Intergenerational equity and the political economy of South Africa

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Introduction

Intergenerational equity is a complex issue in public policy, and the complexities may be compounded when one views it through the lenses of political economy, philosophy or applied ethics. More often than not, the notion is invoked in discourses around environmental sustainability or concerning the politics of public debt. The concept, however, is much deeper and wider in scope.

A range of sub-issues is embedded in the term 'intergenerational equity'. This is so because society is the intermediary between past, present and future generations. All social processes, be they political, economic, technological, ethical or environmental, have a systemic and dynamic impact upon the overlapping generations' welfare. Nevertheless, human beings are predominantly 'present-oriented' – they discount the future more heavily the more distant it is, or is perceived to be. In effect, the present is more important than the near future and the near future is more important than the distant future. Furthermore, human activities and enterprises are, more often than not, subject to uncertainty and imperfect information.

These simple, factual realities have profound and far-reaching consequences for the success and failure of nations. Moreover, our use of natural resources, our approaches to the ecosystem, and the political economy institutions, the social and ethical framework we promote and the ease with which we commit resources to social and human integrity are all affected by our implicit or explicit regard for the principle of intergenerational equity.

These issues have preoccupied philosophers since time immemorial and feature in classical economic thought. However, the modernist pursuit of economics as a value-free 'technical' science, particularly within the framework of neoclassical economics, effectively marginalised the intergenerational topics. The contemporary emergence of institutional economics, coupled with environmental concerns and globalisation, has repositioned intergenerational issues at the centre stage of the global political economy discourse. For the discipline of economics, this offers an interesting, but challenging, vista. In reality, ethical values are implicit and exogenous in virtually all models. Economics is yet to fully internalise this fact.

For South Africa, at this juncture in its social democratic evolution, intergenerational equity has an added significance. Nearly 20 years into the foundational phase of its new democratic dispensation, compelling evidence and complicated syndromes of disregard for intergenerational equity are emerging. From the utter failure of the public basic education system, to the widespread collusive and extractive conduct among corporations, to the near collapse of the public sector's administrative and management capabilities, particularly at local government level, glaring and worrisome signs are in evidence that social welfare across generations is being disregarded, or even compromised.

In the remainder of this chapter, the concept of intergenerational equity is explored in more detail, followed by an analysis of the patterns and trends in resource allocation across generations in South Africa. The analysis of non-pecuniary investments in future generations will be examined next, after which the challenges of intergenerational equity rebalancing are considered. The chapter ends with some conclusions.

Intergenerational equity: definition, application and significance

Intergenerational equity is a principle of distributive justice which concerns the relationship between past, present and future generations. We could conceptualise the basic contours of an equitable relationship between generations in many ways. From a social contract perspective, it is instructive to imagine that all generations are partners in an implicit social contract defining rights, duties and obligations between generations. The contractarian approach, however, ignores the intergenerational effects of power dynamics, as well as the critical role of the individual. The structure of political power and the binding influence of current generation interest groups shape the future.

Every national community, indeed the entire worldwide human community, is comprised of the multiple, complex, overlapping and interdependent systems that constitute our environment. Generically, this environment is made up of two components: one is the natural environment; the other is socially constructed (i.e. human-made). Throughout history, there have been profound philosophical and existential debates about the privileges and responsibilities of each generation with regard to each of these components (see Frischmann 2005).

In the recent past, intergenerational issues related to the ecosystem have received much attention under a variety of topics. For environmentalists and economists, the operative word is 'sustainability'. The concept of sustainability has a long tradition in academic economic literature, dating back to the 18th century when the sole concern was the ability of the earth to provide sustenance for a growing population. The interplay of biological forces, exhaustible resources and human-made technologies has been the focus of ongoing intellectual enquiry ever since. In the past century, Harold Hotelling (1931) formalised 'the economics of exhaustible resources'. Ever since, there have been both opponents and proponents. However, it was the Brundtland Report, *Our Common Future* (WCED 1987), that placed intergenerational equitability at the centre of the global political economy discourse. The report's often-quoted definition provided a technical and ethical challenge for humanity worldwide by stressing that 'sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs'.[1]

> Each generation inherits a wealth of pecuniary and non-pecuniary resources. In return for this boon, it is obliged to maintain and augment these resources for bequeathing them to the generations that follow.

Theoretically, the case of natural resources, exhaustible or otherwise, seems fairly straightforward insofar as we do not create them, we only inherit such resources. It, therefore, stands to reason to postulate, as Frischmann (2005: 463) does, 'that the present generation does not have a superior claim to the Earth's resources and consequently that each and every generation is both trustee for the planet with obligations to care for it and a beneficiary with rights to use it'. Intergenerational equity in this regard, therefore, rests heavily on the internalisation and operationalisation of this fairly straightforward moral principle of trusteeship.[2] In the complex dynamics of social evolution, however, the principle of stewardship intersects with the equally compelling presence of trade-offs between decision options and uncertainty of outcomes.

As important as the natural resources are the human-made resources and capabilities that collectively constitute a dynamic and ever-advancing civilisation. In econometric literature, this is often referred to as the 'made-capital' of a nation, in contrast with the natural endowment of the country. For each generation, then, the national resource (or capital) endowment is made up of the natural endowment plus the inherited made-capital. In this regard, each generation's heritage subsumes vital components, such as culture, knowledge, socio-economic and political institutions, logistical infrastructure and the effective governing legal paradigm. As is argued below, social capital is a critical component of made-capital. From the perspective of intergenerational equity, the treatment of such human-made resources is morally more complicated. It may be argued that the generation that created such resources has a superior claim to their benefits. As a corollary, the costs associated with, or damages arising from, the current generation's decisions ought also to be borne by it (or its members).

The reality of the social structure and its evolution over time is that, more often than not, both benefits and costs are externalised. In effect, neither the full benefits nor the entire costs of a given generation's decisions are born by it or its members. Prime examples of this are the investments made in building accountable political and legal institutions, economic and industrial infrastructure, investment in research and development, social security contributions, the national debt and global warming. For societies that have experienced wars of liberation, or domestic national struggles towards unification, the costs and benefits of such periods of disruption are borne disproportionally by the subsequent generations.

Thus, the substance of intergenerational equity is complex, and its operational requirements are both tangible and intangible. Importantly, the implications are not merely theoretical and academic – the future trajectory of a society's developmental path is defined largely by the depth of understanding of, and commitment to, intergenerational equity. It is interesting to note that as early as 1838, Abraham Lincoln, the visionary USA president, in his Lyceum Address, recognised the enormity of the moral burden of trans-generational equity in the following words:

> We find ourselves in the peaceful possession, of the fairest portion of the earth, as regards extent of territory, fertility of soil, and salubrity of climate. We toiled not in the acquirement or establishment of them—they are a legacy bequeathed us, by a once hardy, brave, and patriotic, but now lamented and departed race of ancestors. Their's [sic] was the task (and nobly they performed it) to possess themselves, and through themselves, us, of this goodly land; and to uprear upon its hills and its valleys, a political edifice of liberty and equal rights; 'tis ours only, to transmit these, the former, unprofaned by the foot of an invader; the latter, undecayed by the lapse of time and untorn by usurpation, to the latest generation that fate shall permit the world to know. This task [of] gratitude to our fathers, justice to ourselves, duty to posterity, and love for our species in general, all imperatively require us faithfully to perform. (In Frischmann 2005: 464)

Lincoln's words envision a powerful, overlapping generational social contract, rooted in equity, inspired by a moral duty to promote prosperity, and driven by a strong reciprocity principle. Each generation inherits a wealth of pecuniary and non-pecuniary resources. In return for this boon, it is obliged to maintain and augment these resources for bequeathing them to the generations that follow.[3]

The operational intricacies of distributive justice multiply when we intersect the above principle of trans-generational morality with the intra-generational mal-distribution of resources. Economic and moral philosophers have grappled with these interrelated issues for centuries. The contemporary interest in philosophical discourse on the subject was ignited with the publication in 1971 of John Rawls' *A Theory of Justice*. The Rawlsian paradigm, which reintroduces the idea of the social contract, has been a significant but controversial intervention. Libertarian, Marxist, institutionalist, egalitarian and feminist critiques of Rawls abound. Amartya Sen, an economic philosopher and a one-time student of Rawls, in his book, *The Idea of Justice* (2009), credits *A Theory of Justice* with revitalising the socio-political discourse on the critical issues of redistributive justice. Sen offers a profound critique of the Rawlsian

ONE

paradigm by highlighting the shortcomings of the 'contractarian tradition' and by emphasising the significant impact that human behaviour has on institutions' ability to bring about and maintain a 'just society'.

At the heart of the controversies and complexities of redistributive justice lie the assumptions made about the nature of the human being, on the one hand, and the political economy construct of society, on the other. Furthermore, the fact that these two are themselves interactive makes the matrix even more complex.

With regard to the nature of human beings, two polar assumptions have driven the entire philosophical, psychological and political economy research. Eric Beinhocker (2007: 418) summarises the points as follows:

> If one digs deeply into the Left-Right divide, down to its philosophical and historical core, one finds two conflicting views of human nature. On the Left is the view that human beings are inherently altruistic, that greed and selfishness stem not from human nature, but from the construction of the social order, and that humans can be made better through a more just society. The lineage of this view descends from Jean-Jacques Rousseau and Karl Marx.
>
> On the Right is the view that human beings are inherently self-regarding and that the pursuit of self-interest is an inalienable right. The most effective system of government is one that accommodates rather than attempts to change this aspect of human nature…The Right claims, however, that if people pursue their self-interest through the mechanism of markets, then the general interests of society will be served as well. The lineage of this view descends from Hume, John Locke, and Thomas Hobbes.

Curiously, on the basis of these opposing philosophical perspectives, and ultimately personal views, competing systems of governance have been constructed, ideological battles have been waged, and socio-economic constructs have been subjected to revolutions and upheavals over the past two centuries. Yet, socio-political experimentation based on the assumptions of the Left and the Right have both failed to bring about an order that is capable of dealing satisfactorily with redistributive justice issues. It is no exaggeration to argue that both contemporaneous and intergenerational equity have deteriorated if judged by the prevailing disparities in wealth and income, as well as the compounded ecological and sustainability crises. Clearly, a new paradigm, based on an alternative and more nuanced perspective on human nature, is needed.

Modern scientific research in psychology, economics, anthropology and game theory has highlighted serious flaws in the simplistic assumptions made by both the Left and the Right about human nature. Recent empirical research conducted within a mutlidisciplinary framework and tested in a variety of socio-economic, racial, tribal and developmental regions, suggests that human beings are neither altruistic nor selfish. They are better defined as 'conditional co-operators' and 'altruistic punishers'.[4] Herbert Gintis, Samuel Bowles and Ernst Fehr (2005) label this type of behaviour as 'strong reciprocity', which they define as 'a predisposition to cooperate with others, and to punish (even at personal cost if necessary) those who violate the norms of cooperation, even when it is implausible to expect that these costs will be recovered at a later date' (in Beinhocker 2007: 419).

This critical revision of our assumptions about human nature opens up a new paradigm of thinking and a vast range of consequent systemic possibilities. Together with other recent scientific research in the fields of thermodynamics, networks, dynamic systems evolution, analytics of disequilibrium economics and empirical psychology, the 'strong reciprocity' assumption paves the way for what is currently known as 'complexity economics'. Complexity economics is a clear and substantive departure from nearly four centuries of traditional economics, reflected primarily, but not exclusively, in neoclassical economic analysis. No doubt it will take years, possibly decades, for the tenets of complexity economics to evolve and for its systemic ramifications to be revealed.

Meanwhile, and in the immediate future, the requirements of intergenerational equity entail a balancing of the human attributes of conditional co-operator and altruistic punisher. Arthur Dahl (2013: 3) offers a framework for transition:

> We desire a world of peace and prosperity, but much of economic and psychological theory depicts human beings as slaves to self-interest. Yet it can be argued that well-being for everyone necessitates a more just and sustainable social order. This would require qualities like moderation, justice, love, reason, sacrifice and service to the common good, which must be harnessed to overcome the traits of ego, greed, apathy and violence, which are often rewarded by the market and political forces driving current patterns of unsustainable consumption and production, in which the well-being of a few is attained at the expense of the many… A new social contract must have a broader view of human well-being founded on ethical principles.

With regard to the political economy construct of any given society, recent scientific research and cross-country comparative analysis offer equally insightful and instructive findings. Two attributes of the social order are of critical relevance to our analysis. The first attribute is that the political economy system is dynamic. Scientifically, this means that the system's current state is strongly related to its previous state, and its future state is a function of its current variables. By way of illustration, consider a country's national stock of capital – a critical variable in determining actual and expected growth

> Intergenerational prosperity is dependent as much on social capital as on financial and technological capital.

rates. Capital accumulation is a dynamic process. The rate at which the national stock of capital is increased or decreased will be determined by the stock of capital at the start of the period (i.e. initial conditions and the rate of capital accumulation or destruction, and the time period). The same analysis holds for unemployment, savings, technological progress, the development of the country's commercial jurisprudence, the evolution of accountability and legal institutions, and numerous other processes.

The second attribute is the fact that within the complex web of the political economy system, there are countless processes with feedback loops. This means that developments in one dynamic process influence another set of processes within the system. What happens to the investment process has direct implications for unemployment, capital accumulation, growth, savings and other processes. These effects are both contemporaneous and trans-generational. For example, enhancing scientific research and development capabilities in the current period affects the current generation, but more so the future capability of the nation in the particular field in question. Likewise, the strengthening or weakening of the country's judicial infrastructure has implications for both current and future generations.

The dynamic nature of the political economy structures, therefore, has profound implications for both pecuniary and non-pecuniary variables that govern intergenerational equity. The interactions between politics and the economy, the governance institutions and the culture of citizen participation are critical factors in the success or failure of nations. Acemoglu and Robinson, in *Why Nations Fail* (2012), articulate the following relationships:

> Each society functions with a set of economic and political rules created and enforced by the state and the citizens collectively. Economic institutions shape economic incentives: the incentives to become educated, to save and invest, to innovate and adopt new technologies, and so on. It is the political process that determines what economic institutions people live under, and it is the political institutions that determine how this process works. For example, it is the political institutions of a nation that determine the ability of citizens to control politicians and influence how they behave. This in turn determines whether politicians are agents of the citizens, albeit imperfect, or are able to abuse the power entrusted to them, or that they have usurped, to amass their own fortunes and to pursue their own agendas, ones detrimental to those of the citizens. Political institutions include but are not limited to written constitutions and to whether the society is a democracy. (Acemoglu & Robinson 2012: 55)

A significant contributor with long-term impact on the sustainability of social development and human prosperity is the embedded value system that manifests within society's operations. Such values and codes of conduct need not be legislated or otherwise formalised; rather, they need to be internalised within society's political economy organs. With the help of such values, social trust is engendered and over time social capital is created, maintained and augmented. Intergenerational prosperity is dependent as much on social capital as on financial and technological capital. The co-evolution of these forms of capital ultimately leads to, and is required for, sustainable development across generations.

In the light of the foregoing account, four protagonists emerge as the primary contributors to intergenerational prosperity and equity – the national resource (capital) endowment (both natural and made),[5] the individual, the political economy institutions and the society, as defined by the embedded value system that is espoused formally and informally.

Empirical quantification of the foregoing aspects of intergenerational equity is not readily available. There are, however, some aspects that lend themselves to tracking by proxy indicators. For example, *Intergenerational Justice in Ageing Societies: A Cross-national Comparison of 29 OECD Countries*, produced under the auspices of the Bertelsmann Foundation's Sustainable Governance Indicators (SGI) project, attempts to create an Intergenerational Justice Index (IJI). It uses four pecuniary variables to construct its IJI – child poverty, public debt per child, ecological footprint and the extent of bias against older generations. Non-pecuniary variables are excluded from this proposed IJI. In what follows, some of the key indicators of intergenerational equity are discussed for South Africa.

Patterns and trends in resource allocation across generations

Amongst the quantitative indicators of intergenerational equity is the aggregate level of investments (savings) achieved by each generation in ensuring the sustainability of growth over time. National savings is an important intergenerational variable insofar as savings are the key source of funding for national investment. Without investment, economic growth is a near impossibility. In the absence of adequate national savings, investment in the national economy has to rely on foreign capital flows into the country. Imported capital, in turn, can be fickle and footloose. More seriously, when a country is dependent on imported capital for a significant share of its national investments, this creates ongoing currency volatility and financial market sensitivity to domestic socio-political dynamics.

This is particularly significant with regard to the type of investments that lay the foundation and create the framework for unlocking the economy's inherent potential. This is central to the 'made-capital' referred to earlier. Made-capital itself is dependent on economic structure. For an economy whose natural endowment is primarily mineral resources, the type of investment needs to be focused on the mix of infrastructure that enables growth and development in this sector. Appropriate rail facilities, harbour logistics, industrial beneficiation capabilities, adequate and reliable energy and water supply are examples of such investments. In contrast, when an economy is oriented largely towards the tertiary sector, its investment requirements are vastly different.

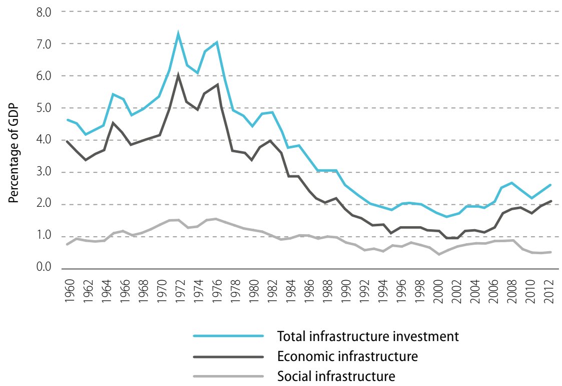
There is no particular level of aggregate investment that is technically optimal and universally applicable across the various phases of business cycles and technological waves. That said, 'the rule of thumb' in economic development history suggests that, over time, for the sake of sustainable growth, a country should spend an average of 5 to 8 per cent of its GDP on socio-economic infrastructure.

As illustrated in Figure 1.1, South Africa's average national investment, as a ratio of GDP, has fallen from its height of over 7 per cent in the mid-1970s to the current level of below 3 per cent. This sustained under-investment has created a cumulative gap in the required stock of socio-economic infrastructure, which, in turn, has undermined growth and retarded social development. At the time of writing, some of the manifestations of such backlogs are present in the lack of adequate energy, roads, export logistics, public education and health facilities, and urban amenities. Furthermore, for a number of years to come, it is highly likely that the country will struggle to catch up with the cumulative backlog.

South Africa's portfolio of natural endowment is heavily resource-based. As such, development and sustainability of growth depend heavily on a well-planned and appropriately sequenced stock of complementary infrastructure. Not only does this need adequate and reliable energy, it simultaneously needs rail, harbour, water and human skills, amongst others. So, the level of investment, per se, is only one requirement; the other is to get the mix, the scale and the timing of such investment right.

During the 1970s, 1980s, 1990s and 2000s, neither investment in public infrastructure nor its optimal mix received much attention. These periods also coincided with considerable political and social upheaval, accompanying the dawn of the new democratic dispensation in the country in 1994. For completely different reasons, infrastructure investment requirements were neglected during the periods prior to and after 1994. From an intergenerational viewpoint, the neglect

Figure 1.1: South African economic and social infrastructure investments, 1960–2013



Source: SARB (2013a)

of adequate investment in public infrastructure in these periods will exact heavy costs on subsequent generations.

Next to infrastructure investment trends, the stock of public debt and its relative magnitude constitutes one of the most commonly debated intergenerational statistics. More often than not, the stock of public debt is perceived as bequeathing a liability to future generations and, as such, it is regarded as morally questionable. However, whether or not public debt is a burden depends largely on what it has been used for. If debt is accumulated due to the current generation's welfare expenditure, or war financing, or abusive and extractive practices in the public sector, then the accumulated government liabilities will entail negative effects on the generations that follow. On the other hand, if the bulk of public debt is due to investments in productive national socio-economic infrastructure, then the effect on future generations will be potentially positive. The latter type of public borrowing is conducive to the expansion of the economy's productive capacity and, hence, future growth, job creation and social development.

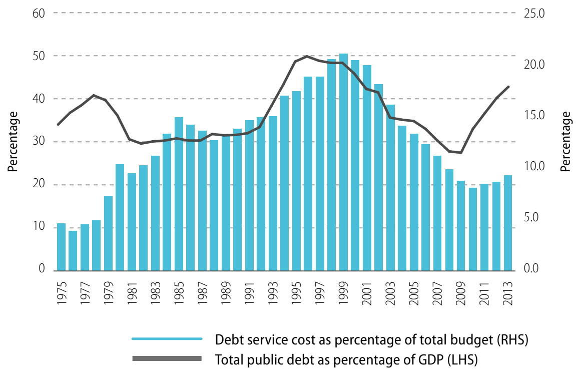
South Africa's public debt trends remain fairly benign. As illustrated in Figure 1.2, the government's fiscal policy paradigm since 1994 has resulted in a substantial decline in public debt to GDP ratios. From a high of 50 per cent of GDP, the public debt ratio fell to as low as 28 per cent in 2008. Meanwhile, debt service charges reached a peak of 20 per cent of government budget before sliding to a low of 7.6 per cent in 2010. At the time of writing, both these ratios were on the rise, due, in large part, to the government's anti-cyclical fiscal policies.

However, from an intergenerational perspective, while public debt ratios remain prudent, the stock of national socio-economic infrastructure, as shown in Figure 1.1, is considerably below its optimal level. If seen as a national balance sheet, it can be argued that the asset side of the ledger (i.e. the stock of infrastructure) is woefully weak, with accumulated backlogs, while the liability side (i.e. the national debt) is moderate at present. The former inhibits actual and expected growth, which, in turn, and over time, causes material sustainability concerns for government debt. Current and future generations are set to suffer welfare losses as a result.

The extent to which (and at what speed) public debt sustainability concerns emerge depends on the key drivers of public expenditure and the associated governing political economy ideology. An analysis of budgetary allocations over the past two decades, as shown in Figure 1.3, highlights the following:

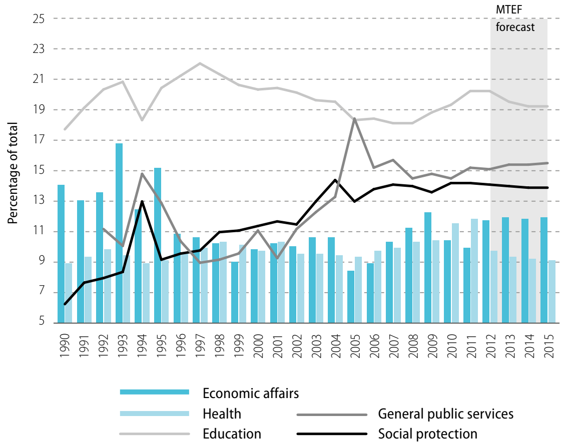
» The fastest growing budgetary item is the 'social protection' allocation. In effect, the welfare spend is the top driver of South Africa's fiscal trends. Whereas in 1997 the number of beneficiaries was at 2.6 million, by 2013 it had reached over 16 million.
» The second fastest growing item is expenditure on public administration. Whereas some growth in this component of

Figure 1.2: Public debt as a percentage of GDP, and debt service cost as a percentage of government budget, 1975–2013



Source: SARB (2013b)

Figure 1.3: Major components of the South Africa government budget, 1990–2015



Source: SARB (2013c)
Note: 2013–2015 are medium-term estimates

ONE

fiscal allocation was inevitable due to the imbalance of pre-1994 state structures, it is debateable if such expenditure produces commensurate value for money spent. Ongoing analysis of such spend by the office of the auditor-general suggests considerable inefficiencies and wasteful expenditure in this category of budgetary expenditure.

» The education budget has been stabilised. Nonetheless, it constitutes 20 per cent of the national budget.
» Economic infrastructure consistently receives a relatively small and variable budgetary allocation. This may well be due to the fact that much of the prevailing political economy discourse in the country is about intra-generational equity, with little consideration for future generations.

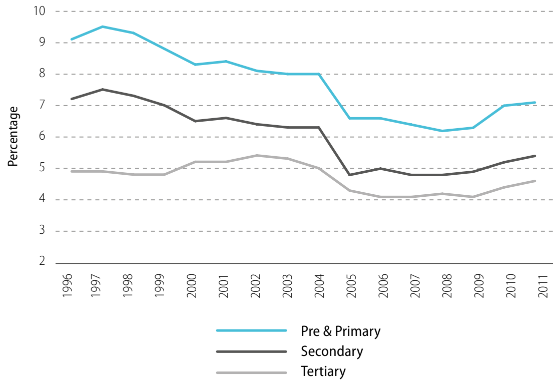
The most serious issue surrounding South Africa's public debt is not its level, or its relative size to GDP, but rather the quality of public expenditure. In effect, liabilities accumulate and there is little corresponding addition of social welfare for the present generation or the promise of future growth and welfare for the generations to come.

A further breakdown of fiscal expenditure reveals additional insights into the composition of public expenditure and its intergenerational implications. Figure 1.3 illustrates the composition of the fiscal expenditure.

Education is the most significant intergenerational item of budgetary allocation. Over the period 1995–2013, on average 20 per cent of the government budget was allocated to this vital investment in future generations. A further disaggregation of the education budget, as shown in Figure 1.4, reveals a sound allocation of resources among the various cohorts of the younger generations.

Judged by the aggregate budgetary allocation to education, or assessed in terms of the intra-generational allotment to the various types of education, South Africa's fiscal allocations are sound and in line with principles of intergenerational equity. However, the problem arises with the quality of education. Table 1.1 highlights the consistent underperformance of the

Figure 1.4: Public education budget allocation by category, 1996–2011



Source: SARB (2013d)

Table 1.1: South Africa's global competitiveness ranking of education, 2008–2013

Indicator	2008	2009		2010		2011		2012		2013	
	134 countries	133 countries	Adjusted rank	139 countries	Adjusted rank	142 countries	Adjusted rank	144 countries	Adjusted rank	148 countries	Adjusted rank
Quality of primary education	104	107	108	125	120	127	119	132	122	133	119
Primary education enrolment, net percentage	97	107	108	109	104	118	110	115	105	122	108
Quality of education system	110	119	120	130	125	133	125	140	120	146	132
Quality of maths and science education	132	133	134	137	132	138	130	143	133	148	134

Source: WEF (2013)
Note: The adjusted rank is calculated by adjusting the number of total sample size in successive years and recalculating South Africa's rank accordingly

South African public education system according to a variety of indicators. At present, the single most obstinate factor undermining poverty eradication across generations in South Africa is the prevailing inadequacy of the national education and training system. A widespread shortage of necessary skills in society is but one of the manifestations after nearly 20 years of the country's democratic dispensation.

It is a fact that the modernisation and technological upgrading of the economy since 1994 has increased the economy's skills intensity sharply. This, in turn, has accentuated the systemic skills mismatch problem. Meanwhile, the country's human capital accumulation has proved to be wanting. While much has been done to promote access to the public schooling system, little has been achieved with regard to improvement in the quality of the education offered.[6] Consequently, 'unemployability', widespread vacancies and huge skills gaps have emerged concurrently. Upward mobility of the poor has been curtailed; hence, their ability to participate in the economy is severely impaired. The poor and their children, who rely on public schooling, have been trapped in a vicious cycle of poverty and dependency. Within the country, the so-called 'second economy' has expanded as a result.[7]

In any modern economy, skills and work experience are the two key contributing factors for upward mobility and intergenerational equity. This is especially so as the economy becomes more sophisticated and its skills intensity rises over time. Over the past decade alone, the South African economy's skills intensity has risen by more than 10 per cent. This is illustrated in Table 1.2.

Rising skills intensity necessitates a matching qualitative upgrade in the school curriculum; in addition, the teaching skills of the educators and the instructional leadership of the school principal need to be enhanced. This is not to underestimate the importance of other factors such as the quality of infrastructure, the management system and the administration of the education budget. Over the period 1994–2013, there was little evidence of improvement in these variables. As a matter of fact, there has been a dilution of mathematics and science standards in the public schooling system, and there have been no signs of any improvement in the quality of teachers and their ability to upgrade their capacity to teach more effectively.[8] To complicate matters further, the political leadership has placed much too much emphasis on reconfiguring the system to improve the 'matriculation pass rate', an indicator that in and by itself is technically distortive and even misleading.

Perpetual stand-offs between the teachers' unions and the government have not helped matters. From the outside, it appears as if union resistance to meaningful skills audits and performance management systems has had the effect of entrenching mediocrity. The ongoing politicisation of this simple, but vital, exercise has exacted a heavy toll on the poor, and has arguably condemned many of the contemporary learner cohorts to a future life of unemployability and poverty.

Table 1.2: Formal sector workers in highly skilled occupations

Year	African	Coloured	Indian	White	National
2000	19.2%	18.8%	32.4%	50.1%	27.1%
2005	19.7%	21.4%	35.6%	50.1%	27.0%
2010	21.2%	28.9%	46.1%	60.2%	30.2%

Source: Hofmeyr J (ed.) (2011: 49)

The poor global ranking of South Africa's education performance places both current and future global competitiveness of the country at serious risk.

At present, there is no credible solution. Of course, there are many expressions of concern and numerous initiatives to deal with the various aspects of the education crisis in the country in a piecemeal manner. Yet, all of these pale into insignificance in relation to the enormity of the challenges facing the country in eliminating one of the most important systemic contributors to the anti-poor and intergenerational injustice of South Africa's public policy architecture. It is stating the obvious that the issue is profoundly political; however, no political leader since 1994 has had the vision and/or the courage to tackle it effectively. Put differently, no sizeable black middle class has arisen yet to create the necessary political pressure for change in the public education system. The rich, both black and white, opt out of the public education system, and the poor are unable to hold the government accountable.

After education, the budgetary spend on social protection is the next item with significant intergenerational consequences. A disaggregation of this budgetary expenditure is shown in Figure 1.5.

Social welfare has been the fastest growing expenditure category over the past decade and a half. With the extension of the child welfare grant to the age of 17 years, announced in October 2009, this budgetary item was set to rise sharply. It is a matter of time before welfare expenditure exceeds expenditure on education, which is the largest budgetary allocation in the national budget. It is noteworthy that ever since 2000, the share of child grants has consistently increased in the budget. The government's expenditure mix is bound to continue in favour of welfare spending. Over the next three to five years, a growing level of fiscal stress is likely to emerge, primarily as a result of the trade-offs between welfare expenditure and socio-economic infrastructure expenditure. This will be all the more so if GDP growth rates fall and stay below 3 per cent per annum.

It may be argued that such welfare expenditure is, in fact, a socio-political imperative to safeguard the poor and the vulnerable and, as such, is an investment in socio-political stability. There is a grain of truth in this argument, yet it does not constitute a sustainable policy. Nor is it a strategy conducive to a developmental society with rising levels of prosperity.

Critically, in the medium- to long-term fight against poverty, and for the sake of intergenerational upward mobility, there is no substitute for an effective education and human resource development system. The creation and augmentation of human capital is essential for breaking out of the vicious cycle of poverty. Historical evidence suggests that it takes at least one generation to make a real dent in systemic poverty, provided a sound education system operates within a well-integrated national human resource development framework. This is a key plank of a platform for sustainable socio-political stability and intergenerational upward mobility.

Seen in the context of the calculus of overlapping generations' assets and liabilities, the low returns on education investment, together with the ballooning child/youth grants expenditure, constitute a sure liability for future generations, without a corresponding revenue-generating capability. The extension of this grant to the unemployed youth has both sociological and fiscal implications

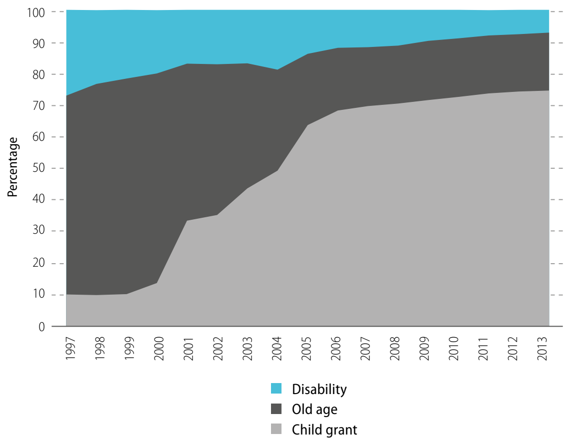
As stated above, socio-econometric processes are dynamic, with feedback loops. The poor education system and the resultant low skills base of the country's labour force leads to a 'low productivity-low wage' outcome. This, in turn, leads to the financial vulnerability of households, and a low and sub-optimal national savings rate. Figure 1.6 illustrates the trajectory of South Africa's national savings over the past three decades, with a projected trend until 2018.

Saving-consumption behavioural patterns are by nature intergenerational. In other words, in general, it is difficult to change savings patterns in the short term. In South Africa, this process is further complicated by the following factors:

» A 'low-productivity-low-wage' scenario keeps the majority of the working population on the breadline, leaving them with very little to save.
» Most saving instruments are structured to benefit the investment managers and their institutions, and not the savers. This, in turn, creates considerable dependency by the retired population on public resources and/or reliance on those who are currently employed. In either case, current savings are curtailed.
» High levels of unemployment and unemployability undermine savings.
» Erratic and unsustainably high levels of economic growth are not conducive to changing saving propensity.

The above trends point to a fairly problematic pattern with regard to the intergenerational equitability of resource allocation, and are indicative of a political economy policy paradigm that heavily discounts the welfare of future generations. As a corollary, the current generation places an undue premium on its own consumption and well-being. In the process, deep distortions and systemic complications in the political system are created.

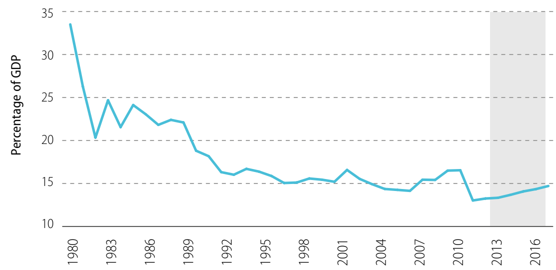
Figure 1.5: Social welfare budget by type of grant, 1997–2913



Source: SASSA (2013)

Note: Child grant = child support, foster and care dependency grants; Old age = grant in aid and war veterans' grants

Figure 1.6: South Africa's national savings as a percentage of GDP, 1980–2018



Source: IMF (2013a)

Non-pecuniary investments in future generations

As important as the pecuniary variables discussed above are, so too are the non-pecuniary investments in the well-being of future generations. At one end, non-pecuniary variables pertain to foundational socio-political and economic institutions and, at the other end, they relate to the significance of promoting social and personal value systems that help lay the ground for defining the nation, its social culture, its internalised moral and ethical codes and its national welfare objectives.

Through the interplay of these two sub-systems of the non-pecuniary network of variables, social capital may be created or destroyed. Contemporary research has underscored the importance of social capital as a critical ingredient of a sustainable political economy framework. The promotion of trust among diverse stakeholders is a key ingredient in the process of social capital formation. This is particularly so in heterogeneous societies like South Africa. The accumulation of social trust augments intergenerational social capital via an array of interrelated processes that include, *inter alia*, the trans-generational conversations within family structures, the workplace, community initiatives and not-for-profit enterprises. The promotion of reciprocity for the common good is a vital element of intra-generational and intergenerational social capital accumulation.

In effect, each individual or each agent lives in multiple 'networks', such as his or her religious, neighbourhood, professional, cultural, tribal or ideological groupings. Systemically, society is the collection of a large number of individuals or agents, each of whom has membership of different networks. Social trust, within a particular cultural norm, admits and promotes co-operation across and among varied networks. As Beinhocker (2007: 435) argues, 'in the terminology of Complexity Economics, if cultural norms provide the micro rules of agent behaviour, then social capital is the emergent result of agents creating co-operative networks'. However, inter-network co-operation obtains within a given institutional and legal platform, commonly defined by the governing constitution of the country.

South Africa's constitutional democracy has been recognised as a progressive platform for the establishment and maintenance of an inclusive system of social development. The Bill of Rights and the separation of powers of the legislative, executive and judicial arms of government are the essential pillars of the democratic dispensation. Furthermore, South Africa's modern history has been synonymous with an independent reserve bank and a credible and active auditor-general's office. The establishment of both the office of the public protector and the national prosecuting authority have further strengthened the constellation of governance institutions promoting accountability, access to justice and the protection of property rights. These are vital requirements for creating a political economy system of governance that has the promise of facilitating a prosperous socio-economic dispensation with resilient intergenerational prospects.

The significance of institutional structuring cannot be over-emphasised. Acemoglu and Robinson (2012) survey the evolution of diverse political economy institutions over a wide range of geographies, with varied socio-political and ideological histories over a span of a few centuries. Societies with 'inclusive' as opposed to 'extractive' institutions, they argue, have a clearly superior chance of success in bringing about stable, sustainable and prosperous societies. Their illuminating political economy review underlines the importance of inclusive institutional structuring for sustainable development. They note:

> This synergistic relationship between extractive economic and political institutions introduces a strong feedback loop: political institutions enable the elites controlling political power to choose economic institutions with few constraints or opposing forces. They also enable the elites to structure future political institutions and their evolution. Extractive economic institutions, in turn, enrich the same elites, and their economic wealth and power help consolidate their political dominance…
>
> Political and economic institutions, which are ultimately the choice of society, can be inclusive and encourage economic growth. Or they can be extractive and become impediments to economic growth. Nations fail when they have extractive economic institutions, supported by extractive political institutions that impede and even block economic growth. But this means that the choice of institutions – that is, the politics of institutions – is central to our quest for understanding the reasons for the success and failure of nations. (Acemoglu & Robinson 2012: 95, 97)

By design, South African governance institutions are inclusive. Furthermore, the country has a well-established, century-old judicial system with a credible and tested jurisprudence. Operationally, however, there has been growing concern in recent years about the over-politicisation of some of these institutions for partisan and individual gain. Corruption and criminality have manifested themselves widely across both private and public entities. Over the past five years, two successive commissioners of police, a number of ministers and premiers, as well as some high-profile members of provincial executive committees, have been implicated in corrupt activities. Private sector entities, ranging from construction, to manufacturing, to telecommunications firms, have been found guilty of collusive and extractive behaviour. State-owned enterprises and agencies, likewise, have been riddled with cases of ongoing misuse, abuse and corrupt use of public resources. The most recent survey of the perceptions of corruption across various sectors in South Africa reveals a disturbing pattern (see Figure 1.7).

It may not be an exaggeration to suggest that the two interrelated phenomena of corruption and crime have been the topmost blights on the face of an otherwise successful, if not wondrous, democratic transition in South Africa. Increasingly, it is evident that the South African liberation movement's social democratic revolution is being tripped up by corruption. There is a growing danger that not dealing effectively with the problem could lead to the institutionalisation of corruption, the rationalisation of corrupt practices and the taking root of a culture of greed and self-enrichment at all costs. In the terminology of Acemoglu and Robinson (2012), institutions that are designed and intended to roll out an inclusive and accountable socio-political dispensation for future generations are captured by 'extractive practices' for opportunistic material gain by the current generation's political elite.

For intra-generational equity and sustainable prosperity, an effective check on poverty is a key imperative. Nearly 20 years into the democratic dispensation, the failure with regard to poverty eradication is the single most prominent concern in the context of intergenerational welfare and equity. Not only in absolute terms, but also in a global comparative context, South Africa has a serious poverty problem. Figure 1.8 illustrates the severity of the matter.

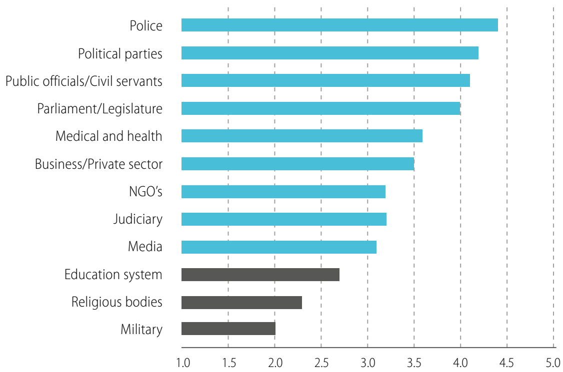
Poverty is a complex phenomenon. It is not self-eliminating, but rather has a built-in self-perpetuating tendency. As is well-acknowledged, the private sector economy is not intrinsically geared to eliminate poverty, although it could be a critical partner in the process of doing so. Thus, the role of the public sector in poverty alleviation is indispensable. The persistence of widespread poverty and, indeed, its deepening since 1994 is, in part, a reflection of the declining efficiency and effectiveness of the public sector. In its 2013 Governance Indicators Series, the World Bank provides an assessment of the South African government's decline in effectiveness (see Figure 1.9).

Increased public sector productivity is a prerequisite for the ability of the economy both to tackle poverty and to raise wage levels for the working classes. The recurring failure of the government and public sector unions to reach speedy and amicable agreements regarding the working conditions of public sector workers has been a major contributor to declining productivity in the public sector. An inability to forge a public service working environment that is conducive to high performance has led to the deepening of a culture of mediocrity, satisfied with little more than adherence to bureaucratic formalities. This normally takes decades to eliminate, while several generations suffer as a result.

Public service delivery is inherently labour-intensive, and labour-intensive production processes more readily lend themselves to the systemic inefficiency and x-inefficiency syndromes.[9] These processes are typically far more management-intensive and system-intensive, and require ongoing performance assessment. Yet, these are the very attributes that the South African public sector operations lack at present.

Furthermore, since 1994, the social imperative of black economic empowerment has deepened the politicisation of

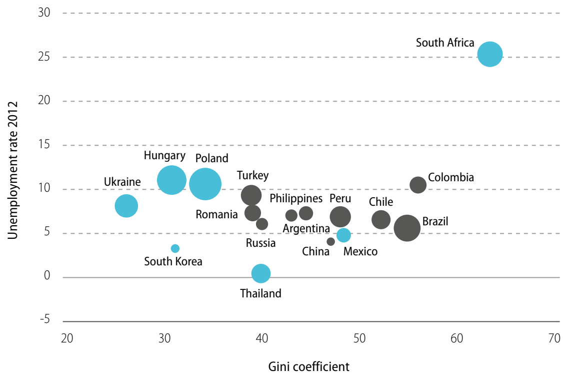
Figure 1.7: Perceptions of corruption by institution, 2013



Source: Transparency International (2013)

Note: On a 1–5 scale, 1 = not at all corrupt, 5 = extremely corrupt

Figure 1.8: South Africa's unemployment rate and Gini coefficient in global context



Source: IMF (2013b)

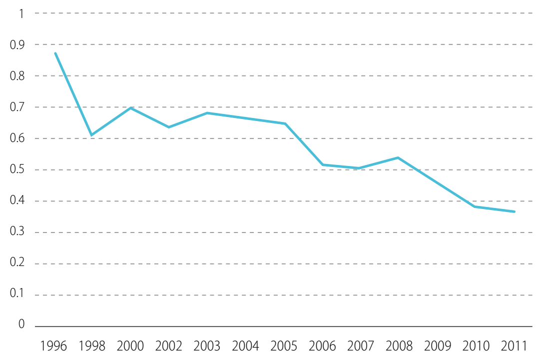
Note: Grey represents a decrease and blue an increase in unemployment between 2008 and 2012 (the size of the bubble illustrates the magnitude of change in unemployment) the public service. This does not imply that the public service was not politicised prior to 1994; the historical record shows that it was indeed heavily populated by the followers of the then ruling National Party. However, while there has been an apparent racial transformation of the public service since 1994, certain managerial cultural practices of the previous dispensation remain deeply entrenched. It is, then, not surprising that certain transgressions and abuses of public resources, associated with the apartheid years, continue to be perpetuated in post-apartheid South Africa. Managerial ineptitude, misappropriation of public resources and corruption pervade the three spheres of government. It is this managerial culture that generates an inordinate degree of inefficiency, and exacts heavy losses on present and future generations.

Cross-country evidence suggests that in times of sustained economic growth, an ineffective public sector widens the income distribution gap, thereby deepening structural unemployment and prolonging systemic poverty in the country (see Euromonitor International 2012). It is, therefore, not surprising that the super-cycle of growth over the past decade and a half has bequeathed an income distribution pattern that is more unequal than ever before. The longer public sector inefficiency persists, the more complex effective developmental, sectoral and micro-financial management becomes. By extension, intra-generational equity becomes so much more difficult to achieve.

Comparable global experience, moreover, shows that changing the operational culture of a complex and varied organisation, such as the public service, takes time and requires diligence from the political leadership. In the absence of such behavioural and managerial transformation, the promise of better public service delivery and cost-effective fiscal management of the country is likely to remain a mere slogan.

These government failures have non-pecuniary intergenerational implications and must be addressed before they become entrenched. The desired outcome is fairly easy to define. Firstly, the government has to learn to 'do more with less'. Secondly, the government structure has to be remodelled in a fashion that allows for the planning and implementation of a well-coordinated public sector investment programme, with a view to expanding productive capacity, catering for quality public service delivery and underpinning sustainable economic performance. The National Development Plan (NDP) defines these qualities as those of a 'capable state'.[10] To achieve such outcomes, the public sector will have to undergo extensive professionalisation, which is supported by an enforceable code of ethical conduct. These are vital ingredients of a

Figure 1.9: South Africa government effectiveness index, 1996–2011



Source: World Bank (2013)

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Nearly 20 years into the democratic dispensation, the failure with regard to poverty eradication is the single most prominent concern in the context of intergenerational welfare and equity.

medium- to long-term poverty eradication strategy.

Much like poverty, public sector inefficiency has many root causes. It is often tempting to attribute such organisational inefficiencies to a single and elegant factor, but empirical studies worldwide suggest otherwise. One factor amongst the primary contributors, however, is the rift between the country's socio-economic 'formal (professed)', as opposed to 'informal (practiced)', ethics. This duality is not unique to the public sector. I have argued elsewhere that, like many other societies nowadays, South Africa is trapped in an evident 'value duality quagmire' with considerable socio-political consequences, especially for the present and subsequent generations of the poor (see Abedian 2008, 2009).

Apart from this duality of values, there are other forces that have contributed to the rapid rise of public sector inefficiencies and public resource misuse in the country. The political imperative of socio-economic transformation has necessitated policies such as affirmative action, black economic empowerment and preferential procurement. Furthermore, the nature of the political transition in South Africa and the evolution of the process of change in power, in 1994 and beyond, have given birth to ineffective political deployment strategies by the ruling party, without due regard for competence, at both the national and sub-national levels of government. While these policies and corrective measures have been created with good intentions, and there may be some rationale for them, too, in practice one of the unintended consequences of such political and regulatory interventions has been the rise in corruption and abuse of power, particularly with regard to public resources. As far as governance is concerned, their most deleterious effects are manifest at the local government level.[11] With regard to the broader developmental impact, the combined effects of the abovementioned factors are much wider and equally detrimental.

The duality of values has been accentuated by the processes of socio-political transformation. In general, it is much easier to create a convergence of values in homogeneous societies than it is in communities where tribal, cultural, religious and ideological differences prevail. Interestingly enough, for the classical economists, the consistency of values was almost axiomatic. For example, on the socio-economic significance of honesty, Adam Smith, in his *Theory of Moral Sentiments*, argued that a well-functioning society was dependent on compliance with what he termed a 'code of honour'. The absence of a 'code of honour' ultimately leads to corruption in one or other form. Corruption in society acts much like a cancer in the human body – if not stopped, it will spread! While, initially, some acts of corruption may even be deemed to be expedient, their ultimate and cumulative effect will be detrimental to the developmental path of society. Most significantly, corruption erodes the moral authority of the state and the party in power.

There is convincing and mounting evidence that real and alleged corruption in South Africa have gradually tarnished internal and external perceptions of state operations, as well as the political authority of the government. As a result, the poor's trust in the government has been considerably undermined. While the economy and society at large suffer the consequences of widespread corruption, the poor bear the brunt of its impact. After all, the poor are far more dependent on the performance of the public sector. The rising disparity in income, the growing gap between the rich and the poor over the past decade, is due, in part, to the growing spread of corruption across all sectors and spheres of the economy. Given the historical inequalities inherited from the previous dispensation, it is South Africa's manifest moral failure since the dawn of democracy in 1994 that it has failed to curb the scourge of corruption. The extent of this failure is perilous, as depicted in Figure 1.10.

It is hard to overemphasise the destructive effects of corruption on society. This systemic bias against the poor, and against future generations, remains highly problematic in today's South Africa. It entails considerable adverse effects on intergenerational equity and social inequity. Miles Corak (2013: 79–80) highlights this point in his cross-country research on intergenerational upward mobility:

> an emerging body of evidence suggests that more inequality of income in the present is likely to make family background play a stronger role in determining the adult outcomes of the young people, with their own hard work playing a commensurately weaker role… rising income inequality can stifle upward social mobility, making it harder for talented and hard-working people to get the rewards they deserve. Intergenerational earnings mobility is low in countries with high inequality …and much higher in…countries where income is distributed more evenly.

The last and by no means the least of the systemic anti-trans-generational equity and upward mobility factors in today's South Africa is the nature of our economic growth and its inherent limitations. Since 1994, there has been a growing recognition that for the country to make a meaningful dent in poverty eradication, sustainable job creation and the promotion of trans-generational upward mobility, the average sustainable growth has to be lifted to a multiple of what it has registered so far. This means that the country requires an average GDP growth rate of between 6 and 9 per cent, sustained over a period of 15 to 20 years. For such growth levels to be a real possibility, there is a need for a much higher level of social trust, as well as stakeholder convergence on approaches to economic growth and development.

The contested and fractured approach towards economic policy-making since 1994 has almost become one of the defining features of public policy-making in South Africa. No sooner is a policy announced that either organised labour or organised business casts serious doubts on its motive, legitimacy and validity, never mind its success. Thereafter, every effort is made to discredit the announced policy and ensure procrastination and delay in its implementation. While open engagement with policy approaches and their technical underpinnings and objectives is an integral part of the democratic process, protracted contestation and ongoing adversarial ideological battles over policy are not conducive to sustained high growth levels. In essence, these adversarial approaches ultimately divert attention away from medium- to long-term issues and channel resources and energies toward short-term crisis management. The opportunity cost of such a *modus operandi* is considerable and, for the poor, it is unbearable. Future generations are set to suffer the consequences accordingly.

One of the major casualties of South Africa's contested public policy domain has been a near total neglect of the country's industrialisation base. Despite numerous public policy statements and pronouncements, South Africa has experienced a real decline in its industrial base. More specifically, the key productive sectors of agriculture, mining and manufacturing have been neglected over the past decade or so. This process of de-industrialisation has been costly in terms of job losses and the loss of productive opportunities. In the manufacturing sector alone, over the past decade, more than 500 000 jobs have been lost and the relative contribution of this sector has declined from 22 per cent to 16 per cent of GDP. The effects of these trends on the poverty of current and ensuing generations have been considerable.

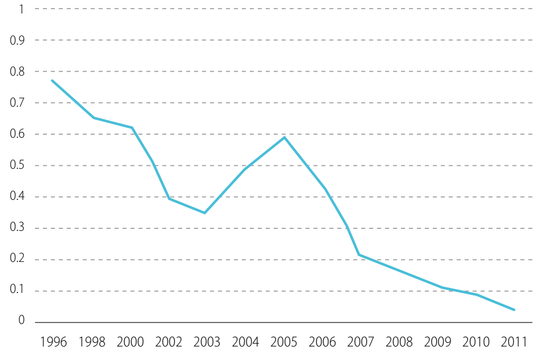
These sectors are vital for medium- to long-term success in the fight against poverty and for trans-generational social development. A focus on rejuvenating the country's industrial base within the framework of integrated beneficiation of mineral and agricultural resources requires a much higher level of collaboration and stakeholder commitment than has been the case thus far since 1994. The re-industrialisation of the economy demands co-ordinated policy implementation and cross-sectoral co-operation between stakeholders in mining, manufacturing and the finance sector, among others. Policy contestation is not going to deliver on this vital socio-economic objective.

The above analysis of non-pecuniary elements of inter-generational equity is by no means exhaustive. Rather, it is illustrative of a select number of factors highlighting the fact that, in addition to quantifiable variables such as investment in multi-generational infrastructure, and the quantum of public debt bequeathed to future generations, there are other foundational variables that do not lend themselves to statistical quantification, yet are key to the success or failure of economic prosperity and social development of future generations.

Challenges in rebalancing intergenerational equity

As argued in the preceding section, it is safe to assert that South Africa's political economy resource allocation is tilted

Figure 1.10: South Africa's control of corruption index, 1996–2011



Source: World Bank (2013)

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> Configuring society for success over time and across generations is the overarching challenge.

heavily in favour of the current generation. Moreover, intragenerational resource allocation is in favour of the urban and the politically connected elites. Rebalancing this distorted configuration requires, first and foremost, the establishment and promotion of a sustainable and prosperous South African socio-economic and political system. Configuring society for success over time and across generations is the overarching challenge. This topic has been the subject of much scientific and historical research in the recent past.

In his analysis of Western ascendancy over the past 500 years, Niall Ferguson (2011) identifies the following six 'killer apps' as the drivers of socio-economic prosperity: (i) competition; (ii) scientific revolution; (iii) the rule of law; (iv) modern medicine; (v) the consumer society; and (vi) work ethics. Acemoglu and Robinson (2012) emphasise the importance of 'inclusive political economy institutions', and highlight the dangers of politically driven and expedient 'extractive practices'. While such retrospective analyses of socio-economic prosperity or failure are instructive, they often do not fully take into account the time-sensitive dynamics of socio-political and economic evolution.

Social development, by its nature, is a complex, adaptive evolutionary process. As stated above, the four protagonists of socio-economic prosperity (or decline) are: the individual; societal culture with its embedded value system; political economy governance structures; and national capital endowment. Each of these is subject to its own dynamic evolutionary process; and the interplay of the four defines the contours of social progress over time. Furthermore, there is a need for a set of norms to guide and govern the conduct of the protagonists in the iterative game of social progress and wealth generation over time.

Critically, the two interrelated portals of intergenerational equity are the family and the education system. For both intragenerational and intergenerational value transmission, role-model setting and cultural inculcation, the family fulfils an indispensable and irreplaceable function. In many respects, the foundations of success in ethical, emotional and cultural evolution are laid within the family. The education system, in turn, reinforces this complex process with a systematic expansion in both cognitive and deductive capabilities. The compatibility of these two portals is particularly critical for social capital formation over time.

As for the individual, intergenerational upward mobility requires a set of norms supporting a strong work ethic, accountability and self-reliance. As Beinhocker (2007: 430) points out, 'it is also important to believe that there is payoff to hard work and moral life in this world, and not just in the next'. The societal norms pertaining to co-operative behaviour are as important. Belief in non-zero-sum game is a prerequisite for co-operative strategies within society. Communities and nations that believe in zero-sum games lack mutual trust and find it hard to engage in co-operation. In line with the above-mentioned notion of strong reciprocity, it is important for society to promote and value fairness and generosity, on the one hand, and to discourage and penalise free-riding, dishonesty and abusive behaviour, on the other.

Societal norms with regard to competition and celebration of scientific and commercial achievements are vital for intergenerational risk-taking and innovation. Last but not least is how society views time:

> Cultures that live for today (or, conversely, are mired in the past) have problems across the board, ranging from low work ethic, to an inability to engage in complex cooperation and low levels of investment in innovation. Why work hard, and invest in cooperation and innovation if tomorrow doesn't matter? In contrast, cultures that have an ethic of investing for tomorrow tend to value work, have high intergenerational savings rates, demonstrate a willingness to sacrifice short-term pleasures for long-term gain, and enjoy high levels of cooperation. (Beinhocker 2007: 430–431)

These norms, collectively and interactively, help to define a socio-political and business milieu that, over time, contributes towards an upwardly mobile trans-generational social process. As noted earlier, however, South Africa at present faces a serious crisis in its social value system. To rectify the prevailing divide between formal (professed) and informal (practiced) values in South African society requires resolute business and socio-political leadership. A key portal in this regard is a high-quality education system capable of not only imparting skills but also fostering active and responsible citizenship. Clearly, this is not a goal that the government can achieve on its own. A much broader set of national capabilities has to be brought to bear on the subject. However, the government has a critical role to play in this regard. To this end, a conscious de-politicisation of the public service is the first necessary step. This needs to be further reinforced by a political and managerial leadership whose actions are congruent with their formal policy pronouncements.

At the same time, business leadership, as well as labour unions and broader social groupings, have equally significant parts to play. Their commitment to, and the promotion of, an explicit value system is critical for changing the current pernicious culture of national resource utilisation. This is particularly so in the light of the reprehensible conduct of big business in a variety of sectors, as recently revealed by the Competition Commission reports on price fixing by, *inter alia*, the banking sector, the petrochemical industry, construction firms, bread makers, glass manufacturers and cement producers. The abusive and unethical behaviour of trade union leaders is unravelling too. At the time of writing, the scandal surrounding the COSATU general-secretary, Mr Zwelinzima Vavi, offers a case in point. The shameful sexual abuse of students by lecturers at the University of the Witwatersrand is another example of deep moral decay within society. Equally reprehensible is the reported widespread abuse of learners by their teachers, as is the reported ill-treatment of children and the elderly within society at large. This is but a sample of unethical conduct across a variety of social segments. Clearly, the problem is not confined to these segments. Procrastination in addressing the value consistency question in the country is bound to deepen a culture of operational mediocrity across private and public sectors, with a corrosive impact on society.

Such are the challenges of intergenerational equity in present-day South Africa.

Concluding remarks

This chapter has reviewed the challenges of intergenerational equity in South Africa. Overall, it suggests that the country's resource allocation is skewed in favour of the present generation. Moreover, it has argued that while pecuniary investments for the benefit of future generations in the form of education, child grant and health expenditure have increased considerably since 1994, the non-pecuniary investments in this regard have left much to be desired.

The trans-generational policy framework in South Africa faces many challenges, the toughest of which arises from the absence of a set of well-defined and generally accepted ethical and moral values. As the forefathers of modern economics convincingly argued, no socio-economic system is sustainable, let alone prosperous, without a set of moral values that are generally internalised across society. Democratic South Africa is no exception. An environment filled with a duality of values is conducive to operational inefficiency and ethical inconsistency, as well as social distrust and instability. In the absence of a coherent ethical code of honour and practice, the poor suffer, and while the elite benefit materially, their welfare remains at risk. Future generations are set to suffer the consequences of inaction today.

In this light, it is a matter of grave concern that the newly released NDP is silent on the importance of ethics for economic growth and social prosperity. Indeed, given the analysis in this chapter, it would have been most appropriate to begin the NDP with a discussion of the role in social progress of ethics and moral conduct, especially on the part of those in public office.

Intergenerational equity is a complex, multifaceted virtue, which is easier to profess than to achieve. In general, when resource allocation is tilted in favour of the present generation, it is harder to correct the imbalance than the other way around. Visionary and resolute political and social leadership is required to achieve success in this regard. Institutional, systemic, social and individual changes are required, too.

Within the analytical paradigm of complexity economics, this chapter has argued that the evolution of the complex adaptive system of socio-economic structures requires a set of norms for success. The adoption of such norms defines the current and likely drivers of competitive advantage and social progress over time. South Africa has one past, but numerous futures. Which one will be realised depends on the decisions made today.

Acknowledgements

I would like to acknowledge the research assistance of my colleagues, Mr Patrick Kanda and Ms Gloria Mabindisa. I owe special gratitude to Ms Tania Ajam who offered insightful comments on an earlier draft of this paper. I am also grateful to Mr Francis Antonie who provided thoughtful editorial inputs. All errors and omissions, nonetheless, remain mine.

Endnotes

1 Note that, in this definition, the consequences of power dynamics are assumed away. In reality, the dominant groups ensure that their needs are met, and not necessarily the needs of the entire present generation.

2 The principle of trusteeship resonates with the saying: 'We do not inherit the earth from our ancestors, we borrow it from our children.'

3 An associated argument is the extent of intra-generational equity in terms of access to resources. If and when a large proportion of the current generation is condemned to poverty and unemployment, it is hard to expect them to care for the future generations.

4 For a detailed and instructive synthesis of this research, see Beinhocker (2007).

5 Increasingly, it is becoming clear that 'global', as opposed to 'national', endowment of capital needs to be introduced into the discourse around intergenerational equity.

6 A lethal blend of factors contributes to this outcome. The Department of Education has mismanaged the sector for years. The teacher unions refuse to allow any form of monitoring of teacher attendance and performance. When teachers take the tests set for students at the level they are supposed to teach, they fail the tests themselves. A big part of the failure of education is also the fact that the family structures malfunction in South Africa. Studies show that only one-third of South African children live in a household with at least one biological parent. Parents, not the state, are generally the first teachers. In South Africa, that is simply not the case for a large proportion of the population.

7 President Thabo Mbeki coined the term 'second economy', referring primarily to a segment of the population that is unable to engage proactively with the mainstream economy of the country.

8 This is so despite the increase in teacher qualifications. In 1994 only about 60 per cent of teachers had three-year degree qualifications. Now, more than 95 per cent do, but there has been little improvement in the quality of teaching and learning.

9 In general, x-inefficiency occurs when certain decision-making units use more inputs than required, which results in higher average costs than necessary. This usually occurs in a monopoly where the company has no incentive to cut unnecessary costs, or in public entities where competition does not prevail due to market structure.

10 The NDP is a document produced in August 2012 by the National Planning Commission of the South African government.

11 For a review of the extent of such public resource abuse, see the various reports of the auditor-general's office (www.agsa.co.za).

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