



Guy Strubbs

## OVERVIEW OF INDUSTRIAL POLICY

Miriam Altman and Marina Mayer

### In this chapter

Introduction	65
What is Industrial Policy?	66
A Historical Perspective	67
Industrial Policy, Post-1994	69
Industrial Policy, Post-2000	77
Implications for Labour Demand	78
Conclusion	82

Access the data for this chapter at <http://hrdreview.hsrc.ac.za>

**abstract** | This chapter analyses the impact of industrial policy on the demand for labour. It shows that South Africa's industrial development has historically been driven by minerals extraction and import-substitution industrialisation, overlaid by apartheid policies aimed at excluding the majority of the population from the economy. This entrenched a growth path characterised by capital-intensive production processes, a paucity of skilled labour, and exceptionally high levels of unemployment.

The post-1994 period has seen a radical shift from the protectionist policies of the past. Trade liberalisation and supply-side policies have succeeded in improving the international competitiveness of manufactured exports. However, high levels of unemployment persist among unskilled and semi-skilled workers, as do high levels of inequality. The chapter concludes that HRD policies should adopt a two-pronged approach: a short- to medium-term emphasis on developing unskilled labour for jobs in the non-tradable sector, and a long-term objective of enlarging the pool of skilled labour in line with the pattern of demand emerging in the manufacturing sector.

## INTRODUCTION

There is widespread consensus that industrial development is the material foundation upon which advanced societies have been built. Indeed, Peet (1987) asserts that 'no major country has yet become rich without having become industrialised ... greater wealth and better living standards under any political system are closely connected to industrialisation'. For this reason, industrial policy is a major preoccupation of policy-makers in developing countries.

Because it influences the nature and pace of industrial development, industrial policy represents a key aspect of state intervention to achieve the broader objective of economic development. Industrial and trade policy play an important role in shaping the way a country's economic fundamentals are translated into specific patterns of industrial development. The character of the industrial development that emerges has direct implications for the magnitude and type of employment opportunities that are created.

South Africa has the biggest and most sophisticated industrial base in Africa, but lags behind successful, newly industrialised countries in terms of its composition and competitiveness. The challenge is thus to expand and deepen the manufacturing sector. This is inextricably linked to the

central preoccupation of government: to redress high and growing levels of unemployment, by placing the economy on a higher growth path.

In a context of growing levels of unemployment among unskilled and semi-skilled workers, this represents somewhat of a conundrum for policy-makers: the sectors that have grown and become internationally competitive during the 1990s have done so by increasing capital and skills intensity while shedding labour. Moreover, the shortage of skilled labour within the domestic economy will constrain the future growth of these sectors. In this context, the implications for human resources development policy are profound.

This chapter examines the manner in which industrial policy has shaped the structure of industry, the concomitant demand for labour, and the composition of the labour supply. These are key determinants of the human resources requirements of the industrial development trajectory. To that end, the chapter contextualises what is meant by industrial policy and the specific policy instruments that are utilised in its implementation. It then provides an overview of the historical evolution of South Africa's industrial base. Against this backdrop, it analyses the impact of the radical shift in industrial policy that characterised the immediate post-apartheid period, and examines the recent paradigm shifts in government's approach to industrial policy. The chapter concludes with the implications of structural changes in the manufacturing sector for employment creation and human resources development.

## WHAT IS INDUSTRIAL POLICY?

There is no agreement on what is meant by 'industrial policy'. The use of the term generally differs according to the specific economic challenges being confronted, the policy approaches being promoted, and the ideological leanings or analytical strategies of the authors/policy-makers. Some prefer narrower formulations that refer primarily to sector-specific 'targeting' as the core of industrial policy (Chang 1994). Others prefer a broader approach emphasising factors that influence industrial progression in a way that advances not only private interests, but also the public good (Mohan 1998).

In South Africa the approach has generally been to adopt a wide range of policies to promote broadly defined sectors: historically, mining, infrastructure and resource-based industrialisation, and more recently, manufacturing. The key components of the country's industrial policy formulated by the Department of Trade and Industry (DTI) presently include investment facilitation, trade, technology, small business promotion, strategic and informational leadership, competition, and labour market policy. This chapter focuses on the objects of the industrial policy framework, the key instruments employed to achieve the desired outcomes, and implications for the demand for labour.

Conceptually, industrial policy may be divided into demand- and supply-side policy interventions. Demand-side interventions increase the demand for the output of particular industrial sectors, typically by enhancing market access to other countries (for example, the European Union-South Africa Free Trade Area). Historically, import-substitution

has secured demand within the domestic market by erecting high tariffs to discourage domestic consumption of imported goods.

By contrast, supply-side measures enhance the productive capacity and competitiveness of firms. Competition policy, technology policy and small business promotion constitute supply-side policy interventions. In addition, trade policy may be viewed as a supply-side measure because the reduction of tariffs removes the protection enjoyed by domestic industry from international competition and reduces the cost of imported inputs. This is a powerful means of enhancing the international competitiveness of firms.

Beyond this narrow definition of industrial policy are a range of policy tools that influence the structure and size of industry. These include macroeconomic, infrastructure, labour market and human resources development policies. Macroeconomic policy, by influencing real interest rates, has a significant impact on both industrial investment and the nature of the production process (i.e. whether it is labour, capital, technology or skills intensive). In addition, the exchange rate is an important determinant of international competitiveness, while a country's macroeconomic performance influences the inflow of foreign direct investment to the industrial sector.

South Africa's industrial development trajectory has been shaped by all these elements. Historically, they have been used to promote the development of resource-based industries. More recently, the manufacturing sector has become the centrepiece of industrial policy.

## A HISTORICAL PERSPECTIVE

As a minerals economy, South Africa's industrial development has been driven by all the attendant complications associated with a 'resource curse' (Auty 1993, 1994, 1994a; Davis 1994; Ostensson & Uwizye-Mapendano 2000; Owens & Wood 1997). In general, minerals economies tend to grow and experience structural shifts more slowly than non-minerals exporters. They also tend to have a more capital-intensive structure of production. This can be explained by a number of characteristics that are common to these economies.

Other developing countries go through a phase of low wage, low productivity manufacturing development that has the impact of mopping up the labour surplus (Syrquin & Chenery 1989). The pattern of development experienced by labour-surplus developing economies usually follows a familiar path where underproductive labour moves off the farms and into labour-intensive manufacturing traded sectors. As there is a labour surplus, wages are low and the sectors can therefore be highly competitive internationally. As the labour market becomes tighter, wages rise and there is a shift to investment in more capital-intensive activities.

Only once there is a tighter labour market do wages begin to rise and the economy moves into the development of more capital and skills-intensive industries. The emphasis on labour-intensive tradables is a necessary step in an economy that is constrained in

terms of capital and foreign exchange. Ultimately, the more successful newly industrialised countries are those that invested simultaneously in human capital development and structural development, so that the skills base developed alongside these structural shifts.

By contrast, minerals economies tend to leapfrog from the resource base into heavy and chemicals industries (HCI) development, bypassing the development stage of labour-intensive manufacturing. This is made possible by large profit margins from the export of minerals. The ability to create jobs in labour-intensive manufactured goods destined for export markets is compromised by overvalued exchange rates. Job creation is not a requirement of manufacturing development as it is in developing economies that do not have ready access to capital and foreign exchange. Since the HCI sector is capital intensive, the benefits of the minerals economy tend to be narrowly spread, resulting in high levels of income inequality and unemployment. Moreover, domestic demand may not expand as much as in other economies.

In accordance with the experience of other minerals economies, South Africa bypassed the phase of development where large numbers of workers are absorbed into low-cost, low-skill, labour-intensive tradables (Altman 2002). The ideal period for this phase arises where there is a labour surplus in a context of low economy-wide cost structures (i.e. in countries where labour is cheap, but so is the cost of living). The low cost structures are often maintained by an agricultural sector that supports large numbers of underemployed workers.

The low growth and high levels of unemployment that characterise the South African economy today are a consequence of the development trajectory that is peculiar to minerals economies. The attendant price distortions – high cost structures in the production of manufacturing and overvalued exchange rates – were amplified by the political agenda of the apartheid regime. These two factors inhibited the role of the manufacturing sector as an engine of growth.

## Import-substitution industrialisation

From the 1920s, South Africa's industrial policy substantially relied on import protection and subsidisation. In the first instance there was emphasis on solving the 'poor-white problem' and absorbing white workers who were moving off farms into urban areas. In addition, there was also increasing interest by the private sector in import-replacement activities, particularly in relation to inputs for resource-based industries such as mining. The most obvious examples were work-wear and chemicals (Altman 1997).

With the intensification of apartheid policies and South Africa's increasing foreign isolation, industrial policy also turned to substantial subsidisation of heavy industries such as steel (Isacor), synthetic fuels (Sasol, Mossgas) and the defence industry. In accordance with a 'minerals economy' trajectory, the main investments prior to 1984 were largely directed to capital-intensive, resource-based projects in basic chemicals and metals.

Due to the small size of the local market – a small economy and poor distribution of income – import-substitution opportunities were largely exhausted by the late 1970s. This fact substantially contributed to poor productivity, high levels of industrial concentration, and slow growth throughout the economy (Altman 1995).

Although South Africa recorded high levels of trade, even at the height of sanctions, trade was concentrated in the export of minerals. As in other minerals economies, the profits generated by mineral exports provided the resources required to develop highly protected and inefficient domestic manufacturing capacity, even though this strategy compromised the international competitiveness of the manufacturing sector, and imposed high costs on consumers.

### The role of apartheid policies

The poor performance of the industrial sector is also associated with a range of apartheid laws that repressed African entrepreneurship. Legal exclusion from vertical mobility severely limited the expansion of entrepreneurial or artisanal skills among the black population. Black firms experienced particular difficulty as a result of exclusionary legislation, insufficient availability of credit, limited market access and high input costs (Nattrass & Nattrass 1988; Rogerson & Da Silva 1986; also see Devey, Skinner and Valodia in Chapter 6). These controls had an impact on the supply of small businesses and on the organisation of production, which in turn gave rise to three developments. First, the restrictions on black business raised the cost of inputs and hindered their access to markets (Nattrass & Nattrass 1988). Second, access to credit constituted a major barrier to the development of African businesses. There had never been many sources of capital available to small business, and the lack of freehold rights in urban areas precluded the possibility of using real estate as collateral against loans (Southall 1980). Third, a black artisanal class could not develop during the period of industrialisation, because whites were moving out of agriculture into higher-paying jobs.

## INDUSTRIAL POLICY, POST-1994

The range of policy instruments at the disposal of the democratically elected government was more limited than during the apartheid era, as a consequence of South Africa's re-entry into the global economy after nearly two decades of isolation. In particular, accession to the World Trade Organisation (WTO) occurred at a time when a number of measures, including export subsidies such as GEIS (the General Export Incentive Scheme), were prohibited, and developing countries were required to reduce their tariffs irreversibly.

In this context, the central challenge was to dismantle the protectionist tariff regime that had kept South Africa isolated from the global economy, without bringing about de-industrialisation. Thus in 1994 the key objectives, with respect to the manufacturing sector, were to open up the economy and improve international competitiveness.

To that end, the ANC-led government implemented a range of measures that marked a radical departure from previous industrial policy. Trade liberalisation (in the context of broader macroeconomic reform and liberalisation), and supply-side interventions – targeted at specific industries, spatial locations and exporting sectors – replaced demand-side interventions as the key instruments of industrial policy. These policy instruments were used to reverse the psychology of protectionism and isolation that had permeated the manufacturing sector.

## Trade liberalisation

Both the nature of international trade and its influence on industrial structure have been quite dramatic over the 1990s, with many unexpected effects. The key changes in the trading environment were related to the system of protection, export promotion, and trade arrangements with key partners.

South Africa's offer of tariff bindings to the WTO in 1994 represented a decisive break with the highly protectionist nature of previous trade regimes. As a central instrument of industrial policy, trade liberalisation induced far-reaching structural change in the economy, by dismantling a range of protectionist tariffs. (See McCord in Chapter 2 for an analysis of the impact of trade liberalisation on the economy and on employment in particular.)

## Securing market access

During the immediate post-1994 period, the centrepiece of trade policy was securing market access to the economies of South Africa's main trading partners. Accession to the WTO, which necessitated an offer of tariff bindings, was a precondition for South Africa to benefit from the most favoured nation (MFN) tariff bindings of other WTO member states. In addition, the government actively pursued Free Trade Agreements (FTAs) with the European Union (EU) and the Southern African Development Community (SADC).

In order to accommodate the different levels of development of member states, both FTAs are asymmetrical. In the case of the European Union-South Africa Free Trade Agreement, the EU will eliminate tariffs on 95 per cent of imports from South Africa at the end of the transitional period of ten years. Although the majority of tariffs on industrial products will be eliminated when the agreement comes into force, the rest will be eliminated over a six-year period. South Africa is expected to eliminate tariffs on 86 per cent of imports from the EU at the end of a transitional period of twelve years. Due to the EU's Common Agricultural Policy, South Africa secured a high degree of market access for industrial goods, while offering a higher level of access to the EU in agricultural products than it was able to secure for South Africa's exports. The agreement has not yet entered into force, as it has not yet been ratified by a sufficient number of EU member states.

In the case of SADC, the Southern African Customs Union (comprising South Africa, Botswana, Lesotho, Namibia and Swaziland, who were forced to make a joint offer as they have a common external tariff) will phase down tariffs at a much faster pace than the other member states. This principle of asymmetry reflects South Africa's status as the most developed country within SADC. The SADC FTA has been ratified by all member states and came into force in 2000. It will be fully implemented by 2012.

An additional source of preferential market access is through the Africa Growth and Opportunities Act (AGOA). The Act extends the Generalised System of Preferences (which, in terms of the WTO's rules, allows developed countries to provide preferential access to developing countries for specific goods) for qualifying African countries to September 2008.

### Impact of trade liberalisation

Of relevance to this chapter is the extent to which trade policy – including the reduction of tariffs and preferential market access – has impacted on the structure and development of industry. Significantly, Cassim, Onyango and Van Seventer (2002) demonstrate that, despite significant import penetration in previously protected sectors, there has been no evidence of de-industrialisation as a consequence of trade liberalisation.

As illustrated in Figure 1, at the aggregate level, exports have grown at an average of 5.5 per cent per annum during the 1991 to 2000 period. A disaggregation of this data reveals that exports emanating from the primary sector (agriculture and minerals) declined by -1.5 per cent per annum, while manufacturing and services exports increased by 11.2 and 9.9 per cent per annum respectively. This represents a significant structural change in the composition of exports, reflecting, more closely, trends in other middle-income developing countries.

In the manufacturing sector, exports as a proportion of total output doubled between 1994 and 2001, from 14 per cent to 28 per cent (DTI 2002b). A disaggregation of manufactured exports reveals that most sectors have experienced an increase in exports. The highest weighted average annual growth in exports occurred in furniture (28.9 per cent), television and communications equipment

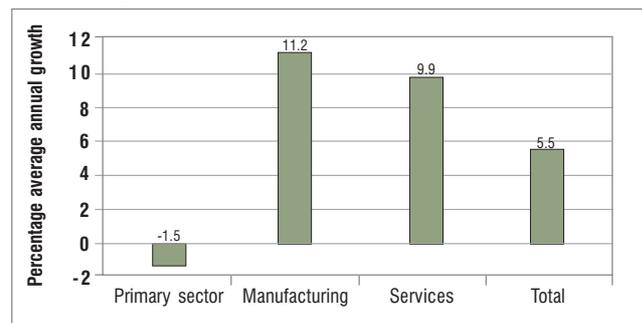
(27.6 per cent), transport equipment (23 per cent) and plastic products (22 per cent). By contrast, exports emanating from the mining sector declined over this period at an annual rate of -3.7 per cent for gold mining, -1.9 per cent for other mining, and -0.9 per cent for coal mining. This demonstrates a marked departure from South Africa's traditional export profile, which has historically been dominated by minerals.

Of note is the rapid growth of exports in the automotive industry, which averaged 20 per cent during the 1991 to 2000 period. This occurred in the context of targeted policy interventions within the framework of the Motor Industry Development Programme (MIDP), and therefore cannot be attributed to trade liberalisation alone. The impact of the MIDP is analysed in detail later in this chapter.

### African market driving export growth

Although South Africa does not yet enjoy preferential access to the SADC, it is the growth of manufactured exports to these countries that has underpinned the structural changes within the manufacturing sector. As illustrated in Figure 2, exports to Africa have grown by 507 per cent over the 1992 to 2001 period. A further feature of South Africa's trade with Africa is that the bulk of trade is focused within the SADC region.

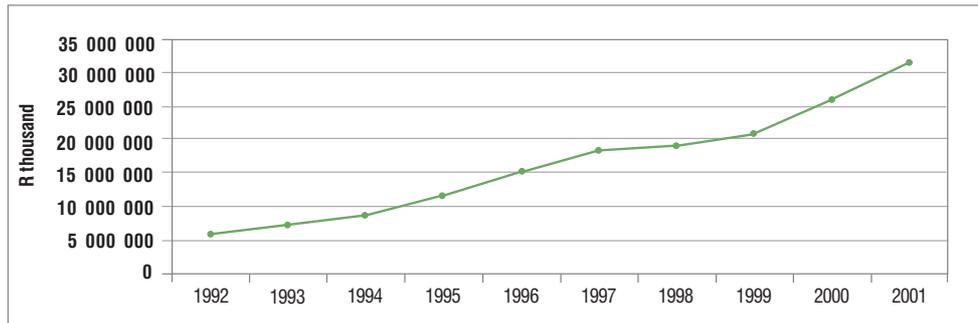
**FIGURE 1** Growth in exports, 1991-2000 (weighted average annual growth rates, constant 1995 prices)



Source: TIPS Standard Industrial Database (2002)

Annually, about 75 per cent of total exports to Africa are to the SADC states. Moreover, approximately 80 to 90 per cent of manufactured exports are destined for SADC markets. If Southern African Customs Union markets are included, Africa becomes the second-largest export market after the European Union.

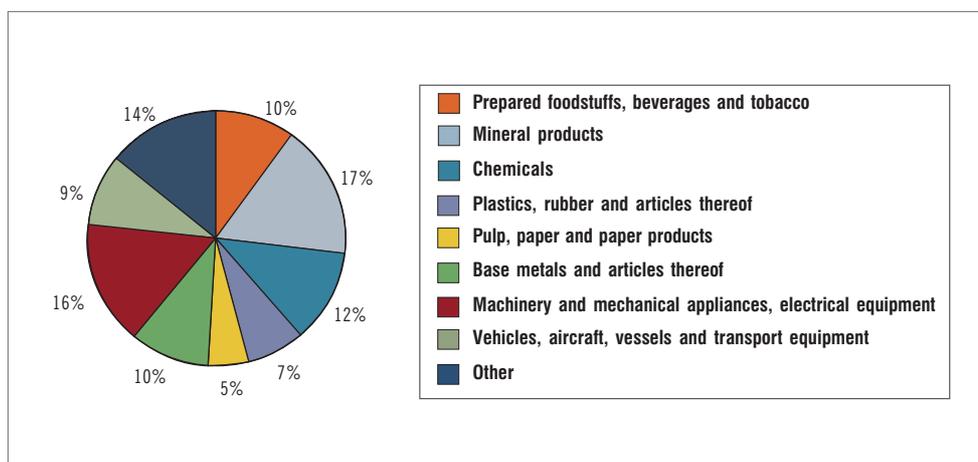
**FIGURE 2** South Africa's exports to Africa, 1992-2001 (R thousand)



Source: TIPS Standard Industrial Database (2002)

While South Africa imports manufactured goods from the EU and exports primary commodities to that market, the exact reverse is true of the African market. As illustrated in Figure 3, in 2001 almost 70 per cent of South Africa's exports to Africa comprised machinery and equipment, base metals and metal articles, chemicals, transport vehicles and equipment, prepared foods, plastics, pulp, and paper. By contrast, half of South Africa's exports to the EU were in the categories of mineral products (19 per cent), base metals (11 per cent), precious and semi-precious stones and metals (15 per cent) and vegetable products (5 per cent) (Whitehouse and Associates 2002). Hence, the stimulus to higher-value growth in South Africa is clearly driven by exports to the African market, with consequent impact on labour demand.

**FIGURE 3** Composition of South Africa's exports to Africa, 2001



Source: RSA (2002)

## Trade liberalisation and unemployment

South Africa's high and rising unemployment has recently been attributed to globalisation and the increasing openness of the South African economy, resulting in shifts in the skills composition of labour demand. The demand for lower-skill labour has fallen in the context of a very large oversupply, and the demand for higher-skill labour has risen in the context of a severe skills shortage (Bell & Cattaneo 1997; Borat & Hodge 1999; HSRC 1999).

Table 1 summarises trends in employment during the 1991 to 2000 period. The data starkly illustrates the 'jobless growth' that has characterised the South African economy in the post-1994 period. In a context of buoyant export growth averaging 5.5 per cent per annum in aggregate and 11.2 per cent per annum in the manufacturing sector, the absence of employment growth appears to be a perverse outcome. (See McCord and Borat in Chapter 5 for an alternative interpretation of the data.)

**TABLE 1** Trends in employment, 1991-2000

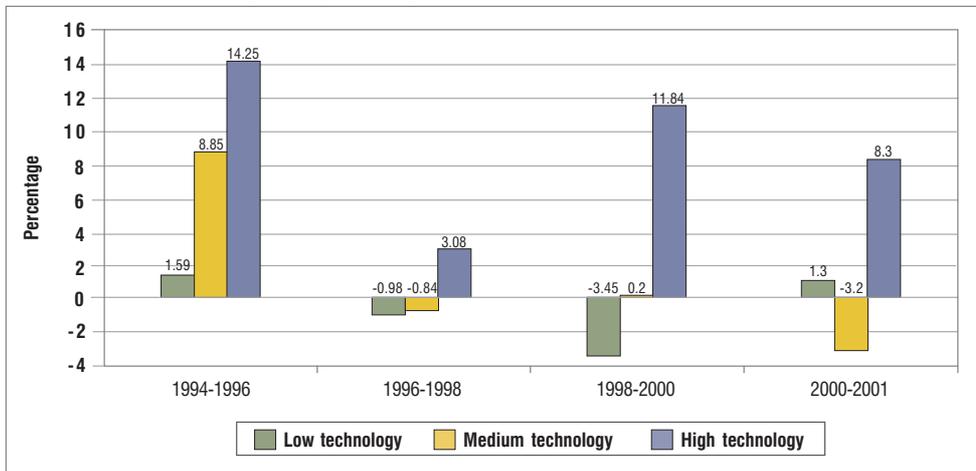
Sector	1991-1995 (percentage change)	1996-2000 (percentage change)	1991-2000 (percentage change)
Primary	-2.5	-5.2	-3.5
Manufacturing	-1.2	-3.0	-1.5
Services	0.3	-0.7	0.1
<b>Total</b>	<b>-0.5</b>	<b>-1.9</b>	<b>-0.9</b>

Source: TIPS Standard Industrial Database (2002)

An analysis of the factors driving the growth of exports and the concomitant demand for labour reveals, however, that it is consistent with declining employment. Trade liberalisation has two distinct impacts that affect employment levels: structural changes at the level of the firm to enhance international competitiveness, and import penetration into previously protected sectors.

In an analysis of structural change, trade liberalisation and employment, Edwards (2001) finds that, since 1984, and particularly between 1993 and 1997, there has been an increase in the capital intensity of exports as a consequence of technological change. This has resulted in rising skills intensity in manufacturing and services. Figure 4 illustrates the marked increase in output in high-technology sectors, and the decline in medium- and low-technology sectors during the 1994 to 2001 period.

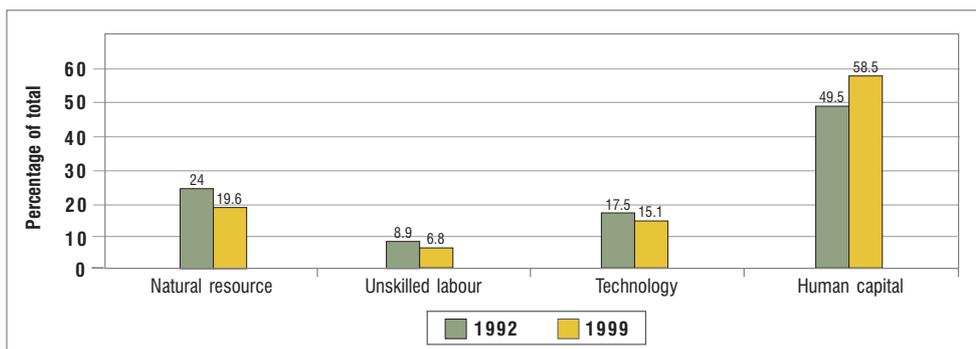
**FIGURE 4** Rates of output growth by technological composition (value added), 1994-2001



Source: TIPS Standard Industrial Database (2002)

Indeed, as illustrated in Figure 5, unskilled labour-intensive exports declined from 8.9 per cent to 6.8 per cent of total exports between 1992 and 1999, while human capital-intensive exports increased from 49.5 per cent to 58.5 per cent during the same period (Lewis 2001). Moreover, an analysis of factor intensity in exports finds that South Africa has a remarkably low, and declining, share of exports that use unskilled labour, and a relatively high share of exports using more skilled labour (Lewis 2002). This explains why the manufacturing sector has not created jobs, despite the rapid growth in exports.

**FIGURE 5** Factor intensity of South Africa's exports, 1992 and 1999



Source: Lewis (2002)

The DTI (2002a) acknowledges that there is a correlation between industries that have become increasingly export-oriented and high rates of investment in capital equipment and capital and skills-intensive technology. This is seen as a necessary structural change to gear up for international competition, and partly accounts for the 26 per cent increase in labour productivity that has occurred since 1994. Moreover, many of the sectors that

have rapidly increased their output are less labour intensive than the manufacturing sector in aggregate.

In sum, trade liberalisation has altered the structure of South Africa's economy, as evidenced by a contraction of exports emanating from the primary sector, and buoyant growth of exports emanating from the manufacturing and services sector. This has, in turn, altered the nature of the demand for labour and exacerbated high levels of unemployment. One implication for human resources development policy is clear: unless the pool of skilled labour increases rapidly, further growth of manufacturing exports will be constrained by skill shortages.

### Supply-side policies

Trade liberalisation was implemented in tandem with a range of supply-side policies to promote the international competitiveness of the manufacturing sector and encourage its expansion through investment. The shift from demand-side to supply-side policies<sup>1</sup> as the main instrument of industrial policy represented a decisive break with the policies pursued during the apartheid era.

The following supply-side measures were pursued in the post-1994 period:

- the Motor Industry Development Programme (MIDP);
- the Duty Credit Certificate Scheme (DCCS) for the clothing and textiles sector;
- a range of measures to promote exports across all sectors (including duty drawbacks for inputs utilised in the manufacture of exports, export-marketing assistance, a number of schemes to promote technological advancements and competitiveness, and the development of export councils);
- investment promotion;
- black economic empowerment;
- the development of the small, medium and micro enterprise (SMME) sector;
- the restructuring of state-owned enterprises in the transport, energy and telecommunications sectors; and
- spatial policies to redress geographical inequities, for example spatial-development initiatives and industrial-development zones.

The impact of these policies has been uneven across different sectors and geographical regions. A notable success is the MIDP, which repositioned an uncompetitive industry in the face of declining tariff protection. It was initiated in recognition of the problems besetting the domestic automotive industry in a context of trade liberalisation: its high-cost structure and low-volume production that resulted from the various local content programmes that had protected it for over three decades. The objective of the MIDP was to entrench the outward orientation of the automotive industry, thereby restructuring it to achieve global competitiveness, while at the same time maintaining its employment and output contribution to the South African economy (Kahn & Black 1998).

The remaining supply-side measures have enjoyed less demonstrable success. In some cases (such as spatial development initiatives and industrial development zones) it is too soon to evaluate their impact, while others (notably the promotion of SMMEs and black economic empowerment) have failed to meet their stated objectives, according to the Department of Trade and Industry (DTI 2002a). Nevertheless, the various measures put in place to promote exports and inward investment have succeeded in reversing the psychology of protectionism and isolation that characterised South Africa's manufacturing sector in 1994.

### The impact of industrial policy

The objective of industrial policy in the post-1994 era – utilising trade liberalisation and supply-side measures as instruments – was to restructure the manufacturing sector in order to render it competitive in the international arena. This was expected to drive higher rates of growth and create sufficient employment to reverse the high levels of unemployment prevailing in 1994.

By 2000, only some of these objectives had been met. That industrial policy was successful in enhancing the international competitiveness of the manufacturing sector is unequivocal as evidenced by a marked increase in exports, despite persistent anti-export bias.<sup>2</sup> The contribution of the manufacturing sector to growth and employment-creation has, however, been disappointing. This outcome can be attributed to the fact that international competitiveness requires industry-level technological change that is biased towards skills and capital-intensive manufacturing processes.

A positive outcome is that industrial policy has led to a more competitive environment. This refers not only to import competition, but also enhanced opportunities for business-entry generally. For example, the period post-1994 has seen the demise of single channel marketing in agriculture, the deregulation of bread (and the entry of small bakeries and millers), and greater opportunities in retail and wholesale trade, and finance. This new environment has, in some cases, resulted in greater ease of entry, improved flows of information, and greater expectations of knowledge-intensity in production and trade.

The unintended consequence, from an employment perspective, has been the importance of industrial policy in shifting the structure of the economy to one that is even more capital and skills absorbing. On the one hand, manufacturing industries have shifted towards more capital and skills-using technologies. On the other, many of the resource-based industries, particularly mining and agriculture, that had been the main employers of unskilled and semi-skilled labour, shed substantial numbers of jobs. While the production profile, now better, represents one associated with a middle-income economy, these shifts have exacerbated structural unemployment.

## INDUSTRIAL POLICY, POST-2000

The failure of industrial policy and broader macroeconomic reform to yield sufficient economic growth or investment to enable government to meet its aims of alleviating poverty, redistributing wealth and eradicating structural unemployment, led policy-makers back to the drawing board. A critical review of the policies that had been implemented between 1994 and 2000 prompted government to augment and refine the instruments of industrial policy. The new policy approach is articulated in government's over-arching microeconomic reform strategy, and the DTI's integrated manufacturing strategy.

President Mbeki unveiled the microeconomic reform strategy in early 2002. Its thrust is a recognition that the long-term development of the South African economy is contingent on a more thorough reform programme to tackle its structural deficiencies. Government proposes to do this through a systemic approach to eliminating constraints to competitiveness and improving efficiency.

Such constraints include appropriate and efficient economic and social infrastructure, access to finance for productive activities, investment in research and development, innovation and the take-up of new technologies, as well as investment in human capital and an adaptive, flexible workforce.

In the manufacturing sector, the DTI's integrated manufacturing strategy (IMS) articulates government's policy approach. The IMS is premised on the view that reliance on traditional bases for competitiveness – in particular, abundant natural resources and cheap unskilled labour – will not create a modern, outward-looking economy that is essential for growth.

Instead, competitiveness should be built on increased knowledge-intensity and include the addition of value. Government believes that new sources of competitiveness are located in the development of the ICT sector, the impact of technological change on production processes, and the importance of time and efficiency to production costs. The emergence of integrated supply or value chains – in many cases transnational and influenced by the operations of multinational corporations – is seen as a hallmark of modern production processes.

In such a global context, government believes, 'The challenge for emerging economies, such as South Africa, which have a resource-oriented legacy is to ensure the opportunities within the domestic economy are developed and integrated advantageously into both domestic and transnational value chains, in order to meet national socio-economic objectives' (DTI 2002a).

Government has signalled its intention to play a proactive role in developing value chains by mobilising infrastructure development and directing investment (both public and private) to these activities. The measures for the DTI to achieve this comprise the championing of competitiveness within government (suggesting that there is currently no unity of purpose), customised support measures (i.e. targeting specific sectors or value chains), and broad-based support measures that address generic areas affecting competitiveness, e.g. market access.

Whether the broadening and reconfiguration of industrial policy set out in government's microeconomic reform strategy and the DTI's IMS will accomplish the objectives of higher growth in the manufacturing sector, and lower levels of unemployment in the broader economy, is uncertain. There is still an uneasy and unspecified relationship between the objective of creating a modern, outwardly focused economy, with the imperative of reducing unemployment among the unskilled and semi-skilled.

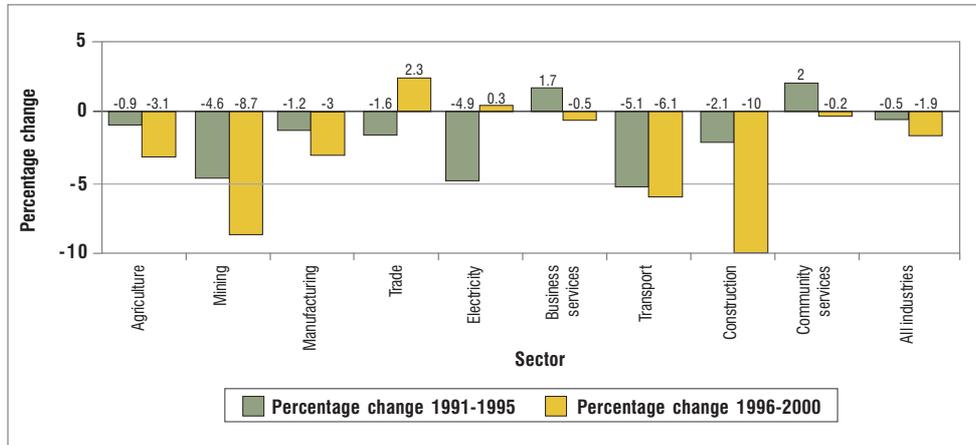
The IMS relies on a rapid increase in the skills base in order to meet the demands of a knowledge-intensive development trajectory. This begs the question as to where the unskilled and semi-skilled workers that currently comprise the vast majority of the unemployed will be absorbed. Moreover, how will the pool of skilled labour be exponentially expanded? While the DTI (2002a) identifies this as a central challenge of the IMS, an exposition of how this will be tackled at a policy level is conspicuously absent.

## IMPLICATIONS FOR LABOUR DEMAND

The evolution of industrial policy is linked to the demand for labour and hence, has profound implications for human resources development policy. The structure of South Africa's manufacturing sector and its potential for growth will determine the future demand for labour. Moreover, the supply of skilled labour will set the boundaries within which a knowledge-intensive growth trajectory can be realised. Hence the direct implication for human resources development is that, unless the skills of the South African labour force can be rapidly upgraded, the development path that government has chosen will be unattainable.

High and growing levels of formal unemployment are arguably the central challenge facing policy-makers in South Africa. According to the September 2001 labour force survey (Stats SA 2001), of a broad labour force of 18.5 million, 7.5 million were employed in the formal sector and commercial agriculture; 3.3 million were working in the informal sector, subsistence agriculture and domestic work; and 7.7 million workers were unemployed.<sup>3</sup>

The build-up of unemployment in South Africa over the past decades can most accurately be attributed to the demise of jobs in traditional resource-based industries in agriculture and mining, without a concomitant employment take-up in more advanced industrial sectors, as would be expected in a process of structural change and development. This is illustrated in Figure 6.

**FIGURE 6** Percentage change in demand for labour by industrial sector, 1991-2000


Source: TIPS Standard Industrial Database (2002)

The demise of employment in major, primary, resource-based industries can be explained by commodity price trends and technical conditions in the case of mining. In agriculture, domestic market deregulation and fear of potential land-tenure claims and labour rights have been instrumental in constraining the demand for labour. The slow pace of land reform and the protectionist stance of the US and the EU further limit the expansion of new agricultural activity.

Employment growth depends on human and physical capital formation; the latter ideally applied to labour-absorbing investments. To explain stagnant or falling employment, it is necessary to look to the causes of weak human-capital formation.

The historically slow growth of the secondary and tertiary economic sectors can be attributed to the apartheid minerals economy that restricted international interaction, limited the entry of small businesses, constrained effective demand, and hampered labour market functions such as skills formation, spatial and occupational mobility, affordable job-search costs, and the circulation of market information. These conditions were created by the approach to import substitution, industrialisation, international sanctions, legal restrictions on the ownership of assets and businesses by black South Africans, and controls over the labour market and access to education.

One legacy is the severe gap in skills attainment. Less than a third of African men and women that work in the urban formal sector have completed high school. Generally, less than ten per cent of informal and non-urban African workers have completed high school (Meth 2001; Stats SA 1999). Indeed, South Africa is a highly distorted middle-income economy. Its cost structure and domestic market-oriented production sectors reflect a middle-income status, but the skills level is more akin to that of a less developed country (Altman 2001; Kahn & Black 1998; Klasen & Woolard 2000).

Human resources development policy should be guided by the reality that the potential for mass employment expansion in South Africa through labour-intensive exports is quite limited. In the context of small and slow-growing domestic markets, it is reasonable to assume that employment expansion will depend on foreign markets as

an important source of demand. Although jobs can be generated through exports, expectations that large unemployment problems can be directly addressed in this way are unrealistic for middle and high-income economies.<sup>4</sup> Tradables can create some jobs, but will be more important for growth, income, foreign exchange, productivity and technological learning. This provides revenue for government and households that can help to support unemployed members of the labour force.

Furthermore, reliance on a labour-intensive export strategy is unrealistic in a middle-income economy, since it depends on low-wage competition. To maintain this as a *dominant* employment-generating strategy for any length of time, it would be necessary to continuously reduce the cost of living (through, for example, price controls on wage goods and the generous provision of a social wage as a proportion of incomes), or reduce real wages (either through exchange rate devaluations or some sort of wage control). Otherwise it is unlikely that these goods would be competitive in international markets (Altman 2001).

Workers in a middle-income country must earn wages that reflect the cost of living or else the human resource is undermined. In a country with a small domestic market, this requires that the production structure and the export profile reflect this cost structure. High-productivity industries generally pay workers with the same educational attainment more than lower-productivity sectors. A greater reliance on higher value-added exports should raise national income and reduce business cycle volatility, with important knock-on effects for domestic firms generally. A longer-term strategy can focus on expanding the number of investments that fall within this category. With high productivity and strong local linkages, however, these sectors are unlikely to generate substantial net new employment in the medium term.

Ultimately the demand-side drivers by means of which the South African economy can absorb more labour, depend on two interconnected legs, involving the expansion of both higher-value tradables and low-productivity, non-traded subsectors.

Economic thinking in South Africa has tended to polarise these activities. One view (the GEAR perspective) rests on the importance of a stable macroeconomic environment and labour market flexibility to encourage the expansion of low-productivity tradables, most likely through foreign direct investment (Department of Finance 1996; South African Foundation 1996). The other view relies on state-financed opportunities, namely public works, mass housing and more equitable asset and income distribution, to expand domestic demand (MERG and the SA Labour Movement 1993; Cosatu et al 1996). The first stylised approach underestimates South Africa's structural constraints. The second does not reflect on the source of income to pay for domestic-demand expansion and so, is unsustainable.

The most likely avenue for creating more employment is by increasing effective domestic demand for more employment-absorbing, non-traded goods and services (Altman 2002). 'Non-traded' is distinct from 'non-tradable'. In practice, most goods and services can be traded, but some are more oriented toward the local market, such as construction or social services. Some products, such as maize and wheat, are traded, but here we refer to their domestic distribution.

The promotion of non-traded goods and services, such as housing construction and

public works, has long been a part of a Keynesian employment programme. Generally, these are recommendations that are meant to kick-start the economy. This was a central part of the ANC's programme prior to entering government. Housing, in particular, was seen as a strategy that could stimulate construction and provide an essential asset to households, whilst being used as the basis for small-business development. This strategy concentrates on the potential to leverage public investment, particularly in conjunction with some small-business support measures (MERG 1993). In fact, the promotion of these sectors was part of all major policy statements from MERG to the RDP to GEAR.

Non-traded sectors offer an opportunity for a number of reasons. Foremost is the great unmet demand for basic goods and services within South Africa. Secondly, it is possible to expand these industries without concern for WTO regulations. There are three essential components to promoting non-traded sectors – more emphasis on basic needs, improved promotion of SMMEs, and more strategic attention to procurement by state-owned enterprises and very large companies. They all rely on an understanding of the underlying operation of related markets to identify the role of government in their stimulation.

Meeting basic needs could have a stimulatory effect on the economy. This stimulation would arise from inter-industry linkages, but also potentially increased economic participation. Government already has programmes that could be targeted more strategically to achieve expenditure targets and optimise potential employment.

In a context where investment overwhelmingly favours capital-intensive production, government expenditure should aim more forcefully to push investment towards sectors with higher employment coefficients in the absence of sufficient market-related inducements. It happens that many of these expenditures overlap with unmet basic needs; therein lies the potential for supporting a positive growth trajectory. In particular, agriculture, food distribution (processing and logistics), construction, and social and community services are the sectors that need to expand to meet basic needs. They also have higher employment coefficients.

Import substitution, without abrogating WTO rules, can be encouraged through substantial linkages programmes that leverage off existing demand by the state, public enterprises, and large corporations. To date, the linkages programmes have focused on low-skills services such as catering or gardening. This demand already exists and therein lies less policy and business risk. There is limited knowledge of how to take advantage of procurement opportunities – this requires the ability both to review procurement lists, and to assess market conditions and the competitive environment.

The SMME sector also provides significant opportunities for employment creation. This is because SMMEs are generally more labour intensive than larger firms, and hence have higher labour-absorption capacity. Moreover, the majority of SMMEs operate in the non-traded sector (Berry, Von Blitnitz, Cassim, Kesper, Rajaratnam & Van Seventer 2002). Given its central role in employment creation, there is some urgency for government to develop more effective policy instruments to promote the expansion of this sector.

The reliance on government stimulation as the *central* strategy has serious limitations, and must be wedded to the promotion of higher-value output. In the context of high

*structural* unemployment, stimulation through fiscal, consumption and production linkages relies on a regular revenue stream for both government and those that are employed. For example, unless a construction boom can be sustained, the jobs offer short-term relief only. An emphasis on public works assumes that the problem in South Africa is primarily cyclical and that these infrastructure projects will generate demand for goods and services, initiating an upward cycle of activity. In fact, the supply constraints in South Africa (such as skills and access to finance) are sufficiently severe so that construction booms tend *not* to set in motion substantial spread-effects (HSRC 1999).

In the context of a relatively small productive base, and large unproductive and underproductive sectors, the balance between the high-productivity, income-generating sides of the economy, and sustainable transfers to socially useful lower-productivity activities is quite critical, particularly if sustained for a lengthy period of say, 10 to 15 years. Over this period, it is expected that the higher-value sectors would expand and that net new entries to the labour force would diminish, owing to falling birth rates and HIV/AIDS.

## CONCLUSION

The central issue confronting policy-makers in the areas of industrial policy and human resources development is redressing an unemployment level that is economically, politically and socially unsustainable. The expansion of manufactured exports has created a sense that the economy is finally moving on to the right track and that it will start generating more employment. National policy is premised on the idea that employment growth will depend on expansion into global markets. This makes intuitive sense, except that the development path that generates substantial numbers of jobs through labour-intensive exports is more associated with low-income, non-minerals exporting economies.

Given international experience of minerals-exporting economies, it appears that policy that promotes employment, especially in the medium term, may be somewhat distinct from that which promotes other economic objectives such as technological learning, foreign exchange and government revenues. They are not *competing* objectives, but rather *complementary* ones. It will not be possible to promote the employment-absorbing non-traded goods and services sectors, and further underpin welfare schemes for the long-term unemployed, unless there is an expansion in the higher-value traded sectors. This is because these latter sectors support less productive members of the population.

The policy approach to human resources development should therefore be aligned with the necessity of pursuing a knowledge-intensive economy as a long-term objective, while finding ways to efficiently create career-pathed employment for unskilled and semi-skilled workers – who represent the majority of the unemployed – in the medium term.

## Biographies

**Miriam Altman** [BA (Economics) McGill; MPhil (Dev Econ) Cambridge; PhD (Economics) Manchester] is Executive Director: Employment and Economic Policy Research Programme at the Human Sciences Research Council. She has been actively involved in economic policy development and advisory services to government in regard to industrial, labour and employment policy, at both national and local levels in South Africa and other countries.

Human Sciences Research Council, Employment and Economic Policy Research Programme, Private Bag X41, Pretoria 0001

Tel: (012) 302-2173 Fax: (012) 302-2994 e-mail: maltman@hsrc.ac.za

**Marina Jadwiga Mayer** [BCom (Hons) (Economics) Witwatersrand; MCom (Economics) Witwatersrand] is a consultant to the Employment and Economic Policy Research Programme of the Human Sciences Research Council. She has extensive experience as a consultant, policy-maker and project manager in the areas of industrial strategy, international trade, regional economic integration, development finance, and privatisation.

Human Sciences Research Council, Employment and Economic Policy Research Programme, Private Bag X41, Pretoria 0001

Tel: (012) 302-2335 Fax: (012) 302-2994 e-mail: mmayer@hsrc.ac.za

## Notes

- <sup>1</sup> Demand-side policies typically create a captive domestic market by imposing high customs duties on imported inputs. By contrast, supply-side policies provide support to enterprises to enhance the efficiency of their production processes, in order to become internationally competitive.
- <sup>2</sup> Anti-export bias is a disincentive to export, relative to producing for the domestic market, usually created by tariffs and other measures that protect domestic industries. This raises the profitability of selling into the domestic market, relative to exporting, because price is higher. While an analysis of South Africa's trade liberalisation in the post-1994 period lies beyond the scope of this chapter, anti-export bias persists, and some would say, has even increased. This is explained by a fall in tariffs that did not compensate for reduced export incentives (GEIS in particular) (Lewis 2002: 9).
- <sup>3</sup> Measuring unemployment is a tricky affair. Properly measuring employment and unemployment across the full population is really a new activity: there have been many changes in the measurement instruments over the 1990s, as Statistics South Africa has sought to make improvements. The best measurements of employment are drawn from the household surveys, notably the October Household Survey (OHS), which ran between 1994 and 1999, and the Labour Force Survey (LFS), run twice a year since 2000. See also Chapters 5 and 6 for extensive discussion on the interpretation of this data.
- <sup>4</sup> The United Nations defines countries as least developed, developing and developed. The terms 'middle-income' and 'high-income' apply to the latter two, which typically have domestic cost structures that constrain their ability to create employment, by exporting labour-intensive goods and services.

## References

- Altman, M (1995) *An Industrial Strategy for the Clothing Sector*, Cape Town: University of Cape Town Press
- Altman, M (1997) *State Regulation and Business Strategies*, PhD thesis, Economics Department, University of Manchester
- Altman, M (2001) Paths to employment expansion in a minerals economy, *Urban Forum*, 12 (3-4), July-December, Special Issue: WORK 2001, First International Conference on Employment Creation in Development, p. 314
- Altman, M (2002) *Progress in Addressing Employment and Unemployment*, Paper submitted to the Presidency, Policy Coordination and Advisory Services as part of ten-year policy review and strategic planning, Pretoria

- Auty, R M (1993) *Sustaining Development in Mineral Economies: The Resource Curse Thesis*, London: Routledge
- Auty, R M (1994) Industrial policy reform in six large newly industrialising countries: The resource curse thesis, *World Development*, 22 (1): 11-26
- Auty, R M (1994a) *Economic Development and Industrial Policy: Korea, Brazil, Mexico, India and China*, London: Mansell Publishing
- Bell, T & Cattaneo, N (1997) *Foreign Trade and Employment in South African Manufacturing Industry*, Occasional Report No. 4, Geneva: Employment and Training Department, ILO
- Berry, A, Von Blitnitz, M, Cassim, R, Kesper, A, Rajaratnam, B & Van Seventer, D (May 2002) *The Economics of SMMEs in South Africa*, Johannesburg: Trade and Industry Policy Strategies Working Paper
- Bhorat, H & Hodge, J (1999) Decomposing shifts in labour demand in South Africa, *South African Journal of Economics*, 67 (3): 348-380
- Cassim, R, Onyango, D & Van Seventer, D (2002) *The State of Trade Policy in South Africa*, Johannesburg: Trade and Industrial Policy Strategies
- Chang, H J (1994) *The Political Economy of Industrial Policy*, London: Macmillan Press
- Cosatu and the South African Labour Movement (1996) *Social Equity and Job Creation: Proposals by the South African Labour Movement*, Johannesburg, monograph <<http://www.cosatu.org.za/docs/jobs.html>> Accessed 6 June 2003
- Davis, A G (1994) *South African Managed Trade Policy: The Wasting of a Mineral Endowment*, Westport: Praeger Publishers
- Department of Finance (1996) *Growth, Employment and Redistribution: A Macroeconomic Strategy (GEAR)*, Pretoria
- DTI (Department of Trade and Industry) (2002a) *Accelerating Growth and Development: The Contribution of an Integrated Manufacturing Strategy*, Pretoria
- DTI (2002b) *A Guide to the Real Economy*, Pretoria
- Edwards, L (2001) Globalisation and the skills bias of occupational employment in South Africa, *The South African Journal of Economics*, 69 (1): 40-72
- HSRC (Human Sciences Research Council) (1999) *SA Labour Market: Trends and Future Workforce Needs: 1999-2003*, Pretoria
- Kahn, B & Black, A (1998) Growing without gold? South Africa's non-traditional exports since 1980, In *Non-Traditional Export Promotion in Africa*, (ed) G K Helleiner, Studies in Development and Economic Policy Series, WIDER: Palgrave MacMillan
- Klasen, S & Woolard, I (2000) Surviving unemployment without state support: Unemployment and household formation in South Africa, Paper presented at *Annual Meeting of European Society for Population Economics*, Bonn, 15-17 June
- Lewis, J D (2001) *Reform and Opportunity: The Changing Role and Patterns of Trade in South Africa and SADC*, Africa Region Working Paper No. 14, Washington DC: World Bank
- Lewis, J D (2002) Promoting growth and employment in South Africa, *South African Journal of Economics*, 70 (4)
- MERG (1993) *Making Democracy Work: A Framework for Macroeconomic Policy in South Africa*, Cape Town: OUP
- Meth, C (2001) Unemployment in South Africa – What the latest figures tell us, University of Natal, unpublished paper
- Mohan, R (1998) Industrial policy for restructuring: Best practice policy instruments in a market economy, Discussion paper prepared for *Trade and Industrial Policy Secretariat Annual September Forum on 'Industrial Restructuring in South Africa'*, 20-22 September, Johannesburg
- Nattrass, N & Nattrass, N J (1988) Small formal business in Durban, *Natal Town and Regional Planning Supplementary Report*, 31, Durban
- Ostensson, O & Uwizye-Mapendano, A (2000) Growth and diversification in mineral economies, *Regional Workshop for Mineral Economies in Africa*, Cape Town, 7-9 November, draft

- Owens, T & Wood, A (1997) Export-oriented industrialisation through primary processing? *World Development*, 22 (9): 1453-1470
- Peet, A (1987) *Export-led Industrialisation in the Third World: Manufacturing Imperialism, International Capital and Industrial Restructuring*, Boston: Allen and Unwin
- Rogerson, C M & Da Silva, M (1986) From backyard manufacture to factory flat: The industrialization of South Africa's black townships, Johannesburg: University of the Witwatersrand, unpublished paper
- RSA (Republic of South Africa) (2002) *South Africa's Exports to the SADC Region*, Pretoria: Customs and Excise, South African Revenue Services
- South African Foundation (1996) *Growth for All*, Discussion document, Johannesburg
- Southall, R (1980) African capitalism in contemporary South Africa, *Journal of Southern African Studies*, 7 (1): 38
- Stats SA (Statistics South Africa) (1999) October Household Survey, Pretoria
- Stats SA (2001) Labour Force Survey, September 2001, Pretoria
- Syrquin, M & Chenery, H B (1989) Patterns of development, 1950 to 1983, *World Bank Discussion Papers*, 41, Washington DC: World Bank
- TIPS (Trade and Industrial Policy Strategies) (2002) Standard industrial database, Johannesburg <<http://www.tips.ac.za/>> Accessed 2 January 2003
- Whitehouse and Associates (2002) Product selection for the establishment of a pan-Africa trading hub, Report submitted to the Alexandra Renewal Project, Johannesburg