play a bigger role in their institutions.

E-learning has the ability to revolutionise learning by providing an interactive environment involving the lecturers and students that enhances the student's ability to learn and the lecturer's ability to communicate better with their students. The full value of e-learning can only be realised if university authorities align their teaching and learning policy to e-learning, by making resources available and providing the necessary education and training to its lecturers, tutors and students.

With the number of students entering universities steadily increasing and the attendant problems and the poor quality of students coming through the schooling system, universities are being challenged to find solutions to these problems. E-learning can be seen as a solution.

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DEFINITION OF E-LEARNING

E-learning can be described as the transference of information through technology to enhance the learning situation. E-learning is a support system that relies on technology to provide an interactive environment that aids the learning process (Meyer, 2007). Clark and Mayer (2011: 8-9) posit view that e-learning is a learning instruction which is delivered through an electronic device. Some of the benefits that arise out of the use of e-learning are portability, any time any place connectivity, flexible and timely access to e-learning resources, immediacy of communication, empowerment and engagement of learners, as well as active learning experiences (JISC, 2005: 9). Tavangarian, Leybold, Nolting, Roser and Voigt (2004) summarise the concept of e-learning by stating that e-learning is a type of on-line information and communication technology-based learning that can be conducted inside and/or outside a classroom.

E-learning is viewed as flexible learning which uses information and communication technology resources, tools and applications that focus on: accessing information; interacting with lecturers, tutors and learners with the purpose of collaborative learning; and production of materials, resources and learning experiences (Isaacs & Hollow, 2012). For the purposes of this paper e-learning can be seen as the use of information and communication technology with the aid of an electronic device in order to enhance the learning situation.

E-LEARNING IN LEARNING INSTITUTIONS AROUND THE WORLD

In the last decade the use of the internet has dominated our lives. It has fundamentally affected the way we look at classroom learning. The affects of e-learning in institutions of higher learning across the world has had varying degrees of success. The benefits of e-learning have been narrowed down to: cost effectiveness and the enhancement of the learning experience. A summary of some of these benefits is provided hereunder. In many countries an increase in technological awareness has been noted. In these countries, especially in places of learning, e-learning policies have been formulated to drive this process. Resources have been set aside to ensure that the process is successful (OCED, 2005). The provision of electronic devices e.g. the number of computers, has begun to match the number of learners. In addition the internet connections have been on the increase so that the technological skills of learners can also be improved (Key Lessons, 2010: 13-14).

For the purposes of their research Ruiz, Mintzer and Leipzig (2006: 207-212) identified e-learning as technologies that offer learners control over content, learning sequence, pace of learning, time and media which allow them to mould their experiences so as to meet their personal learning objectives. In the area of medical education e-learning was found to match the effectiveness of the traditional classroom lectures. The conclusion drawn is that both e-learning and classroom-based learning can function side-by-side without one replacing the other. An important component for e-learning to be successful is that the necessary infrastructure must be provided. These include digital libraries, e-learning materials, technical standardisation and methods of peer review resources. Ruiz *et al* (2006) are of the opinion that innovations in e-learning technologies usually point towards a revolution in education that allows learning to be suited to individuals (also known as adaptive learning), while enhancing learners' interaction with others via collaborative learning and simultaneously transforming the role of the teacher.

E-learning, when compared to traditional learning or any other formal learning encounters the same challenges: learners' needs must be assessed; the content has to be negotiated or prescribed; learning activities need to be orchestrated; and learning must be assessed. The difference is that "... the effect of the online medium creates a unique environment for teaching and learning ... the capacity for shifting the time and place of the educational interaction ... the ability to support content (is) encapsulated in many formats, including multimedia, video, and text, which gives access to learning content that exploits all media attributes ... the capacity of the Net to access huge repositories of content on every conceivable subject... including content created by the teacher and fellow students... creates learning and study resources previously available only in

the largest research libraries, but now accessible in every home and workplace... the capacity to support human and machine interaction in a variety of formats (text, speech, video) ...” (Maloney, 2007: 1-3). Clegga, Hudson and Steela (2003: 39-53) suggest that e-learning is shaping higher education. They believe that whether observers ‘enthusiastically’ embrace practitioners or ‘stand aside and watch’, e-learning will happen. Management support for the success of e-learning is therefore essential.

In the United Kingdom (UK) the Minister of Universities and Science made a request to universities to invest in online learning. This request was as a result of government policy that placed e-learning on their priority list. E-learning is seen as a tool that will enable the UK to recover from its diminishing student enrolments at Universities. Offering their courses online is seen as a way of expanding universal reach, while improving access and increasing revenue. The e-learning innovation will lead to universities in the UK becoming more competitive. The London School of Business and Finance and University of Westminster have adopted the e-learning philosophy and have established campuses offshore with much success (Van Rooijen, 2013).

The universities in the United Kingdom have also realised that e-learning should not be seen as a replacement of traditional education but should be seen as a tool that complements it. E-learning is a way of expanding access to education at a global level. In addition, it is a means of attracting the individuals who fall in the mid-20’s age group who want to develop their careers with little or no disruption to daily functioning. The benefits of online education is also seen in terms of a global village in which students and lecturers in one part of the world could connect to a similar group in a different part of the world, thus providing a network of expert global knowledge. The experts in e-learning in the UK have come to the conclusion that the implementation of e-learning needs real investment which, in most cases, lies outside the potential of the government and the universities themselves. To this end public private partnerships must be considered.

Curran (2004), in his study conducted with universities in Europe and United States, examines e-learning strategies with three different objectives:

- Widening access to educational opportunity,
- enhancing the quality of learning, and
- reducing the cost of higher education.

Curran (2004) found with institutions in Europe and United States that:

- Increasing the access to students and providing the necessary resources was an important consideration for these institutions. While the institutions targeted enrolment growth as their form of income survival, the widening access and different forms of enrollment provided the opportunities not only for new groups of students but by widening access to post-graduate qualification they attracted the mature, career orientated student.
- E-learning was seen as a tool that enhances the quality of teaching by supplementing the teaching function by providing online information, enhanced communication between lecture and student and the speed of feedback. University resources can be shared and duplicated online without additional cost to the student. This study also found that notwithstanding the supportive and supplementary role of e-learning, the possible long-term effect of e-learning on traditional teaching practice in universities needed further research.
- In terms of cost reduction with the use of e-learning, the study found that there was an expectation that technology-based teaching would reduce costs. The analysis provided to reach this conclusion, while not entirely new, suggested that traditional teaching already had a sound framework in terms of its offerings and course development and administration cost and with little or no additional cost could be adapted into e-learning. Another area that was worthy of consideration was that with e-learning academic productivity would be enhanced, thus saving time in lecturer/student interaction. Institutions using e-learning would naturally have found a smarter way of doing things which again would result in cost reduction. The study is guarded in saying that in

general the containment of cost needs a longer period of e-learning usage before final conclusions could be drawn (Curran, 2004).

Curran (2004) concludes his study by stating that the key characteristic of e-learning is its diversity and characteristic of adaptability in use and flexibility of application. The implicit compatibility with institutional aims suggests that the e-learning strategies universities adopt reflect rather than influence the institutional ethos (Curran, 2004). This is worthy of consideration especially when making a decision about the adoption of the new technology and to what extent it is adopted.

WHY USE E-LEARNING IN UNIVERSITIES?

The growth of e-learning has to be weighed against the development of online technology. In the United States a survey of about 100 tertiary institutions in 1998 showed that two-thirds were already participating in a 'virtual university', or were a partner in IT-supported distance-education. Later studies showed that these numbers increased for distance-learning (Curran, 2004: 1-3).

Research into how universities can use e-learning to achieve their goals provides useful information that can chart the future for the use of e-learning in institutions of higher learning.

Universities in the global environment are continuously faced with the demand to cater for the increasing number of students wanting to gain entrance to their institutions. Competition for the best students who achieve outstanding results has led to the leading institutions of higher learning, especially in the United States (US), setting the trend with making e-learning participation compulsory by providing 100% Wi-Fi coverage and increased laptop ownership. France and Italy have matched universities in the US by also providing 100% Wi-Fi coverage and increased laptop ownership. Norway and Scandinavia are amongst the leading countries in Europe in e-learning enhancement. E-learning programs like Blackboard, Moodle and Sakai are increasingly being used the world over with huge amounts of money being spent by institutions to enhance the e-learning environment.

E-learning has certain advantages which include:

- E-learning is said to enhance the teaching and learning environment by:
 - Improving the communication between the lecturer, tutor and learner,
 - accessibility in online searches in terms of time, place and availability of information, and
 - individualised attention in terms of assessment, teaching and learning.
- E-learning is said to increase organisational efficiency by:
 - Reducing overhead costs,
 - reducing time spent on assessments, and course management thus providing more time for lecturing,
 - providing automated testing and grade tracking,
 - enhancing control mechanisms for assessment, lectures and attendance, and
 - improving communication between lecturer and student.
- E-learning reduces running costs by:
 - Reducing the cost of infrastructure, and
 - providing online courses across the world.

TRENDS OF E-LEARNING IN SOUTH AFRICAN UNIVERSITIES

The South African situation is similar to the trends found in universities across the world. There are varying degrees of e-learning usage with some at an advanced level of usage while others are at the infancy stage of development. In the last decade universities have slowly moved from using the internet for information and research purposes only to using e-learning as a serious tool that can enhance learning.

The University of South Africa (Unisa), which was established 140 years ago, has a student enrollment in excess of 350 000 students from over 130 countries in Africa and around the world. Unisa is the largest open-distance learning institution in Africa and is the longest standing dedicated distance-education institution in the world. Unisa enrolls nearly a third of all South African students.(unisa.ac.za)

In a South African survey conducted in 2011 by the SA Institute for Race Relations, Unisa was considered the most productive university in South Africa because it accounted for 12.8% of all the degrees conferred among the 23 public universities and universities of technology in South Africa. (www.unisa.ac.za). This is indeed a proud track record which could only have come about as a result of a paradigm shift by all stakeholders at that university.

In order for Unisa to change from an institution of distance-education to a virtual university there had to be a change in management thinking with the approval of the relevant policies, the availability of the necessary resources, training and development of their staff in e-learning technology and the provision of the infrastructure needed to make this change.

In order to provide an interactive environment that enhances the learning experience of its students; improves the communication between its lecturers and their students; and makes their resources available to all its students, Unisa had to change to a virtual university which conducts its provision of higher education through the electronic media. An innovation in this direction was the adoption of MyUnisa which is a teaching and learning system that provides an enabling environment for the lecturers, tutors and students to interact with each other and to draw on the resources made available by the university (Kinuthia & Dagada, 2008).

The University of Pretoria is another one of South Africa's e-learning success stories. Being the largest residential university with an enrolment of over 48 000, of which 24 000 students are categorised as off-campus either enrolled part-time or for distance-education. In order to cope with the challenges of the large number of students the university embarked on a similar exercise to Unisa by developing a virtual campus.

The University of Pretoria also had to implement new policies on e-learning and technology, provide resources, develop new infrastructure and provide training and development to adapt to the new technology (Le Roux, 2004). The transformation into a virtual university has helped the lecturers and students to adapt to a technology-charged learning environment. The students are now in a position to utilise the learning materials of the university while the lecturers benefit by using the new e-learning technology. The university has also invested in the establishment of a Department of Telematic Learning and Education Innovation which will provide ongoing training for academic staff in learning design activities (Kinuthia & Dagada, 2008).

Similar to Unisa and the University of Pretoria is the University of Johannesburg which is in the fortunate position of having the necessary resources to advance its e-learning activities. It also has large student numbers, close to 45 000, spread across seven campuses. This university also provides support to its academic staff in the form of experts in learning design. The management paradigm shift experienced at the other two universities is also present at the University of Johannesburg (Kinuthia & Dagada, 2008).

Another of the large universities that has made some progress in e-learning is the University of KwaZulu Natal (UKZN) which is situated in the province of KwaZulu Natal. The university has over 40 000 students spread over 4 major campuses. Just as in other institutions lecturers are faced with large student numbers resulting in large class groups and experience difficulties in communication. They have made some progress in their e-learning endeavours with lecturers being trained in the use of the Moodle system which enhances their teaching and improves their communication with students. The university has started the process of equipping students with their own 'state-of-the-art tablets' and the first batch of 1 000 students from the College of Health Sciences were provided with the tablets as part of a pilot Visual Learning Project (VLP) (Liam, 2013: 9).

The new VLP allows students to be part of an interactive classroom that includes student and lecturer interaction electronically. The advantage of the system is that it enables students who are not in a lecture room as they are completing their practicals in some remote area to still be part of the lecture from any location. In addition these students can also use their tablets to download the content of the lectures from the internet.

The University of the Free State (UFS) while also having to contend with large student numbers found that by providing "... online lecture notes, quizzes, tests and online discussions to supplement the traditional lectures..." students were able to cope with the demands of university education and the communication between the lecturers and students improved (Thomas & Cronje, 2006).

While some universities such as those quoted above have made strides in transforming their universities into e-learning ones others, especially the ones that are normally termed 'previously disadvantaged institutions', have made little or no progress. This slow shift toward e-learning has largely been due to the lack of management direction and shift in institutional policy; lack of resources, cost of infrastructure, academic staff apathy; unavailability of e-learning expertise and lack of training and development.

Notwithstanding the above shortcomings some of these institutions are starting to make some sort of movement in the direction of e-learning. The University of the Western Cape, University of Zululand and the Mangosuthu University of Technology as well as other institutions, which are classified as 'previously disadvantaged institutions', having the majority of their students coming from disadvantaged backgrounds and a society that reflects many of the social and economic problems of the country. These universities are limited by having priorities that are different from the traditional ones highlighted above. In addition to coping with large student numbers; large class groups, students coming from a poor schooling system; and the inability of students to meet payment of their fees, these universities with limited resources were expected to develop their infrastructures with little or no outside sponsorship. The government's funding formula for subsidies does not adequately address the legacy of underfunding for these institutions during the apartheid years. Therefore when consideration has to be given by these institutions to adopting an e-learning culture and allocating resources for funding they have to exercise caution regarding other competing demands which they need to consider.

The University of Zululand recently sent a motivation to the university's Senate Committee for the adoption of the E-learning Implementation Strategy and Plan for the university. What was important about this motivation was that it pointed out that while e-learning facilities have existed on a limited scale for over a decade at this university, there was a degree of apathy exhibited by all role players. Management support, training attendance, computer literacy as well as students' enthusiasm towards the use of technology, have all been seen as stumbling blocks. In addition the lack of institutional policy was another factor that hindered the growth of e-learning (Evans, 2014).

The University of the Western Cape (UWC) is starting to make some progress in e-learning. The university has recently decided to establish an e-learning division. This division would be able to provide technological support and training for academic staff, tutors and students. This move by the university must be viewed as a step in the right direction because it comes about through institutional policy and provision of resources (Stoltenkamp, 2006).

The Mangosuthu University of Technology (MUT) with its limited resources and infrastructure has recently expanded its Teaching and Learning Division and is soon hoping to employ a full time e-learning specialist. In addition staff is now encouraged to attend training in technology. While not yet compulsory, staff are being trained to use Blackboard which is an interactive learning program that provides advanced communication between lecturer and student and enhances the learning situation.

CHALLENGES FOR UNIVERSITIES

Access to university education and increasing students attending university is no longer a debate. In a South African context this has become part of our existence. Poor schooling, remote locations, lack of resources and infrastructure confronts every institution of higher learning. In order to meet these challenges the universities need to transform into e-learning institutions. The challenges which have been identified in the preceding discussion need to be addressed before embarking on this venture.

DEVELOPMENT OF POLICY

An institutional policy on e-learning must be formulated and adopted by all stakeholders including management, lecturers, tutors, students and information technology staff. This policy gives direction for the institution's e-learning transformation.

DEVELOPMENT OF INFRASTRUCTURE

The necessary infrastructure for the change to a technological environment must be developed. Besides the necessary equipment, suitably qualified staff are needed, not only to administer and manage the project, but also to provide the necessary support to the lecturers, tutors and students.

PROVISION OF RESOURCES

Resources that are needed must form part of the overall plan for this development. As seen from this discussion some institutions cannot avail themselves of these resources and as a result their movement towards an e-learning environment is slow or non-existent. A consideration that could be explored is the development of partnerships with private companies. The companies could share in the establishment of a satellite campus that has offerings that are oriented towards students who are seeking to do post graduate degrees that are career-based. This arrangement could see a profit generated which can then be used to provide resources that will change the institution to a virtual campus thereby creating an attraction to students who want to be part of this environment.

GOVERNMENT FUNDING

The majority of institutions in South Africa are plagued by a lack of funding. This challenge is a much more serious issue when one has to look at the previously disadvantaged institutions. The non-payment of student fees and the high unemployment rate as well as levels of poverty in the areas from which these institutions attract their students adds to the challenge facing these institutions. It is becoming increasingly necessary for government to seriously reconsider how it funds the different categories of universities that exist in South Africa. The universities need to pressurise the government, via the Minister of Education, to embark on these discussions. The students, on the other hand, must also be part of this exercise. Instead of going on a strike each year because of the increase in their fees and lack of bursaries, they should also engage with the Minister of Education. Any success will provide additional funding for the universities, which could then be used to fund some of the required development.

TRAINING AND DEVELOPMENT

The successful implementation of e-learning depends on the training and development of lecturers, students, and tutors. Training and support by qualified staff comes at a cost that cannot be avoided. Institutions need to acquire the funds for this training without which e-learning cannot become a reality. The training and development of staff cannot be seen as a once-off, it has to be ongoing with the necessary expert support available on a continuous basis. In addition the training must become compulsory and all staff involved in e-learning must be compelled to attend.

CONCLUSION

Universities around the world have, to varying levels and degrees, been confronted with the technological explosion that has become an integral part of our lives for the last decade or so. Together with the widening access to the increasing number of students, universities have had to transform their institutions into e-learning environments that assist in dealing with large class numbers and difficulties in communication between lecturers and students. The universities need to realise that e-learning should not be seen as a replacement of traditional education but should be seen as a tool that complements it.

South African Universities are faced with the added challenge of disadvantaged universities, disadvantaged students, high unemployment rates and extreme levels of poverty which all contribute to the ability of universities to allocate funds to provide the necessary resources and infrastructure to realise the benefits of e-learning.

Universities that have been fortunate to have the funds, like Unisa and the University of Pretoria, have been able to transform their universities into virtual institutions. This has benefitted the university by improving the communication between lecturers, tutors and students by enhancing the teaching and learning environment; increasing organisational efficiency and the reduction of running costs.

Universities no longer have a choice in adapting to e-learning, it has become necessity. Institutions need to engage with the government and private sector to provide assistance in order for them to obtain the necessary funds to provide for the infrastructural development of e-learning.

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<https://www.google.co.za/#q=establishment+of+e-learning+division+UWC>

[www.unisa.ac.za/contents/faculties/humanities/docs/Neil 20Evans.ppt](http://www.unisa.ac.za/contents/faculties/humanities/docs/Neil%20Evans.ppt)

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MONETARY POLICY TRANSMISSION IN CHINA

P. Egan¹ & A. Leddin²

ABSTRACT

This paper estimates a Markov switching IS Curve for China in an attempt to examine the relationship between monetary policy, the credit market and the real economy in China. It endeavours to solve two of the main problems encountered in studies of this kind in the past. Firstly, the Markov switching aspect will eliminate any non-linearities, structural breaks or asymmetries in the transmission process. Secondly, the IS Curve will be estimated using a monetary policy index (MPI) which has been calculated using a Kalman filter in a State-Space Model (SSM) form. This index will account for the various monetary policy tools, both quantitative and qualitative, that the People's Bank of China (PBOC) have used over the time period of 1990 - 2010. The paper's findings suggest that an IS Curve model can be used to analyse the effect of monetary policy on aggregate demand in China once the issues of structural breaks and monetary policy tool selection are properly accounted for.

Keywords: Monetary Policy in China; IS Curve; People's Bank of China; Markov Switching; Kalman Filter.

INTRODUCTION

The Chinese economy has experienced tremendous transformation and record-high growth during the last three decades since the start of economic reforms in 1978. Having overtaken Japan as the world's second largest economy in 2010, it has taken an ever-increasing role on the world stage. Given its importance to the global economy and its extensive trade relations with the United States and the European Union, the dynamics of Chinese inflation, output and monetary policy reactions have become hugely significant. Since the reform period, Chinese macroeconomic dynamics has been characterised mainly by high GDP growth accompanied by erratic swings in its business cycle fluctuations. Despite average growth of almost 10% per annum over the last three decades, Chinese output volatility has remained consistently high. In an IMF paper, Zhang (2011) states that Chinese output volatility is now twice as high as that of the United States.

To gain a better understanding of what drives this business cycle behaviour, it is important to carry out a robust study of the relationship between monetary policy, the credit market and the real economy. This paper will attempt to do so by estimating a non-linear Markov switching IS Curve. We endeavour to solve two of the main problems encountered with studies of this kind for China in the past. Firstly, the Markov switching aspect will eliminate any non-linearities, structural breaks or asymmetries in the transmission process. Secondly, we will estimate our IS Curve using a monetary policy index (MPI) which has been calculated using a Kalman filter in a State-Space Model (SSM) form. This index will account for the various monetary policy tools, both quantitative and qualitative, that the Peoples Bank of China (PBOC) have used over the time period of 1990 - 2010.

LITERATURE REVIEW

A number of seminal papers have been written relating the level of aggregate demand to monetary policy. Bernanke and Blinder (1992), Blanchard (1990) and Friedman (1997) are all good examples of the established fact that in advanced economies, the level of real output is highly responsive to monetary policy. There is however a separate branch of research which suggests that monetary policy has very little impact on the real economy. It has also been suggested that the effect of monetary policy on output over the business cycle may have an asymmetric effect

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arising from the convexity of the aggregate supply curve. Since output is initially low in the flatter part of the supply curve when the economy is in recession, shifts in the aggregate demand due to changes in monetary policy would result in a larger impact on real output but a smaller impact on prices. In contrast, at the steeper part of the supply curve when the economy is in a state of expansion, changes in monetary policy will have a weaker impact to real output. An important question therefore from the perspective of this paper is can similar studies be carried out for the Chinese economy, given the huge difference between it and the economies studied in the research mentioned earlier. Perhaps an even more important question is whether or not standard monetary policy models can be used by policy makers to examine this relationship in China.

The New Keynesian model of monetary policy has become a standard tool for the analysis of monetary policy. This model consists of a Phillips curve, an IS Curve and a monetary policy rule. According to Goodhart and Hoffmann (2005), the IS Curve represents the intertemporal Euler consumption equation³. It relates the output gap to the expected future output gap and the real interest rate, where the higher the interest rate, the lower the output. A great deal of research on this topic in China has focused on understanding the impact of interest rate changes on investment, which accounts for a particularly large share of GDP and growth in China and is an important driver of business cycle volatility (Conway, Herd & Chalaux, 2010). Chinese authorities have traditionally relied mainly on administrative and an array of quantitative measures in conducting monetary policy, with interest rates playing a less prominent role (Koivu, 2009). So far the majority of the literature has supported this argument as macro based evidence of a significant negative relationship between interest rate change and capital formation have been weak. Geiger (2006) argues that changes in interest rates have limited impact on aggregate macro variables and that the transmission of monetary policy via the interest rate channel is distorted. Mehrotra (2007) examines the role of interest rate channels in Japan, Hong Kong and China using a structural VAR model and finds that there is quite strong evidence of the interest rate channel as a monetary policy tool for both Japan and Hong Kong, the same cannot be said for the Chinese data. The limited importance of the interest rate channel in China is attributed to the implementation of interest rates by administrative measures rather than market-determined interest rates by Mehrotra.

The majority of studies analysing aggregate demand in China have used linear models and have found little or no evidence of a relationship between output and monetary policy. Koivu (2009) argues that the reforms and structural breaks during the estimation period of 1998 to 2007 prevented the estimation of a stable credit demand equation for China. To remedy this, the author estimates the model across two sub-sample periods, accounting for these structural breaks and reforms. The results seem to support the findings of previous studies that the link from interest rates to real economy is still quite weak in China. The author did however find that the link had strengthened towards the end of the time period, suggesting that interest rates have increased in importance with continued reforms in the Chinese financial sector. Qin, Quising, He and Liu (2005) find that the overall impact of monetary policy on the real sector of the macro economy is small and insubstantial suggesting that these instruments are not effective monetary policy tools for controlling output, investment or employment in China.

Despite strong evidence to the contrary as illustrated above, a number of authors have found that there is a negative link between interest rates and macroeconomic aggregates in China. Girardin and Liu (2007) use a VAR model to investigate the relationship between interest rates and output in China and find that a negative relationship does exist, particularly in the latter half of the sample period of 1997 - 2005. While Conway *et al* (2010) argue that an IS equation for China is difficult to estimate, the authors estimation for the period 2000 - 2007 find that both the interest rate and the exchange rate have a statistically significant impact on the real economy in China, even if this impact is relatively small. The literature would suggest that it is very difficult to estimate a stable IS Curve for the Chinese economy, particularly since the reform period of 1978. There would appear to be a number of reasons for this. The reform and transformation that China has

³Details of this can be found in Appendix A.

experienced in the last thirty years has been accompanied by significant structural change in the Chinese economy. This can make examining the relationship between real and financial variables through linear macroeconomic models much more challenging. Dickinson and Liu (2007) for example find that the presence of structural breaks has affected the relationship between the real economy and the monetary policy in China.

Modelling the relationship between real and financial variables is therefore very difficult and it is their opinion that structural changes need to be taken into account when assessing the impact of monetary policy to the Chinese economy.

While there has been a great deal of literature concerned with Chinese economic policy (in particular the effect of changes in exchange rate policy), less attention has been paid to estimating an indicator for the monetary policy stance and almost none have accounted for the asymmetries that these policies have on output. Xiong (2012) computes a monetary policy index using an ordered probit model but stops short of differentiating between tightening and loosening of monetary policy i.e. whether there is an asymmetric response of the PBOC's actions due to changes in the state of the economy. The author states that this warrants further investigation.

It would appear that two common problems have been prominent. Firstly, China has traditionally relied on administrative and quantitative measures when conducting monetary policy while the People's Bank of China (PBOC) has been more reluctant to use the interest rate. The second issue is that the huge amount of structural change in the Chinese economy makes a stable IS Curve difficult to estimate. This paper will examine these issues by modelling a IS Curve using the traditional monetary policy tool i.e. the interest rate. It will then also construct a Monetary Policy Index (MPI) based on the quantitative and qualitative measures available to the People's Bank of China (PBOC). The Monetary Policy Index (MPI) IS Curve will be then estimated using a Markov switching process in an attempt to capture the structural breaks which have hindered studies of this nature in the past and will allow us to test for asymmetries in the response of output to monetary policy movements.

MODELLING AND ESTIMATION

Traditional IS Curve

The traditional IS Curve takes the form of equation (1) below. The derivation of the IS Curve to this form can be found in Appendix A:

$$\hat{y}_t = E_t(\hat{y}_{t+1}) - \alpha(i_t - E_t(\pi_{t+1})) + v_t \quad (1)$$

Where \hat{y}_t is the output gap;

$(i_t - E_t(\pi_{t+1}))$ is the real interest rate;

v_t is a demand side shock;

α is the response of output to changes in the real interest rate.

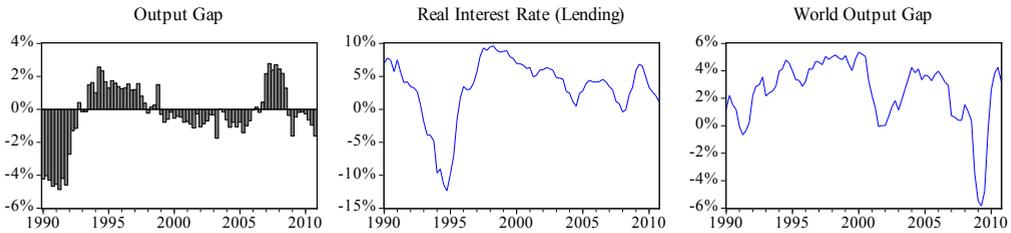
Equation 1 is a purely forward looking equation and relates the output gap to the expected future output gap and the real interest rate. In empirical applications however, purely forward looking models have been found to be inconsistent with the dynamics of aggregate demand (Estrella & Fuhrer, 2002). Therefore, a backward looking specification is often preferred in order to match the lagged and persistent responses of inflation and output to monetary policy measures that are found in the data (Rudebusch, 2002). Backward looking specifications have been used in empirical studies such as Fuhrer and Moore (1995) *inter alia*. Therefore, the model becomes:

$$\hat{y}_t = \beta(\hat{y}_{t-1}) - \alpha((i_{t-1}) - (\pi_{t-1})) + v_t \quad (2)$$

This purely backward-looking specification of the Chinese IS equation was chosen to obtain dynamics that match those of available economic data most consistently⁴. Actual data usually shows a high degree of persistence in both, inflation and output (Estrella & Fuhrer, 2002).

Figure 1 plots the variables for a traditional Chinese IS Curve. For the demand shock, we use world output gap data from the International Monetary Fund International Financial Statistics (IMF IFS). For the domestic output gap, the Chinese NBS publish quarterly GDP data for China. This data is however only available since 1992. Quarterly Chinese real GDP data is available since the reform period of 1978 from the National University of Singapore's Econometric Studies Unit. This series was calculated using the method developed by Abeyasinghe and Rajaguru (2004) and is used as our GDP data. This technique involves applying the Chow-Lin related series technique to annual real GDP series which provides us with quarterly real GDP estimates, as developed by Chow and Lin (1971). The basic idea is to find some GDP related quarterly series and come up with a predictive equation by running a regression of annual related series. Then, use the quarterly figures of the related series to predict the quarterly GDP series and adjust to match the annual aggregates. A HP filter is then applied to this data to obtain a quarterly output gap series. The real interest rate is calculated as $(i_t - \pi_t)$ where i_t is the lending interest rate and π_t is the annual change in quarterly Consumer Price Index. Both of these series are available from the IMF IFS. The time period of 1990Q1 - 2010Q4 was chosen simply due to the earliest availability of data for our estimations in the post reform period.

Figure 1: Standard IS Curve variables



Source: Abeyasinghe & Rajaguru (2004)

Table 1 reports the results of the traditional IS Curve equation for China. Overall, the results are not particularly compelling. The \hat{y}_{t-1} coefficient is high in magnitude and also highly significant indicating that there is high persistence to shocks to real output. Conversely, while the real interest rate, $(i_{t-1}) - (\pi_{t-1})$, has the expected negative sign, its coefficient of 0.05 is not significant indicating that the lending interest rate set by the PBOC has no significant effect on the real economy. The presence of structural breaks is also tested by applying the Quandt Andrews SupF statistic. This is a test for parameter stability at each of the different points of a time series. Pioneered by Quandt (1960) and developed by Andrews (1993), it tests for one or more structural break points in the sample of a specific regression equation. It is prudent to test for structural breaks in this manner when the time series in question has experienced shocks and abrupt policy changes like that experienced by China during its reform period since 1978. The stability assumption is strongly rejected by the SupF test. It is obvious from these estimations that a standard linear interest rate IS Curve is not appropriate to examine the monetary policy transmission channel in China. There are a number of explanations we can offer as to why this specification fails to model the relationship adequately. First of all, the underdevelopment of the banking system, market segmentation and the ineffectiveness of the credit channel make an IS Curve represented by an interest rate alone inappropriate. Secondly, the PBOC has also relied on many different tools in the conduct of monetary policy. This issue will be dealt with in the next section of this paper. Finally, the presence of structural breaks, non linearities and asymmetries in the transition of monetary policy also make linear models redundant in the Chinese case.

⁴Preliminary estimations of the Chinese IS Curve also indicated that the backward looking model was a better fit to the data.

Table 1: Standard IS Curve (1990Q2 - 2010Q4)

Parameters	Coefficients	Standard
c	-0.05	(0.12)
\hat{y}_{t-1}	0.89***	(0.05)
r_t^5	-0.05	(0.05)
r_t	0.02	(0.03)
SupF	15.4**	

***, ** and * denotes significance at the 1, 5 and 10% respectively

Monetary Policy Index – The role of qualitative variables

Since the PBOC have adopted a wide range of monetary policy instruments over the last three decades, no single variable can be used to adequately capture their monetary policy stance. A good measure of monetary policy stance should be able to indicate, either qualitatively or quantitatively, whether policy is becoming contractionary, expansionary or remaining unchanged (Xiong, 2012). Most studies in this area focus on the movement of a single policy variable such as the lending/deposit interest rate (Conway *et al*, 2010) or the M2 (Burdekin & Siklos, 2008; Koivu, 2009). Given that the Chinese economy has changed so rapidly since 1978 and during the period of this study, 1990 - 2010, it stands to reason that the monetary policy procedures of the PBOC have also changed dramatically. Therefore the index must include a comprehensive set of variables at the PBOC's disposal over the estimation period. We therefore attempt to construct a Monetary Policy Index (MPI) based on the battery of instruments available to the PBOC.

It is commonly accepted that monetary policy in China consists of both quantitative instruments (interest rates, deposit rates, reserve requirement etc.) and qualitative instruments. Qualitative instruments include, persuasion, telling banks which companies to lend to etc. This is often referred to as 'window guidance'. This policy uses 'benevolent compulsion' to persuade banks and other financial institutions to stick to official guidelines. Central banks put moral pressure on financial players to make them operate consistently with national needs (Geiger, 2006). This usually involves influencing market participants through announcements rather than a set of strict rules. Despite the phrase guidance, which implies a voluntary aspect in the system, the PBOC has a major influence on the lending decisions especially of the four state-owned commercial banks (Ikeya, 2002). Many authors, including Goodfriend and Prasard (2006), have emphasised the increased importance of these quantitative instruments, but the problem for a modelling point of view is that there is no data available for such policies. How can one model if the PBOC inform a company to follow their instructions? Therefore this 'qualitative' instrument variable must be calculated.

Calculating quantitative monetary policy instruments

Extracting unobserved variables is a common problem in economics. Unobserved component models (UCM) have been used in economic research in a variety of problems when a variable, supposed to play some relevant economic role, is not directly observable.

For example, unobserved components have been used in modelling agents' reaction to (permanent or transitory) changes in the price level (Lucas, 1976), in modelling credibility of the monetary

⁵ For simplicity the real interest rate $(i_{t-1}) - (\pi_{t-1})$, will be represented as r_t .

authority (Weber, 1992) and in measuring the persistence (or long-term effects) of economic shocks (Cochrane, 1988). The statistical treatment of unobserved components models is based on the State-Space form⁶. The unobserved components, which depend on the state vector, are related to the observations by a measurement equation. A transition equation then models the dynamics of the unobserved variables or states. The Kalman filter⁷ is the basic recursion for estimating the state, and hence the unobserved components, in a linear State-Space model (Harvey, Koopman & Sheppard, 2004).

In our State-Space model⁸ for example, the unobserved variable is the People's Bank of China qualitative monetary policy tools. The measurement equation of our model expresses quarterly changes in M2 as a function of both the quantitative and the qualitative monetary policy instruments used by the PBOC. The transition equation then models the unobservable qualitative instruments as a first-order autoregressive process (AR(1)). In line with the work of Petreski and Jovanovic (2012, 2013) the qualitative instrument series is obtained by a Kalman filter estimation of the equations (3) and (4) below. By extracting this series it allows for the analysis of the effect of qualitative instruments on real output to take place.

Applying this technique to our Chinese example yields the following two equations: *Measurement equation*:

$$\Delta M2 = \beta_1 + \beta_2 \text{ exchange rate} + \beta_3 \text{ discount rate} + \beta_4 \text{ reserve requirement} + \beta_5 \text{ lending rate} + \beta_6 \text{ deposit rate} + \beta_7 \text{ Qual} + \epsilon_{t1} \quad (3)$$

Transition equation:

$$\text{Qual} = \beta_8 \text{ Qual}(-1) + \epsilon_{t2} \quad (4)$$

The measurement equation above relates the quarterly change in money supply (M2) as a function of the quantitative variables (exchange rate, discount rate, reserve requirement, lending rate and deposit rate) as well as the qualitative tools. Our quantitative instruments are chosen based on information from the People's Bank of China official website.

Conway *et al* (2010) argue that the PBOC does not issue loans at the base rate and there has been no lending through the base lending window since 2001. Therefore, we replace the base rate with the deposit rate as it is widely accepted that the PBOC sets benchmark interest rates for commercial bank lending and deposits across a range of maturities. Changes in the exchange rate are included due to the heavily managed exchange rate regime which would certainly have had an affect the supply of money.

The set-up of equations (3) and (4) assumes that the only variable affecting the monthly growth rate of M2 that can have an AR(1) structure is qualitative instruments, and treats all other factors as shocks. While using this as an expression of our qualitative variable may at first seem slightly naive, it can be justified by two compelling arguments. First of all, the quantitative instruments would be expected to change gradually as the main role of monetary policy is to smooth and cushion economic fluctuations. An AR(1) therefore is ideal for this as it applies smoothness to the process.

⁶A model of State-Space form estimates that an observed time series is a linear function of a (unobserved) state vector and the dynamics for the state vector is a first-order vector auto regression.

⁷The Kalman filter is an iterative algorithm, used for many computational purposes, including estimating unobserved components models. A more detailed explanation of this process can be found in *Appendix B*.

⁸These estimations were carried out using Eviews 8 *sspace* (state-space) function. Van den Bossche (2011) explains how this technique is carried out in Eviews.

Secondly, since all the variables which may have an AR(1) structure and still effect changes in M2 have already been included in the measurement equation (exchange rate, discount rate, reserve requirement, lending rate and deposit rate), the only important variables that remains for change in M2 is the qualitative variable. M2 is chosen in the measurement equation because qualitative instruments are likely to be reflected on to broad money. This is the case as qualitative instruments involve the central bank persuading commercial banks to take certain steps through window guidance without itself making any changes to benchmark rates. The variables e_{t1} & e_{t2} are the monetary policy shock and the shocks to the qualitative instruments, respectively.

The results of the estimations are as follows:

Measurement equation:

$$\Delta M2 = 7.9 - 0.02 \text{ exchange rate} - 0.11 \text{ discount rate} + 0.11 \text{ reserve requirement} - 1.3 \text{ lending rate} + 1.1 \text{ deposit rate} + Qual \quad (5)$$

Transition equation:

$$Qual = -0.02 Qual(-1) \quad (6)$$

The State-Space model relies on the dynamics of the state variables and the linkages between the observed variables and the state variables to draw statistical inference about the unobserved states. In the above State-Space model, the measurement equation ($\Delta M2$) links the quantitative variables (observed) to an unobserved state variable (qualitative instruments). The transition equation then describes the dynamics of these qualitative instruments. The starting values for the parameters in the Measurement Equation were chosen from OLS regression which is the standard procedure for an estimation of this type. The AR(1) Coefficient was set to 0.6 in line with Petreski and Jovanovic (2012).

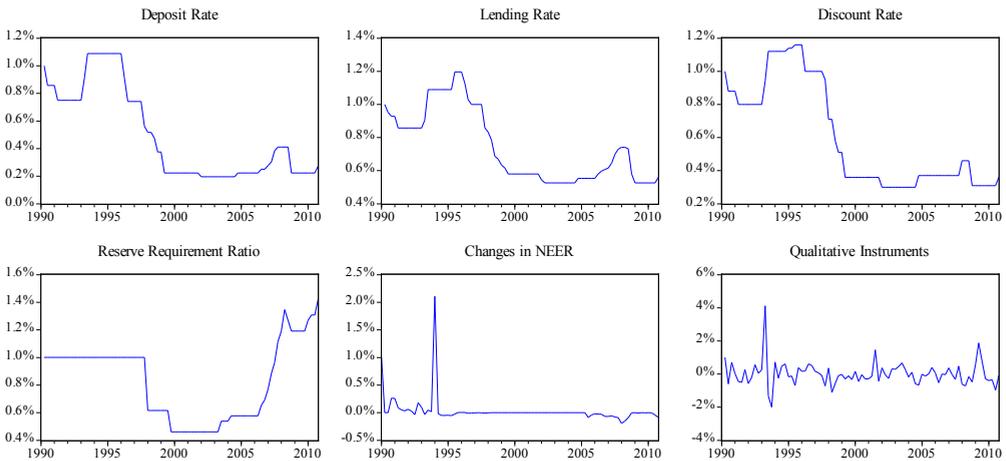
The role of qualitative and quantitative instruments

The estimations, (5) and (6), shows that reserve requirement and the discount rate are both insignificant, and the discount rate coefficient is also incorrectly signed. This would suggest that these quantitative variables have played a limited role on the Chinese money supply. The exchange rate, the deposit rate and the lending rate on the other hand are correctly signed and significant indicating a role in the money supply over the period. The qualitative series calculated from the Kalman filter estimation can be seen in the bottom right panel of Figure 2. In theory, this series should correspond to the administrative functions of the PBOC. For example the marked spike and decline in the 1992 - 93 periods can be accredited to Deng Xiaoping's southern tour. In January 1992, Deng Xiaoping toured the southern areas of Wuchang, Shenzhen, Zhuhai, and Shanghai and made a series of important speeches on reform and opening up of the economy. He encouraged growth, prompted foreign investment and called on China to embrace all aspects of a capitalist market. Following this, China's economy overheated, and accordingly, the 1992 money supply and credit plan of the PBC was breached. In late 1992, rapid growth of money supply and credit was noticeable, and hence, the Central Committee of the Chinese Communist Party and the State Department announced two related commands. Regional governments were ordered to control the credit quotas instead of the central bank. The flow of funds among regions was also restricted (Sun, 2013). Despite these commands, provinces continued to pursue the regional PBOC's for credit, and most folded under this pressure, despite the order from Beijing. The then vice Premier Zhu Rongji, fed up with the inability of the Governor of the People's Bank to control the money supply and the price level, fired him and personally assumed the position of Governor of the PBOC - it was even rumoured that one of the regional presidents was executed Hou (2014). Zhu Rongji embarked on a policy of strict macroeconomic austerity in an attempt to deliver a more controlled money supply.

The spike in the 2008 - 09 periods captures the stimulus package the PBOC undertook to prevent the effects of the financial crisis in China. It would then appear that our 'qualitative' variable measure has succeeded in capturing important Chinese monetary policy movements.

Having obtained the qualitative series variable, we can construct the monetary policy index. Firstly we calculate the coefficient of variance of the six instruments and their sum normalised to unity. The coefficient of variance is a statistical measure of the dispersion of data points in a data series around the mean, and compares the degree of variation of the six series. The coefficient of variance for the six variables can be seen in Table 2.

Figure 2: Monetary Policy Index variables



Source: Abeyasinghe & Rajaguru (2004)

Table 2: Coefficient of variance of policy instruments

Index	Deposit Rate	Lending Rate	Discount Rate	Reserve Requirement	Exchange Rate	Qualitative Instruments
mpi_t	0.01	0.01	0.01	0.01	0.13	0.83

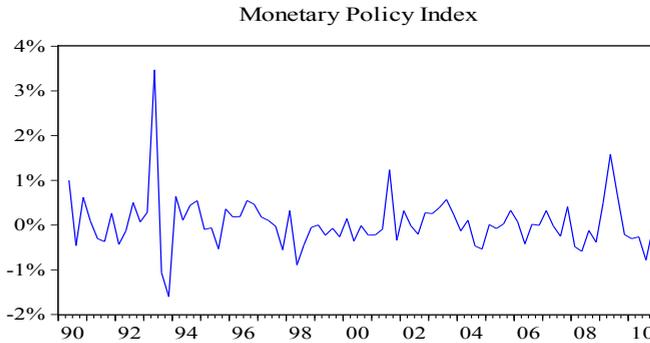
Source: Authors' calculations (The coefficients have been normalised)

We can clearly see that the main monetary policy tools mentioned by the PBOC – deposit rate, lending rate discount rate and reserve requirement – play only a minor role and seem to change infrequently. The addition of changes in the exchange rate and the qualitative instrument variable clearly show that these two variables have an important role in monetary policy in China. The final Monetary Policy Index (MPI) is then calculated as a weighted average of the six policy instruments using the coefficient of variance values above as weights. Figure 3 plots the final MPI which will be used in estimations that follow.

One issue in the use of this monetary policy index is the interpretation. While it will become clear in the next section of the paper that an upward movement corresponds to a loosening of monetary policy, it is not clear how big a movement a 1 index point shift in the index implies. To gain a better understanding of this, we can interpret the movements by examining the standard deviations of our variables. i.e. how many standard deviations the dependent variable increases when the independent variable increases. This can be done by estimating standardised coefficients

by simply taking the MPI coefficient calculated by the IS Curve multiplying it by the standard deviation and dividing by the standard deviation of the output gap.⁹

Figure 3: Six instrument quantitative and qualitative Monetary Policy Index (MPI)



Source: Abeysinghe & Rajaguru (2004)

Monetary Policy Index IS Curve

The augmented IS Curve model including the MPI then takes the following form:

$$\hat{y}_t = \alpha + \beta(\hat{y}_{t-1}) - \vartheta(mpi_t) + v_t \tag{7}$$

The estimation of the augmented Monetary Policy Index IS Curve can be seen in Table 3. The results indicate that the MPI accurately describes how Chinese monetary policy affects the real economy. The coefficient of 0.44 is highly significant. The positive sign suggests that an increase in our Monetary Policy Index corresponds to looser monetary policy and a decrease to tighter monetary policy. Despite a relatively large coefficient, the magnitude suggests a rather small dependence of output on monetary policy. A one standard deviation increase in the MPI leads to a 0.14 standard deviation increase in output.

Despite a more robust relationship to output than in our traditional real interest rate IS model, the problem of structural breaks has not been eliminated. This is observed by the highly significant value of the SupF test seen in Table 3. This adds to the common believe that it is difficult to estimate a stable IS equation for China (Conway *et al*, 2010). In an attempt to remedy this problem, we will estimate a Markov switching IS Curve.

Table 3: Complete Monetary Policy Index IS Curve (1990Q2 - 2010Q4)

Parameters	Coefficients	Standard Errors
c	-0.12	(0.11)
y_{t-1}	0.88***	(0.04)
mpi_t	0.41***	(0.12)
v_t	0.04	(0.03)
SupF	17.4**	

***, ** and * denotes significance at the 1, 5 and 10% respectively

⁹These summary statistics used for this technique can be seen in Appendix C.

Markov Switching MPI IS Curve

Many economic time series occasionally exhibit dramatic breaks in their behaviour, associated with events such as financial crises or abrupt changes in government policy (Hamilton, 2005). The Chinese economy in particular has experienced tremendous structural changes in recent decades, associated with the gradual opening of the economy. Prices have been liberalised, trade has increased extensively, companies have been privatised and the economy has been transformed from one that was centrally planned to market economy (Brandt & Rawski, 2008). It has also experienced a number of economic shocks some of which were related to policy measures to liberalise the economy (Gerlach & Peng, 2006). The presence of structural breaks, which often present themselves in series when an economy has undergone huge economic and political change, make linear models of estimation inappropriate. Therefore, we use the Markov Switching Model (MSM) of Hamilton (2005) to account for any non-linearities or asymmetries associated with a reforming economy with an underdeveloped financial system. The MSM is so called because the switching mechanism is controlled by an unobserved state variable s_t that follows a first order Markov chain process. By doing so, we can investigate if the effects of Chinese monetary policy depends on the state of the economy.

The MSM has been used in this manner extensively to examine monetary policy transmission in advanced economies such as the US, UK and the Euro area. Dolado and Maria-Dolores (2001), Peersman and Smets (2001) and Aragon and Portugal (2009) have all carried out similar studies for advanced economies but the technique has yet to be applied to the Chinese case. This gives us a unique opportunity to examine any asymmetries in China's monetary policy transmission channel. The MSM would seem to be perfect fit for this paper as it allows us to endogenously determine whether the Chinese economy is contracting or expanding (positive or negative output gap) and to test if the effects of the PBOC's monetary policy differs in any substantial way. The MSM is controlled by a state variable, s_t , which follows a Markov process. A Markov process is one where the probability of being in a particular state is only dependent upon what the state was in the previous period. The model involves multiple structures that can characterise the time series behaviour in different states. By permitting switching between these structures, the model is able to capture more complex dynamic patterns. The state switches between different regimes according to its previous value and transition probabilities. The MS model differs from models of structural changes, which have been used extensively in this area. While the former allows for frequent changes of random time points, the latter admits only occasional and exogenous changes. It is therefore more suitable for describing correlated data that exhibit distinct dynamic patterns during different time periods (Kuan, 2002).

By fitting the linear IS equation to the MS framework¹⁰, we have:

$$y_t = \alpha_{s_t} + \beta_{s_t}(y_{t-1}) - \vartheta_{s_t}(mpi_t) + v_{t,s_t} \quad (8)$$

Where $e_t \sim$ i.i.d. $N(0, \sigma_{e,s_t}^2)$ and with unobserved state s_t , which is assumed to follow a Markov chain of order 1 with transition probabilities p_{ij} . The transition probability p_{ij} gives the probability that state i will be followed by state j .

$$P_{ij} = \Pr[s_t = j \mid s_{t-1} = i], \quad \sum_{i=1}^m p_{ij} = 1, \quad \forall i, j = 1, \dots, m \quad (9)$$

¹⁰The estimation of Equation 8 was carried out using MS_Regress, a MATLAB toolbox specially designed for the estimation of a general Markov Switching Model.

It is often convenient to collect the transition probabilities in an $(N \times N)$ matrix P known as the transition matrix:

$$P = \begin{bmatrix} P_{11} & P_{21} & \cdots & P_{N1} \\ P_{12} & P_{22} & \cdots & P_{N2} \\ \vdots & \vdots & \cdots & \vdots \\ P_{1N} & P_{2N} & \cdots & P_{NN} \end{bmatrix} \quad (10)$$

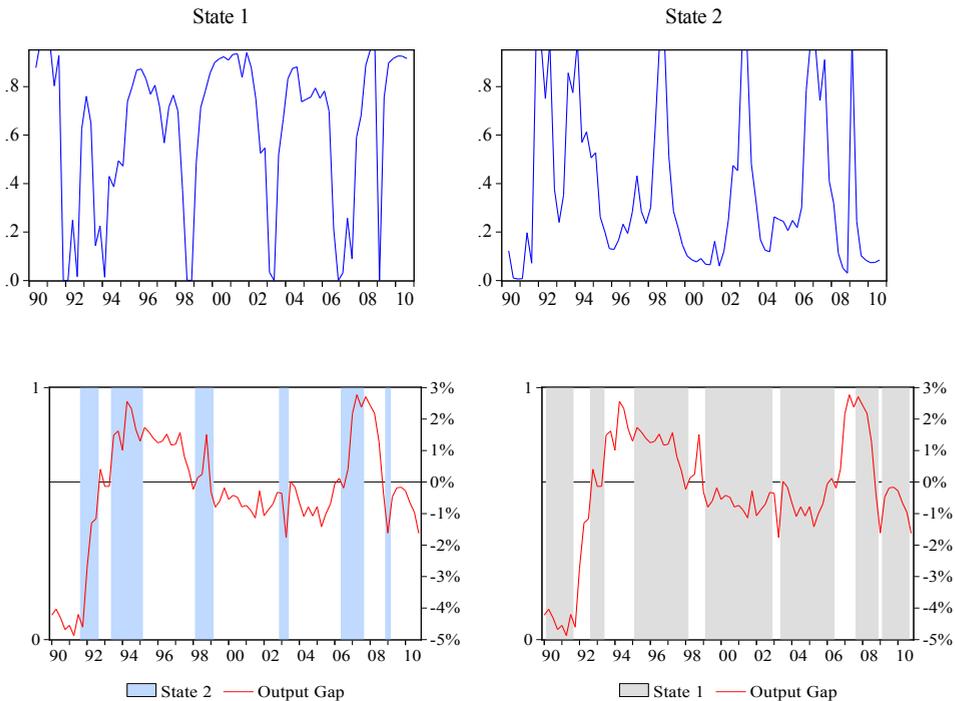
The row j , column i element of P is the transition probability p_{ij} . To demonstrate, in the above matrix (5), the row 2 column 1 element gives the probability that State 1 will be followed by State 2. Let us for example, say that at time t , the state of the economy S_t is classified as either expansionary in $S_t = 1$ or recessionary in $S_t = 2$. In our estimation let us assume that the model gives us a value of 95% for P_{11} and 5% for P_{21} . What these values tell us is that if the economy is in a state of expansion in the previous period, it tends to stay in an expansionary state with a very high probability of 95%. Conversely, the probability of being in an expansionary state in the previous period and switching to a recessionary state is low at just 5%. The estimation of the model depends on maximum likelihood. The maximisation of likelihood function of the model requires an iterative estimation technique to obtain estimates of the parameters of the model and the transition probabilities. With the parameters identified, it is then possible to estimate the probability that the variable of interest, in this case the level of Chinese real output. It is also possible to derive the smoothed state probabilities which indicate the probability of being in a particular regime or state.

The results of the Markov switching estimation of the IS Curve can be seen in *Table 4*. The results are interesting. First of all, the lag of the output gap is significant across both states, with highly significant values of 0.90 and 0.74 respectively. This indicates that shocks to the output gap are quite persistent i.e. output will be increased if output was high in the previous period. The coefficients on the Monetary Policy Index (MPI) are also very interesting. They show that there is a highly significant relationship between the level of output in the Chinese economy and the index calculated for monetary policy we have estimated with a coefficient value of 0.49 in State 1. The same cannot be said for State 2 however, as the coefficient of 0.29 is not significant. Finally, the demand shock while being significant in State 1 has a small coefficient of 0.08, and is not significant in State 2. This is an interesting finding as it suggests that despite being the world's largest exporter of goods, China has somehow managed to insulate itself from external demand shocks like those experienced by most global economies during the 2008 financial crisis.

Overall, the State properties indicate that State 1 dominates over State 2 in the selected time period, but the difference is minimal. The typical duration of each state, calculated by $(1/1 - P_{ii})$, is 5.11 quarters for State 1 and 3.04 quarters for State 2. *Figure 4* shows separate graphs of the smoothed probabilities related to the Markov switching IS Curve which indicates the probability of being in a particular state for each observation. It also illustrates both states along with a plot of the output gap. The output gap plot and regime specification imply State 1 to be a contraction (mostly negative output gap) and State 2 an expansion (mostly positive output gap). With regard to the responsiveness and effectiveness of the Chinese monetary policy index across different states of the economy, we find that the PBOC's policies were much more effective in times of contraction – periods with negative output gap. On the other hand, these policies have no significant effect when the economy is in expansion – positive. The standard deviation calculations also confirm a much stronger magnitude of policy reaction to output in State 1 than in State 2. The one standard deviation in MPI results in a 1.3 and 0.19 standard deviation increase in output.

Kakes (1998) suggests that there are two strands of literature which attempt to explain the reason for this asymmetry. The first is the presence of credit market imperfections, which are very common in China. It is widely believed that in China there is a deeply rooted political ‘pecking order’ in credit allocation which effectively discriminates against private firms in favour of state owned enterprises. Government credit plans also give priority to industries like manufacturing and because larger firms can offer more collateral and are more credible than smaller ones, banks are more willing to grant them credit (Zhang, 2011). Another branch of literature on this issue is based on the shape of the slope of the supply curve. This ‘convexity theory’ implies that the slope of the supply curve is steeper at higher levels of capacity utilisation and inflation than at lower levels. As a result shifts in aggregate demand that are driven by changes in monetary policy will have a stronger effect on output and a weaker effect on inflation in recessions and vice versa. Consider the so-called capacity constraint model, which assumes that as the economy expands, more firms find it difficult to increase their capacity to produce in the short run. As a result inflation becomes more sensitive to shifts in aggregate demand at higher rates of capacity utilisation. This is consistent with the early empirical work on the Phillips curve (Egan & Leddin, 2014), which assumed that the relationship was non-linear (Peersman & Smets, 2001). Egan and Leddin (2014) also discovered evidence of non linearities in the Chinese Phillips curve. Using quarterly data from 1987 - 2010, the authors found that the slope of the inflation/output relationship was much steeper in higher levels of inflation and much flatter at lower levels.

Figure 4: Markov Switching Model States



Source: Abeyasinghe & Rajaguru, (2004).

Table 4: Markov Switching Model (1990Q2 - 2010Q4)

Parameters	Coefficients	Standard Err	
c_1	-0.01***	(0.01)	
c_2	0.01	(0.01)	
\hat{y}_{t-1_1}	0.90***	(0.04)	
\hat{y}_{t-1_2}	0.74***	(0.01)	
mpi_{t_1}	0.49***	(0.10)	
mpi_{t_2}	0.29	(0.26)	
v_{t1}	0.08***	(0.03)	
v_{t2}	-0.05	(0.09)	
p_{11}	0.80***		
p_{12}	0.20*	Duration of S1	5.11
p_{21}	0.33*	Duration of S2	3.04
p_{22}	0.67***		

***, ** and * denotes significance at the 1, 5 and 10% respectively

CONCLUSION

In examining the link between Chinese monetary policy and the real economy using different variations of the IS equation, our estimations produced a number of interesting findings. The results of the traditional linear model indicate that there is no significant link between the interest rate and aggregate demand in the Chinese economy. This is in line with the majority of studies on the topic which have suggested that it is difficult to estimate and reliable and robust aggregate demand equation for China. This problem can be attributed to a number of causes. The underdevelopment of the banking system, market segmentation and the ineffectiveness of the credit channel make an IS Curve represented by an interest rate inappropriate. The PBOC has also relied heavily on many different tools in the conduct of monetary policy, both quantitative and qualitative. This has often included direct credit policies such as window guidance i.e. telling banks when and how much to lend. The presence of structural breaks, non linearities and asymmetries in the transmission channel also make linear models inadequate for policy analysis.

Given these limitations, we therefore estimated an IS Curve with a Monetary Policy Index (MPI) composed of the tools used by the PBOC between 1990 - 2010. This index contains all the relevant variables at the disposal of the PBOC, both quantitative and qualitative, and therefore gives a much better representation of the monetary policy stance of the Chinese central bank. The presence of structural breaks again however indicated that there is an asymmetry between monetary policy action and output depending on the state of the economy.

Finally, we estimated a Markov switching IS Curve, again using our monetary policy index composed of both the qualitative and quantitative tools. This nonlinear technique allowed us to examine non-linearities or asymmetries in the monetary policy transmission channel. We tested for these asymmetries by examining differences in the response of output to changes in monetary policy depending on whether the output gap is positive or negative i.e. if the economy is expanding or contracting. Testing for this type of asymmetry is important due to the under-

developed nature of the Chinese financial system and due to huge amount of reform and structural change that the economy has expended. Our results suggest that there is a significant link between the monetary policy tools used by the PBOC and the real economy in State 1 of our augmented model, when output is low. This relationship breaks down when the economy switches to a higher level of output. Our results also suggest that shocks to output are persistence, given the high and significant value of the lagged dependent variables across both states. Finally, our model seems to suggest that demand shocks i.e. changes in the world output played a very minor role in the movement of Chinese output.

With regard to the responsiveness and effectiveness of the Chinese monetary policy index across different states of the economy, we find that the PBOC's policies were much more effective in times of contraction – periods with negative output gap. On the other hand, these policies have no significant effect when the economy is in expansion – positive. Overall the paper's findings suggest that an IS Curve model can be used to analyse the effect of monetary policy on aggregate demand in China once the issues of structural breaks and monetary policy tool selection are accounted for.

A possible recommendation from the results of this paper would be of further reform of the financial and banking sectors which may help reduce output volatility and allow for greater symmetry in the transmission of monetary policy.

APPENDIX A

Deriving the IS Curve

Clarida, Gali and Gertler (1999) state that the modern IS Curve equation is obtained by the log linearization¹¹ of the consumption Euler equation (sometimes referred to as the Kevnes-Ramsev equation) that arises from the households optimal saving decision after imposing $Y_t = C_t + G_t$. This is the market clearing equilibrium condition that consumption is composed of output – government expenditure. In other words, total output is split between total output and government expenditure.

Log-Linearizing the Euler equation

The Euler equation can be written as,

$$U'(c_t) = \beta E_t [U'(c_{t+1})] i_t$$

Suppose you want to purchase 1 more asset. You must reduce your consumption today by 1. The cost is then current marginal utility.

The gain is the extra return in the next period, i_t .

We need to use this Euler equation to arrive at the IS Curve. This is difficult however due to its non-linear nature. To linearize, a first order Taylor series approximation is calculated. This method involves taking the derivative of the expressions and evaluating the derivative at full employment levels. The difference between the variable at time t is then multiplied by the full employment level.

So, if assume the utility function $U(c_t)$ is,

$$U(c_t) = \frac{c_t^{1-\gamma}}{1-\gamma}$$

¹¹Sims (2011) defines the process of log-linearization as taking the natural logs of the system of nonlinear difference equations. Then linearizing the logged different equations about a steady state and simplify until a system of linear equations is achieved, where variables of interest are % deviations about a point (steady state).

The marginal utility is then

$$c_t^{-\gamma}$$

By taking the first-order Taylor series approximation around c_f

$$c_t^{-\gamma} \approx c_f^{-\gamma} - \gamma c_f^{-\gamma-1} (c_t - c_f)$$

Reverting back to our Euler equation

$$U' c_t = \beta E_t [U'(c_{t+1})] i_t$$

$$c_t^{-\gamma} = \beta E_t [c_{t+1}^{-\gamma}] i_t$$

If we then let i_t be full employment interest rate, the Euler equation becomes,

$$c_f^{-\gamma} = \beta [c_f^{-\gamma}] i_f =$$

$$\beta i_f = 1$$

Linearizing the Euler equation, as before using the first-order Taylor series approximation

$$c_t^{-\gamma} = \beta E_t [c_{t+1}^{-\gamma}] i_t$$

$$-\gamma c_t^{-\gamma-1} (c_t - c_f) = \beta i_f E_t [-\gamma c_t^{-\gamma-1} (c_t - c_f)] + \beta c_f^{-\gamma} (i_t - i_f)$$

$$-\gamma c_t^{-\gamma} (c_t - c_f) / c_f = \beta i_f E_t [-\gamma c_t^{-\gamma} (c_t - c_f) / c_f] + \beta c_f^{-\gamma} (i_t - i_f) / i_f$$

Define variables as % deviation from full employment so...

$\frac{(c_t - c_f)}{c_f}$ can be rewritten as \check{c}_t = consumption as % deviation from full employment.

Cancel common terms and use result from full employment interest rate....

$$-\gamma \check{c}_t = -\gamma E_t (\check{c}_{t+1}) + \tilde{i}_t$$

To log linearize Euler equation dividing by γ and removing accents for simplicity we can we write as

$$c_t = E_t(c_{t+1}) - \alpha i_t$$

Where $\frac{1}{\gamma} = \alpha$ = the coefficient that indicates the sensitivity of current consumption to changes in the real interest rate or the intertemporal elasticity of substitution.

Finally, we use the Fisher relationship i.e. the real interest rate, $r_t =$ the nominal interest rate,

i_t – the expected inflation rate.

$$r_t = i_t - E_t(\pi_{t+1})$$

$$c_t = E_t(c_{t+1}) - \alpha(i_t - E_t(\pi_{t+1}))$$

Linking the Log-Linearized Euler equation to the IS equation

Since in equilibrium we stated that $Y_t = C_t + G_t$, we can re-write the log linearized consumption Euler equation as follows....

$$(y_t - \dot{Y}_t) - g_t = -\alpha(i_t - E_t(\pi_{t+1})) + E_t(y_{t+1} - \dot{Y}_{t+1}) - g_{t+1} + \alpha r_t + \varepsilon_t$$

$$(y_t - \dot{Y}_t) = \text{output gap} = \hat{y}_t$$

Rearranging we get the modern IS Curve

$$\hat{y}_t = E_t(\hat{y}_{t+1}) - \alpha(i_t - E_t(\pi_{t+1})) + v_t$$

$$\text{Where } v_t = E_t(\Delta y_{t+1} - \Delta g_{t+1}) + \frac{1}{\sigma} r_t + \varepsilon_t$$

The above equation in bold states that current output depends on expected future output, as well as the interest rate. Because individuals prefer smooth consumption, expectations of higher consumption in the future next period (associated with higher expected output) leads them to want to consume more today which raises current output demand. The negative effect of the real rate of current output in turn reflects the intertemporal substitution of consumption. The interest elasticity in the IS Curve, represented as α corresponds to this.

Finally, the disturbance term v_t is a function of expected changes in government purchases relative to expected changes in potential output. Since this term v_t shifts the IS Curve, it is interpreted as a demand shock (Gali & Gertler, 1999).

APPENDIX B¹²

The Kalman filter

A useful method for extracting unobserved variables is to represent the model linking the unobserved variables and the observed variables in a State-Space representation according to Kalman (1960).

This approach starts by setting the model in the State-Space format, and runs a set of recursions after having established appropriate starting conditions. The Kalman filter provides an easy to program, computationally efficient algorithm, and is used in the estimation of unobserved component.

Below is a brief description of this method.

A State-Space model consists of two equations.

1. **A Measurement Equation** – This is an equation that describes the relationship between observed and unobserved variables. It maps our observed variables to the unobserved variables we want to estimate.

¹²Details for this appendix were sourced from Cuthbertson, Hall and Taylor (1992), Kim and Nelson (1999) and Commandeur and Koopman (2007).

2. **A Transition Equation** – This equation then describes the dynamics of the unobserved variables.

Taking the **measurement equation** as the following:

$$u_t = x_t A_t + e_t \quad e_t \sim iid N(0, R) \quad (3)$$

u_t is the vector of the observed variables at time t .

A_t is the vector of the unobserved variables.

x_t is the matrix of coefficients which connects the unobserved variable with the observed variables.

e_t is the measurement equation error. It is normally distributed and has covariance matrix R .

The **transition equation** can be represented as:

$$A_t = F_t A_{t-1} + v_t \quad v_t \sim iid N(0, Q) \quad (4)$$

F_t is a matrix which defines the transition process and dynamics of the unobserved variable.

v_t is the transition equation error. It is normally distributed and has covariance matrix Q .

When a model is written in the form of these two distinctive equations, it is known as a State-Space form. The Kalman filter can then be applied to these State-Space equations to yield a set of recursive equations¹³. This procedure calculates an optimal estimator of the unobserved variable at time t given all the information available at time.

The recursive process carries out two steps repeatedly.

Prediction – At the beginning of time t , the model calculates an optimal estimator of unobserved variables.

Correcting/Updating – At the end of time t , the model corrects or updates the estimator of unobserved variables

The unobserved states/variables are then extracted in the following way.

At first, initial values of parameters are set. This is commonly done through a simple OLS estimation.

The Kalman filter then uses the recursive procedure above to generate a series of one-step ahead prediction errors.

At this point, the Kalman filters recursive equations have completed their required task and standard Maximum Likelihood procedures are used to estimate the unobserved states/variables.

¹³A recursive equation is one that is used to determine the next term of a sequence using one or more of the previous terms in that sequence.

APPENDIX C

C.1 Summary Statistics Linear Model

	Output Gap	MPI
Mean	-0.00181	0.00045
Median	-0.00256	-0.00011
Maximum	0.02773	0.03471
Minimum	-0.04872	-0.01603
Standard deviation	0.017079	0.006068

C.2 Summary Statistics Markov Switching Model

	Output Gap S1	MPI S1	Output Gap S1	MPI S1
Mean	-0.00528	0.000797	0.007098	-0.00044
Median	-0.00371	-0.00016	0.010092	1.48E-05
Maximum	0.024307	0.03471	0.02773	0.006415
Minimum	-0.04872	-0.00785	-0.02726	-0.01603
Standard dev	0.01645	0.00627	0.015346	0.005417

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US HIGHER EDUCATION: TRANSITION AND TURBULENCE IN THE NEW MODEL

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ABSTRACT

Education has been regarded as the great equalizer; in socio-economic terms educational attainment has been credited for moving more people out of poverty than any other factor. Horace Mann, the father of the American public education system, stated in 1891 that “[e]ducation then beyond all other devices of human origin is a great equalizer of the conditions of men – the balance wheel of the social machinery...it prevents being poor” (Mann, 1891). A college degree increases social and economic mobility through higher earnings and protecting against unemployment and poverty. In terms of incentivizing individuals, a college degree has served as a pathway to the middle class and in regards to national self-interest, educational attainment provides a highly skilled workforce enabling a greater global competitiveness. As such the demand for post-secondary education has exploded and governments around the globe have made higher education access and attainment a policy priority. Utilizing the US higher education system as a case study, this manuscript describes the rewards and challenges regarding increased access. Framed within the economic investment model we describe the seismic paradigm shift that occurred in the system and identify five major trends impacting the current system: 1) fiscal austerity; 2) increased reliance on tuition; 3) shifts in funding uses; 4) fundamental changes in investment returns, and 5) a varying student body.

Keywords: Education; Socio-economic; Skilled Workforce; Global Competitiveness.

INTRODUCTION

Education has been regarded as the great equalizer; in socio-economic terms educational attainment has been credited for moving more people out of poverty than any other factor. According to Horace Mann, the father of the American public education system, education equalises human conditions and prevents poverty (Mann, 1891). A college degree increases social and economic mobility through higher earnings and protecting against unemployment and poverty (Autor, 2014; Forbes, 2014; Pew Research Center, 2014; OECD, 2012). In terms of incentivising individuals, a college degree has served as a pathway to the middle class. In terms of national self-interest, educational attainment provides a highly skilled workforce enabling a greater global competitiveness. The demand for post-secondary education has exploded and governments around the globe understand the benefits of making access and attainment in higher education a policy priority. Utilizing the US higher education system as a case study, this manuscript describes the challenges regarding increased access and delivery within the broader economic context. Framed within the economic investment model we describe the seismic paradigm shift that occurred in the system and identify five major trends impacting the current system: 1) fiscal austerity; 2) greater reliance on tuition; 3) shifting uses of funds at institutions; 4) fundamental changes in investment returns; and 5) a varying student body.

GLOBAL CONTEXT

We live in a global society and our economic systems are interconnected through technology, increased trade, monetary exchanges, and capital flows. The global economy also known as the ‘knowledge economy’ or the ‘new economy’ refers to countries that have transitioned from a manufacturing economy to a service and technology based economy (Gordon, 2000). The global

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economy requires a highly skilled and educated workforce, but not all countries have maintained the necessary educational attainment. According to a report titled 'Education at a glance' (2012), issued by the Organisation for Economic Co-Operation and Development (OECD):

As globalisation and technology continue to re-shape the needs of the global labour market, the demand for individuals who possess a broader knowledge base, more specialised skills, advanced analytical capacities, and complex communication skills continues to rise. As a result, more individuals are pursuing higher levels of education than in previous generations, leading to significant shifts in attainment levels over time within countries. At the same time, the rise of new economic powers – and sustained efforts by some countries to build and invest in their tertiary education systems – has shifted the global landscape of educational attainment as well. In recent years, countries with strong and long-held leads in attainment have seen their positions erode as individuals in other countries have increased their attainment at an extremely fast pace. (OECD, 2012: 26).

Although the US has some of the best universities in the world, it has lost its competitive edge in educating its citizens. According to a 2014 report titled 'The learning curve: lessons in country performance in education' (Pearson, 2014), East Asian countries are now the world's top leaders in education followed by Scandinavian countries. For 2014, developed countries were ranked as follows: 1) Korea, 2) Japan, 3) Singapore, 4) Hong Kong-China, 5) Finland, 6) United Kingdom, 7) Canada, 8) Netherlands, 9) Ireland, and 10) Poland. The United States did not rank in the top ten developed countries on education systems. The US ranked #12 in 2014 and #14 in 2012 (Pearson, 2014). Once a world leader the US is now considered average. Similarly, the US lags behind other developed countries in both four year and two year degree attainment among young adults. In 1990, the US ranked #1 in the world for four year degree attainment among 25 - 35 year olds (White House, nd). According to a report by The Center for Public Education (2012) titled 'Getting back on top: an international comparison of college attainment', the US ranks 11th (alongside Japan) with only 33% of the population, ages 25-34, attaining a 4 year degree. In assessing 2 year degrees, the US ranked even lower. It ranked 18th for percentage of young adults, ages 25 - 34 who hold a 2 year degree; which represents 10% of the US population. Comparatively, Russia ranks 1st in the world for 2 year degree attainment for 25 - 34 year olds, which represents 34% of its population. In sum, the US has taken a back seat to its peers in East Asia, and Western and Eastern Europe.

PRESIDENT OBAMA'S CALL FOR ACTION

President Obama has acknowledged the US has been outpaced by its peers in education calling for improvement in the US higher education system. Wanting to restore the US as the world leader in college attainment, his administration has set two goals: 1) the US having the highest proportion of college graduates in the world by 2020; and 2) five million community college graduates by 2020. In order to achieve these two goals the President has issued a call to action, based on four initiatives, to make college more accessible and affordable for everyone. (The White House, 2014). These initiatives include: 1) help for middle class families to afford college, 2) cost containment, 3) stronger community colleges, and 4) improved transparency and accountability (The White House, 2014; Naylor, 2014). These Presidential goals and initiatives take place within the larger context of overall fiscal restraint and increased demand in higher education. However, the demand for college education is well documented. According to the White House, employment in jobs requiring higher education will grow more rapidly than employment in jobs that do not (The White House, 2014). In the 'new economy', it is widely recognised that a post-secondary degree is a requirement for entry into the middle class and governments have recognised the need to use post-secondary degrees as a way to improve competitiveness in the new economy. Consequently, the demand for college degrees has increased creating a mandate for access, advancement and opportunity for all Americans (Obama, 2014).

EDUCATIONAL ATTAINMENT AND MOBILITY

There is clear, consistent and overwhelming evidence linking economic mobility and college attainment (Autor, 2014; Avery & Turner, 2012; Becker, 1964; Pew Research Center, 2014). Educational attainment provides an increase in earnings and a protective factor against poverty and unemployment. More importantly educational attainment enables individuals to advance relative to their peers.

Earnings gap: high school versus college degree

The earnings gap between those with a college degree and those with a high school degree is significant and enhances an individual's incentive to get a college degree. According to the report titled 'The cost of not going to college' by the Pew Research Center (2014), young adults with a college degree earn \$17 500 more annually than their peers with a high school degree. Equally important, salaries for those with college degrees receive greater increases over time than those with a high school degree (50 % compared to 25% for those in the 40 - 44 age bracket). Over a 40 year career this adds up to approximately \$1 million (Forbes, 2014; Pew Research Center, 2014). Even when accounting for the cost of tuition and wages lost while attending college, individuals with a college degree out earn individuals with a high school degree by \$800 000 by retirement age (Daly & Bengali, 2014) making college attainment a critical step in advancing to a higher economic class. Moreover, Avery and Turner (2012) find that the net present value subtracting tuition of a college degree relative to a high school degree over the 35 year period between 1965 and 2008, adjusted for inflation, increased from \$213 000 to \$590 000 for men and from \$129 000 to \$370 000 for women. This evidence points to the benefits of obtaining a college degree; it remains the clearest path to economic mobility and more specifically, the middle class.

Graduate school

Equally important, the positive correlation between educational attainment and earnings goes beyond a college degree. According to the US Bureau of Labor Statistics (2013), the average median weekly income by educational attainment is as follows: individuals with a high school degree earn \$651, those with a 2 year degree earn \$777, with a college degree earn \$1 108, with a master's degree earn \$1 329, PhDs earn \$1 630, and those with a professional degree earn \$1 714. According to a US Census Bureau (2002) titled 'The big payoff: educational attainment and synthetic estimates of work life earnings', on average, over a career, a high school graduate will earn \$1.2 million, those with a bachelor's degree will earn \$2.2 million, those with a master's degree \$2.5 million, those with a PhD will earn \$3.4 million, and finally those with a professional degree (law, medicine) will earn on average \$4.4 million. In sum, the higher the educational attainment, the greater the investment, and the bigger the payoff. Individuals with graduate degrees on average out earn those with college degrees.

Household and gender

Autor (2014) provides additional insights into the earnings gap for households and genders. He finds evidence of an increasing median earnings gap (inflation adjusted) over the 1979-2012 period for husband/wife households and for males and females separately. The earnings gap for households grew over this 40 year period grew from \$30 298 to \$58 249; the earnings gap for males grew from \$17 411 to \$34 969; while the earnings gap for females grew slightly less from \$12 887 to \$23 280.

Unemployment rates and poverty

There is also evidence that unemployment rates decrease with educational attainment. This means that the higher educated a person the smaller the probability that they are unemployed or living in poverty. The US Bureau of Labor Statistics (2014) reports that in 2013, for adults over the age of 25, the unemployment rate for an individual with less than a high school diploma is 11%, the rates for individuals with a bachelor's, master's, and doctoral degree are 4.0%, 3.4%, and 2.2%

respectively. Equally important, only 5.8% of those with college degrees live in poverty compared to 21.8% with a high school degree (Pew Research Center, 2014). These facts underscore the need for a college degree and to protect oneself from the ups and downs in the job market.

The cost to our society of not providing higher educational opportunities to increase the size of the middle class is simply too high. Higher educated individuals experience greater social mobility, higher salaries, less unemployment and poverty, and enhance national competitiveness. Policies in most developed countries recognise the benefits of higher education and encourage citizens to obtain a college degree. However, structural changes manifested as the new corporate model within higher education appear to work against these policies.

PARADIGM SHIFT: THE NEW CORPORATE MODEL

A seismic shift took place in the US higher education system. Historically, there have been two models in the system: 1) democratisation, which took place from the 1950s to late 1970s, and 2) corporatisation, which took place from the late 1970s/early 1980s - 2008 (Schultz, 2012). (Although Schultz argues that the corporate model ended in 2008 with no replacement model, we believe the corporate model is still intact today.) According to Schultz (2012), democratisation was the result of returning military veterans from World War II and the need for political supremacy over communism. The model included an increase in the demand for college, growth in the number of inexpensive state/public colleges, and increased funding to attend college. In this model, public universities...

received most if not all of their money either from tax dollars to subsidize tuition and costs or federal money in terms of research grants for faculty. The business model then was simply-public tax dollars, federal aid, and an expanding population of often first generation students attending public institutions at low tuition in state institutions (Schultz, 2012: 1).

However, by the 1970s the democratization model was no longer sustainable due to a fiscal crisis, the recession. According to Schultz (2012), inflation caused by financing the Vietnam War coupled with the energy embargo led the country into recession and as a result, state budgets began to decline along with university budgets. As a consequence the democratic model was replaced by the corporate model. In essence, universities have replaced the shared governance model for a top-down business model that focuses on generating revenue to replace lost public funding. In regards to faculty, this included vacating the shared governance model as outlined by the American Association of University Professors (Schultz, 2012) and a reduction in full-time faculty while at the same time an increase in administration and adjunct faculty (Delta Cost Project, 2011). In regards to funding, it included a decreased reliance on state funds, an increased reliance on corporate funds, and an increased use of graduate tuition.

This business model thus used tuition from graduate professional programs to finance the rest of the university. Students either were able to secure government or market loans or those from their educational institution to finance their training. Further, the business model relied heavily upon attracting foreign students, returning older Baby Boom students in need of additional credentials, and recent graduates part of the Baby Boomlet seeking professional degrees as a short-circuit to advancement (Schultz, 2012: 1).

The corporate model was also able to generate more tuition revenue by enrolling students in online courses and fully online programs. Online education has grown exponentially. From 2002 - 2011, which represents a decade of data, online enrollment as percentage of total enrollment increased from 11% to 32% for US degree granting institutions. From 2002 - 2006, online enrollment for US degree granting institutions doubled from 1.6 to 3.5 million students taking at least one online course. All institutions have online growth rates in double digits from fall 2002 - 2006. More importantly the compounded annual growth rate for online education is 21.6% compared to

1.5% for the total student population. Moreover, overall enrollment growth in higher education is down, but enrollment is up for online education (Babson Survey Research Group & Quahog Research Group, LLC, 2013).

The sustained movement towards a more corporate model of higher education provision overly emphasises tuition generation and is bringing a structure to US colleges and universities that feature a strong and growing administrative component. Within the context of the corporate model the broader threats to educational access, attainment, quality and costs are defined. Greater access will improve the outcome but not if coupled with a declining quality of outcome (low graduation rates) and a significant student loan debt imputed to recent graduates, and, more significantly, to those students who don't complete their programs. For example, student loan debt in the US has climbed to \$1 trillion, which exceeds credit card debt (Ripley, 2012: 35; Lipka, 2012). The next section of this manuscript outlines an economic model incorporating individual choice. The model considers the supply and demand forces at work in US higher education along with a cost benefit approach. The model is used as a prism from which one can view the impacts of the corporatization of higher education in the US and see impacts of the elements of the iron triangle: access, costs and quality (Stengel, 2012; Naylor, Wooldridge & Lyles, 2014) along with other observed trends in US higher education: fiscal austerity, changing revenue sources, new patterns of university expenditures, changing incentives for students, and a change in the pool of students entering US colleges and universities.

AN ECONOMIC INVESTMENT MODEL – DEMAND AND SUPPLY CHARACTERISTICS

Similar to many institutional features of the US economy, colleges and universities are chartered and recognized as a partnership, relying on state support and market forces to fulfill their missions. A demand and supply approach allows us to characterise the market interaction reflecting the incentives available to buyers (students) and sellers (US colleges and universities). A key component of the demand and supply approach is the incorporation of an investment based cost benefit analysis providing the incentives that drive individual student demand.

The demand for higher education is driven by the benefits accruing to consumers, by and large the earnings gap described earlier, and ability to pay. Government policies, as proposed by President Obama, directly impact the ability to pay directly through grants and aid, or indirectly through lower cost loans, while the supply of education is, of course, provided by US colleges and universities. From the perspective of many faculties, an institutional mission will mark the segment of their university's supply. Government funding and policy decisions also influence the supply of education. Most importantly, state governments have a long history of funding or subsidising colleges and universities in the hopes of benefiting its citizens. Given the seismic shift away from the democratic model, and a declining state subsidy to many institutions the supply of higher education in the US is changing mostly to the detriment of access, quality, and attainment.

The investment model then follows Avery and Turner (2012). Individuals decide whether or not to pursue a higher education and engage in a cost benefit paradigm. The costs of attending include tuition and fees, books, and the lost wages while in school. There may be additional non-pecuniary costs such as impacts on family or lifestyle choices. The benefits of attending are primarily the earnings gap cited above. There may also be non-pecuniary benefits such as a feeling of accomplishment, pursuit of lifelong learning, and a greater social or cultural standing.

Conditions changing the cost benefit paradigm impact the underlying demand and supply model and hence, college enrollment patterns. Changes that raise the cost of attending a US college or university raise the price and lower the quantity provided in the mixed market scenario. The higher cost increases the cost in the cost benefit paradigm.

TRENDS REFLECTED IN THE INVESTMENT MODEL

In this section we consider four major challenges to the mixed public/private system of providing education in the US. These challenges are: fiscal austerity across the US; a greater reliance on tuition as opposed to other sources of funding at US colleges and universities; a change in the nature in the uses of funds at US colleges and universities; and impediments to the functioning of the economic return to college education. These recent changes in higher education are viewed through the lens of the economic investment model.

Fiscal austerity at US colleges and universities

The Great Recession of 2007 - 2008 had immediate and somewhat lasting impacts on the funding received by US colleges and universities from state governments, changing their operating ability. Data from a variety of sources all point to recent reductions in state funding at US colleges and universities.

A comprehensive analysis is provided by the Center on Budget and Policy Priorities (2014) which compares inflation adjusted percent change in state spending per full time equivalent student over the 2008 - 2014 fiscal years. The Center found that state spending per student is down 23% or \$2,026 across all 50 states. Spending fell in every state except for Alaska and North Dakota (those states enjoyed increased economic activity due to energy abundance over that time period). The biggest reductions in per-student state spending occurred in Arizona (-48.3%), Louisiana (-43.2%), and South Carolina (-41.6%). Epple, Romano, Sarpca and Sieg (2013) examine and model the implications of fiscal changes at US colleges and universities. They conclude that institutions adjust partially to changes in state funding through higher internal reliance on tuition revenues.

Roebber and Meadows (2011) adopt an agent based modelling approach and draw conclusions over multiple simulations based on their experience at the University of Wisconsin system showing that state budget cuts to higher education systems will result in drastic tuition increases over time.

In terms of the supply and demand of college enrollment the reduction in state subsidy is directly tied to the supply side of the market as US colleges and universities either began limiting available seats, not expanding as they were prior to the onset of the Great Recession, or increasing their reliance on adjunct or other types of non-traditional faculty. There is also a reaction, at least in part, due to this funding change where tuitions began, on balance to rise and US colleges and universities began to engage in a more of a retail pricing model, in which institutional aid is used to discount tuitions for selected students based on criteria determined by the institutions themselves.

The contradiction with policy is obvious. Reductions in state funding clearly oppose greater access. Funding cuts have also caused US colleges and universities to engage in different behaviors which may diminish quality in addition to access. The hiring of traditional faculty has decreased and more US institutions are relying on non-traditional faculty to complete their educational missions (Delta Cost Project, 2011). Further, some institutions have pursued or encouraged the use of online education believing that to be a lower cost alternative to traditional coursework (Babson Survey Research Group & Quahog Research Group, LLC, 2013).

Changing revenue sources

It is worth noting that while state support for US colleges and universities declined following the Great Recession, the situation is not as dire for institutions as might be expected. First, states have once again begun to increase spending at US colleges and universities (Center on Budget and Policy Priorities, 2014). Further, aggregate spending/revenues by US colleges and universities did not decrease across the board over that time period. By and large, institutions were able to shift to other revenue sources. The convergence of these factors has created a legitimacy and financial crisis for US colleges and universities.

Data available from the College Board (2014) compares revenue per full time equivalent student received at three categories of institutions: Public Doctoral, Public Masters, and Public Bachelors between 2001 and 2011.

The findings are presented in the Table 1.

Table 1: Share of institutional revenues, tuition and state support: US colleges and universities, by type, 2000 - 2010

Year	Public Doctoral Institutions, % of Revenues from		Public Masters Institutions % of Revenues from		Public Bachelors' Institutions % of Revenues from	
	Tuition	State Support	Tuition	State Support	Tuition	State Support
2000	25%	48%	32%	55%	30%	62%
2005	29%	36%	40%	46%	39%	59%
2011	36%	29%	48%	38%	46%	51%

Source: College Board (2014)

Across the types of institutional categories, bachelors' granting institutions have the largest shares of revenues coming from state funding. Over the 10 year period the state share of funding fell by nearly 18%. At public masters and public doctoral institutions the percentage decreases were relatively larger 31% and 40% respectively.

Over the same period we observe two contrasting trends in US college and university tuition. First, the published advertised levels of tuition have increased across the board. Second, most institutions are increasingly engaging in a tuition discounting, through the use of institutional aid – dollars that exist within the institutions' systems of accounts and used as tuition discounting. Generally tuition discounts, are offered as part of a package which may include other types of external scholarships, and federal and state government provided aid.⁴ Put another way tuition charges are becoming more of an application of pricing strategy allowing colleges and universities to compete on price with those students who may be interested in attending.

Browning (2013) provides a thorough review of tuition discounting, terming it a practice of price discrimination in an economic sense, similar to practices used by retailers, as well as conducting an analysis between the practice and institutional financial health. The College Board (2006) defines the practice and cites its prevalence at US colleges and universities. Hillman (2012) examines tuition discounting practiced at 174 US colleges and universities over a six year period and concludes that the practice is enhancing revenues at most institutions; but that if tuitions are discounted too far, revenues will decrease. The widespread adoption of tuition discounting as a form of price discrimination is entirely consistent with the corporatization of higher education in the US. In Economic Theory price discrimination is a practice used by sellers with market power and is considered generally inefficient and a transfer from consumers to sellers (Perloff & Brander, 2013).

In terms of the supply and demand of college enrollment, the subsequent rise of tuition revenues to replace declining state support and the more widespread practice of price discrimination will impact the demand side of the market for college enrollment. To the extent that overall tuition levels rise, after discounting, demand should diminish; a fact not lost on universities in 2013 when the baby boom had run its course and many families faced lingering financial pressures from the Great Recession.

⁴Ironically these discounts must show up on the institutions' books eventually as a cost.

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Changing uses of funds at US colleges and universities

Ginsberg (2011a) called attention to the observation that administrative functions within US colleges and Universities were growing much faster in terms of staffing and resources than faculty. Ginsberg's work largely pertains to events at his institution, The Johns Hopkins University where he has witnessed and documented not only a rapidly growing administration, but an erosion of power of academic matters from Faculty to various administrative offices.

Empirical estimates and news reports often characterise the changing use of funds at US colleges and universities in terms of employment headcounts. Desrochers and Kirshstein (2014), for example, come to some startling conclusions. They find that the lion's share of employment growth at US colleges and universities was against faculty, even when part time faculty is counted as full time equivalents. Faculty growth over the 2002 and 2012 period slightly lagged enrollment growth while non-faculty growth increased faster than enrollment. Most of the administrative growth was found to be in professional jobs like business support and non-instructional student services.

A different approach at measuring spending at US colleges and universities involves budgetary data focusing on use of funds. The Delta Cost Project and NACUBO offer two similar sets of expenditure categories and include the following: Instruction, Research (separately funded), Public Service, Student Services, Academic Support, Institutional Support, Scholarships and Fellowships, and Plant Operations and Auxiliaries. The two of these categories most closely affiliated with the primary educational mission of colleges and universities are instruction and academic support. The Delta Cost Project (2011) reported that spending on these two categories fell over the 2002 to 2006 period. Spending in other categories increased.

To more closely examine spending trends at US colleges and universities, the Delta Cost Project (2011) provides spending by type of expenditure. We use a measure of mission centrality and look at the change in the Instruction and Academic Support categories of expenditures as a percentage of total spending. Instruction at most universities includes all faculty costs as well as the costs of their immediate, or in-unit, administrative structure, deans, associate deans, and secretarial support. Academic Support is a category whose three main components are libraries, academic advisors, and tutors with some additional IT costs if those are part of the academic support units on a given campus. The data aggregates by three types of institutions: Public Research, Public Masters, and Public Bachelors. As a metric we determine whether the percentage change in expenditure for a category in a given period is above or below the overall change in expenditures. Two time periods were examined spanning 2000 - 2010 and 2005 - 2010. Mixed evidence was found of growth in instructional and academic support spending using these categories of institutions. The results are shown in Table 2. For institutions categorized as Public Bachelors, overall spending grew by 2.1% over the period 2005 - 2010 while spending on both instruction and academic support grew by less. This pattern is in fact similar to the relative spending at Public Research and Public Masters Institutions.

Table 2: Relative growth of mission centrality: US colleges and universities 2000 - 2010

Type of Institution	Expense Category	% Change 2000 - 2010	% Change 2005 - 2010
Public Research	Instruction	Below	Below
	Academic Support	Above	Below
	Overall	11.6%	3.6%
Public Masters	Instruction	Above	Below
	Academic Support	Below	Below
	Overall	4.1%	0.07%
Public Bachelors	Instruction	Above	Below
	Academic Support	Below	Below
	Overall	3.8%	2.1%

Source: The Delta Cost Project (2011)

The calculations in Table 2 are consistent with the observation on employment growth at colleges and universities. There is certainly growth, although at times the growth is small, and a relatively large share of the growth is taking place in areas of the university away from their central educational mission.

The impact on the supply and demand models are a little harder to document. On the one hand Ginsberg (2011b) might be correct, when students ask about tuition rises perhaps they should consider the growth in administration within their colleges and universities. The advent of the relatively large number of administrators on college and university campuses may well include a higher cost of provision of education, reducing supply to the market and forcing higher prices for students. It may also be true that with the rise of administrative functions, not directly tied to student learning and success; quality of education diminishes at a time when institutions are being asked to expand capacity and provide more access and opportunity for more students.

The increased corporatization of US higher education has brought with it an increased relative importance on campuses of administrative functions not directly related to the instructional mission. As indicated above these costs work against access mandates. There is no definitive answer as to whether the increased relative importance of administrative functions enhances quality in some indirect way. Ginsberg's perceptions are widely shared by Faculty but these must be tempered with the complex set of changes being dealt with at US colleges and universities.

Changes to the investment returns

An investment framework highlights both the notion that individual students see education as an investment and provides a perspective for students to rationally tap into capital markets to finance their own human capital accumulation. The stubbornness of the Great Recession and some new data create more uncertainty for potential students and decreases the demand for student enrollment⁵. The current labor market can also be seen as adding complexity.

⁵Some studies have questioned the ability of college students to understand the investment approach to their education (Manski, 1993).

Recent reports of depressed post college earnings and higher costs of college attendance are likely changing the decision making calculus of those contemplating college. Recently, *The Economist* (2014) has reported wide variances in starting, and implicitly, lifetime earnings depending on college and major. "A graduate in computer science from Stanford can expect to make \$1.7m more over 20 years than someone who never went to college, after the cost of that education is taken into account. A degree in humanities and English at Florida International University leaves you \$132,000 worse off" (*The Economist*, 2014: 11). Potential students can obtain estimates of earnings based on past results at payscale.com, and by broad occupational roles, tied to chosen major, at the Bureau of Labor Statistics.

Krymkowski and Mintz (2011) introduce another element bringing variability to the estimation of future returns of college graduates, race and gender. While finding improved graduation rates for females and African American and Hispanic individuals, they point out that "the relationship between rising college graduation rates, in particular, and changes in labor market outcomes by race or ethnicity has not been extensively researched" (Krymkowski & Mintz, 2011: 1).

Within the context of the investment model, if gender and ethnic earnings differences remain when individuals are degreed, the incentive to achieve a college or university degree is diminished for members of those demographic classes.

Within the investment model, actual or perceived decreases in earnings potential would directly impact the demand for college education since the benefits of attending may be considered diminishing. There is also evidence offered that the benefits across potential graduates are clearly not uniform; they will likely vary by major and by university attended. To the extent that differences across institutions and majors either grow or become more widely known one could expect demand to become less uniform. In an environment where President Obama and other world leaders are calling for greater access, and the economies of all nations are looking for college graduates to replenish or deepen their pools of human capital, consideration may have to be given to what institutions the individuals are attending and what majors they are choosing.

A changing student body

In a widely quoted study by the Pew Research Center (2014), a result emerged that has been discussed on nearly every college and university campus in the US. In a survey of 1 055 presidents of two-year and four-year US colleges and universities taken in 2011, 58% of the presidents indicated that public high school students matriculating into US colleges and universities were not as prepared as students matriculating 10 years previously. One specific aspect of a lack of preparation is the need for remedial or developmental non-credit courses for entering college students. The National Center for Education Statistics (2012) reports for AY 2007 - 2008 (the latest for which data is available) that 36.1% of first year undergraduate students took at least one remedial course.

In US colleges and universities students must pay for these courses; however, the courses do not count towards degree completion. A number of studies have shown that students placed into remedial courses have lower persistence and completion rates than students who are not required to complete remedial work (Bettinger & Long, 2010; Complete College America, 2012).

Long and Boatman (2013) point argue that the costs of remedial education are significant and represent society double paying for the same education given that remedial courses are designed to bring entering college students up to high school proficiency standards so that they may progress through a university level program. Long and Boatman (2013) also present evidence that remedial education is required relatively more of minority and low income students and that the need for remedial courses present numerous challenges including students prolonging their college education since the remedial courses do not count towards degree requirements.

There are clear implications in the economic investment model of a significant need for remedial education. The extra coursework required will lessen student demand, since the coursework will

likely increase the time to earn a degree and the costs of obtaining that degree. Further, there is evidence that students requiring remedial coursework are less likely to persist and graduate (Long & Boatman, 2013). On the supply side of the market, the need for remedial education represents a cost of provision, effectively reducing supply and forcing universities to reallocate Faculty resources away from their degree programs. The impact of a significant need for developmental or remedial education in terms of President Obama's broader access mandate is also clear. The need for developmental education limits access and its effectiveness in leading to degree completion, let alone securing a pathway to the middle class is not well established (Long & Boatman, 2013).

CONCLUSION

For many Americans, a post-secondary degree is the pathway to success, affording them the opportunity to gain access in higher socio-economic status and the ability to compete in various corporate employments, international and domestic. For the US, providing higher education is a necessity in order to stay viable and competitive in the global market and in the new economy. However, the US has fallen short in offering opportunities for all Americans to get a college education that is accessible, affordable, and attainable. This manuscript presents research that underscores the systemic policies and challenges regarding access and achievement within the US higher educational system. Incorporating the broader perspective of the economic framework, the authors further expounded on the seismic paradigm shift that has occurred within the system. Historically, two models, democratisation and the new corporate models, have emerged that strategically changed the trajectory of how colleges and universities provide education to their student populations and the overall organisation, administration, financing, and management of these institutions. Moreover, there is a structural disconnect in the funding policies between the two models. The democratisation model focused on increased state funding for students to attend state/public colleges, while the new corporate model although encouraged access with increased university enrollment through corporate funds, the costs, quality, and educational attainment are limited, therefore lowering student retention and graduation rates.

In order to raise the bar for the US higher educational system, President Obama issued a call to action that by 2020 there will be an increased number of students graduating from four year colleges/universities than any other country in the world and that state legislatures and the federal government must set policies in place to secure the funding formula to graduation rates. By incorporating the economic investment model, individuals can make better decisions whether to pursue a post-secondary degree through a cost-benefits analysis. Although the economic investment model offers a supply/demand approach through individual choice, this model is also without challenges such as fiscal austerity, tuition reliance, change of student body, and the overall changes in college/university enrollment decisions.

In essence, educational attainment is paramount as it is the key to increased salary earnings and a major influence against poverty and unemployment. With the increased demand for post-secondary degrees, Americans can play a vital role in the employment industry as the global/domestic economy requires a highly skilled and educated workforce. It is our hope that we begin the dialogue addressing the problem of the 'iron triangle', which refers to access, affordability, and quality (Stengel, 2012; Naylor *et al*, 2014) and to further expand the discussion on policy reform that enables all individuals regardless of gender, race, and ethnic background the opportunity to obtain a college degree, without the concern of student loan debt repayment, the costs of financing their education, and the possibility of low graduation rates. If the US seeks to return as the world leader in educational attainment, then pragmatic and normative policies addressing the iron triangle need to be implemented across the entire US higher educational system if education is to remain the 'great equalizer'.

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BOOK REVIEW

By C. Rootman

STRUWIG, F.W. & STEAD, G.B. 2013. *Research: planning, designing and reporting* (2nd Ed.). Cape Town: Pearson. Pages 290, including index. ISBN 978 1 7757 8128 8

The first author is currently Director: School of Management Sciences at Nelson Mandela Metropolitan University and the second author is currently a staff member of Cleveland State University in the Department of Curriculums and Foundations.

The comprehensive update of this book (the first edition was published in 2001) is inspired by and based on the authors' years of experience in assisting students with research projects. The main aim of the book is to provide readers with a clear guide on how to conduct research – from the start to the end of a research project.

The book is a user-friendly tool that will assist both academic researchers and students – whether undergraduate or postgraduate. It discusses both quantitative and qualitative research methods and thoroughly explains research concepts, steps and methods by providing practical examples, mainly from the fields of business management and social sciences.

A major contribution of the book is the quick response codes (QR codes) incorporated throughout the text. These codes can be accessed using a mobile phone and provide links to YouTube videos or Internet sites with additional learning tools and explanations on certain research topics. In addition, access is also provided to the Pearson's Study on the Go text and online content mobile integration. This app provides readers with research related audio summaries and quizzes, amongst other tools. The textbook will soon also be available in electronic format.

The book is structured in eight chapters, each with a content overview flowchart, purpose and various learning aims. In addition, all chapters contain exercises, assessment questions, practical group activities and a reading section to ensure a better understanding of the chapter's research content, and to practise the skills relating to it. The layout of chapters is as follows:

Chapter 1 introduces the reader to the research process. Specifically, it highlights the nature of research, as well as discusses and compares the quantitative and qualitative research approaches. To keep pace with technology, the authors also discuss the Internet technologies available to researchers in this chapter.

Chapter 2 explains what the literature review of a research project entails. This chapter, which often lacks in other research books, clearly explains what a literature review is, how to conduct it and how to present it in an academic report. It discusses the various types of literature sources. A section in the chapter is also dedicated to academic writing.

Chapter 3 focuses on designing, planning and drafting the research proposal. The chapter describes how to go about in selecting a research topic as well as how to formulate a research problem and research objectives. A useful tool in this chapter is the research proposal template, a guide to researchers when developing and writing their own research proposals. The chapter also emphasises ethics issues relating to research.

Chapters 4 and 5 focus on the empirical investigation part of research. Specifically, Chapter 4 discusses data collection methods. The chapter distinguishes between primary and secondary data collection and focuses on how to apply the various data collection methods. Useful guidelines and examples to assist in questionnaire design add to the value of this chapter.

Chapter 5 explores data collection procedures. In this chapter the focus is on providing readers with knowledge on various sampling procedures, methods, techniques and size issues. Fieldwork is also briefly discussed.

Chapter 6 sheds light on the issues of reliability, validity and rigour in research. The chapter aims

to highlight these research concepts and, in addition, ensure that readers apply these to their own research. Various types of and measures for these concepts are discussed in Chapter 6.

Chapter 7 details the importance and processes of data analysis and interpretation. Compared to other research books, this book's chapter on data analysis is easy to understand and use. The chapter clearly shows researchers how to screen and tabulate data before further data analysis procedures. The chapter continues to highlight how to select and apply appropriate statistical measures. Details on the interpretation of both quantitative and qualitative data are provided in the chapter.

Chapter 8 concludes with step-by-step guidelines on how to present a research project. This chapter gives the book a competitive advantage over other research books which lack these details. The chapter adds value to both researchers and examiners. Academic writing, specifically the technical requirements for a research project, and how to produce publications such as conference papers and journal articles from research projects are thoroughly discussed. The examination process and process of selecting external examiners are also highlighted.

In addition to the eight chapters, the book also provides a document stipulating requirements for research reports and the roles of research role players (e.g. supervisors), a guide on using reference techniques and a useful glossary.

Various students have commented on the usefulness of this book while conducting their research. Globally the book is highly acclaimed by academics, and therefore widely used by supervisors and in Research Methodology courses.

JDL JOURNAL POLICIES

Aims and scope

The Journal for Development and Leadership (JDL) is a peer-reviewed journal of the Faculty of Business and Economic Sciences at the Nelson Mandela Metropolitan University in Port Elizabeth, South Africa. This journal is aimed at providing practical guidance and empirical evidence to researchers and practitioners specialising in Business and Economics and related fields.

The journal provides a communication forum to advance entrepreneurship, innovation, small business management and various disciplines in Business and Economics, as well as the application of the disciplines in practice. Its aim is the improvement and further development of these fields and it is designed to appeal to academics, researchers and practitioners.

A double-blind review process is followed, supported by a national and international Editorial Peer Review Board.

Full academic accreditation will be applied for at the DoHE when the set requirements have been met.

The mission of the Journal for Development and Leadership (JDL) is to be a dynamic and internationally-recognised academic journal of excellence that will stimulate sustainable development and leadership by generating and disseminating of cutting-edge knowledge and understanding.

It is envisaged that the JDL will serve as a platform for presenting information central to the concerns of academics, researchers and practitioners. In this manner, research will grow and simultaneously shape theories for future application in the relevant societal contexts.

The Journal is published bi-annually, in June and December by the Faculty of Business and Economic Sciences of the Nelson Mandela Metropolitan University.

The views expressed in the journal are those of the respective authors.

INFORMATION FOR CONTRIBUTORS OF ARTICLES

Editorial policy

The editorial policy includes taking cognisance of the journal's objective to advance all disciplines, fields and sub-fields within the Faculty of Business and Economic Sciences, such as those mentioned above and, in addition, the advancement of entrepreneurship, innovation, small business development, among others, as well as the application of the various, relevant disciplines in practice.

The primary purpose of the journal is to publish research articles in the various fields, to disseminate information and to serve as a publication vehicle for academics, researchers and practitioners. For example, practical papers, empirical papers, new approaches and techniques, case studies, and conceptual papers will be considered for publication, as well as book reviews and, when appropriate, conference papers.

Review process and proofing

The decision of the Editorial Committee to publish a given article is based on the judgment of the reviewers, who are all knowledgeable in their respective fields.

Authors will be informed of the committee's decision, including any relevant comments, after the article had been reviewed. Neither authors nor reviewers are identified in the review process.

Submission requirements

When submitting articles, authors have to agree that:

- They have not submitted and will not submit their article to another entity while the article is under review at JDL.
- They will only submit articles and empirical reports that have not been published previously.
- Their articles are prepared according to the prescribed style of JDL.
- Articles that have not been appropriately prepared according to the set guidelines will be returned to the authors prior to peer-reviewing.

Format

Font and font size should be Arial or Times New Roman in 12 pt font size. The margins should be 3 cm left, 2 cm right and 2.54 cm top and bottom of each page.

Abstract

The abstract should consist of approximately 200 words, should be in single spacing and should be in italics.

Keywords

Authors should identify up to five keywords, separated by a semi-colon on the title page that characterise the principal themes covered by the paper.

Language

Papers should be written in English (South African English). (In MS Word go to Tools, Language, Set Language and then select 'English, South Africa'.)

Title page

This page should contain the title of the article and the name, affiliation, full address and contact information of every author. If the article is co-authored, then the name of the author to whom correspondence should be sent has to be marked with an asterisk (*).

Body

The article has to be typed on one side of the page only in 1.5 line spacing. Appropriate headings and sub-headings should be used to segment the article to enhance readability. The length of the article should not exceed 10 000 words of typed text (approximately 30 typewritten A4 pages).

Headings

Headings and sub-headings should not be numbered. All headings have to be formatted in bold upper case, and sub-headings in bold lower case (for example, using initial capitals and the rest lower case). Sub-sub-headings should be in regular lower case.

Manuscript contents

Articles should include: abstract, introduction, identification of a problem, aims of the study, method and sample, measuring instruments, procedure, followed by interpretation and articulation of the results.

A conclusion has to be provided at the end of the article followed by a bibliography and possible annexures (appendices).

Tables and figures

Tables and figures should be applied in the text, as close as possible and relevant to the appropriate explanation. They should be numbered consecutively in Arabic numerals.

Captions above tables and figures should be flush with the margin and in bold and lower case.

Sources below tables and figures should be flush with the margin (not bold) and in lower case.

Referencing

The Harvard Style of reference is used (see below). All publications cited in the text should be listed alphabetically by the surname of the first author in the bibliography at the end of the paper.

The bibliography/list of references (alphabetical, by author's last name, including initials) should be placed at the end of the article. Authors should ensure that there is a complete reference for every citation in the text and that the cited dates and the spelling of authors' names in the text and the references are consistent. A bibliography/list of references also includes other consulted sources not necessarily cited in the text, whereas a list of references includes only those sources referenced in the text.

Citations

The most recent publications on the topic should be cited, particularly those of the last five years, although the inclusion of older publications is acceptable, if appropriately applicable within the relevant context.

Full stops and no spaces between initials in prelims list, article opener - for example: Professor H.R. Lloyd.

After abbreviations - no full stops after abbreviation that ends in the final letter of the word - for example: 'Dr'

References in text

Up to 6 authors: use all names at first mention, thereafter use '*et al*'.

Use ampersand (&) between authors' names when between brackets.

In the text, comma after author's name, space after colon - for example: (Lloyd, 2008:123).

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In the bibliography, no parentheses around the year except in the case of 'nd' for 'no date supplied'.

Full stops between initials - see below.

Book and article titles: use upper case only for the first letter of the titles and not for the first letter of the sub-title after the colon.

Style for dates - all dates in UK/SA style, e.g. 24 June 2008. Use this in every instance, in the text and in the references.

Examples of references in text

One author:

Brown (2010)

(Brown, 2010: 54)

Two authors:

Brown and Black (2011)

(Brown & Black, 2011: 89)

Three or more authors:

Black, Brown and White (2013: 45)

Black *et al* (2013: 65)

Same author, different dates:

Black and White (2011, 2012)

Same author, same date:

Brown (2012a: 15, 2012b: 33)

Different authors:

(Black, 2013; Brown & White, 2012)

Examples of references in the BibliographyBook:

White, A.B. & Snow, R.J. 2012. *Organisational psychology* (3rd Ed.). Englewood Cliffs, NJ: Prentice-Hall.

Edited book, chapter:

Brown, J.J. 2010. Personnel assessment. In A.K. Black & J.B. White (Eds), *Handbook of industrial psychology* (pp. 345-388). New York: Wiley.

No author:

A manual of style. 2013. Palo Alto, CA: Jossey-Bass.

Journal article:

Black, P.P. 2009. Employment testing: old theories and new research findings. *Journal of Human Performance*, 9(1): 130-145.

Internet:

Brown, T.P. 2012. *City project*. Available online at: <http://www.larcities.com> [Accessed 6 January 2013].

Urbanisation. 2011. Available online at: <https://www.wurbancit.com> [Accessed 15 August 2012].

Black, C.J. & Brown, A.M. 2012. Coordinating family and school. *Adolescence*, 3(1). Available online at: <http://www.school.com> [Accessed 10 May 2013].

Quotations & quotation marks

Use double quotation marks.

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Use spaces instead of commas between hundreds, thousands and millions.

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