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# **INDUSTRIAL STRATEGY PROJECT**

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**This is a presentation of the overall  
framework and policy recommendations of the  
Industrial Strategy Project.**

**It represents work-in-progress and  
we welcome comment on this draft.**

**The project consists of 12 sectoral studies and  
5 cross sectoral studies on trade, technology, industrial  
relations, competition and ownership,  
and regional industrial policy.**

**Detailed analysis and policy recommendations are  
contained in each of these reports.**

**1993**

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# MANUFACTURING PERFORMANCE

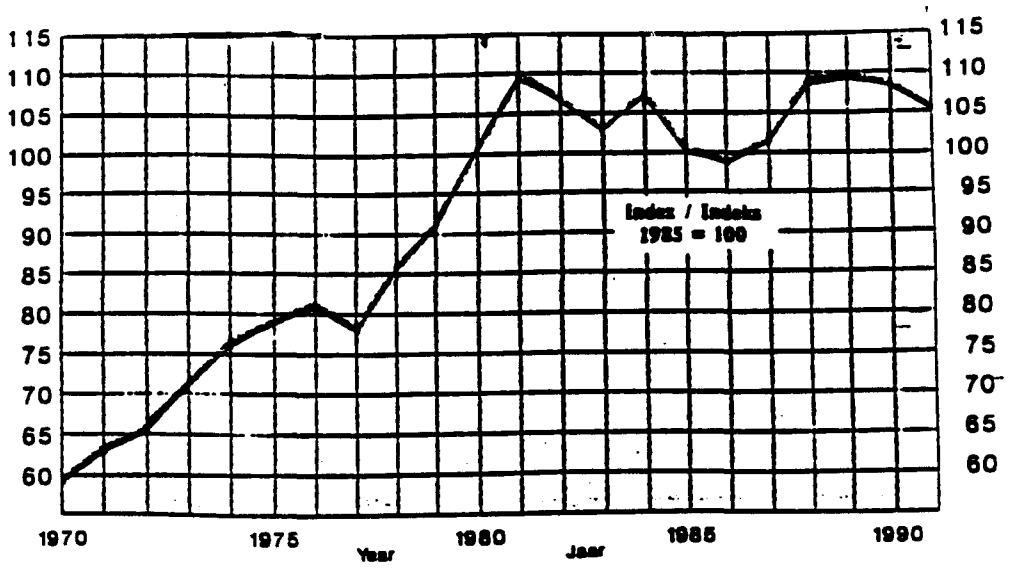
A little under one-quarter of our total output (Gross Domestic Product) comes from manufacturing industry. Manufacturing industry is especially important because it has the potential to generate high productivity jobs and activities. Moreover, countries with high productivity manufacturing sectors can sustain the development of lower productivity but more employment intensive (job creating) sectors, such as services or social infrastructure.

## SOUTH AFRICA'S MANUFACTURING PERFORMANCE

For over a decade, by comparison with most other countries particularly our principal competitors-manufacturing has performed poorly. Poor performance is manifest in low output and employment growth, low levels of investment and poor performance in international markets. Underlying this poor performance has been very low rates of productivity increase.

**Manufacturing Output** rose rapidly in the 1970s; there have been fluctuations, but no increase since 1981.

**FIGURE 1**  
**PRODUCTION:**  
**INDEX OF PHYSICAL VOLUME MANUFACTURING**



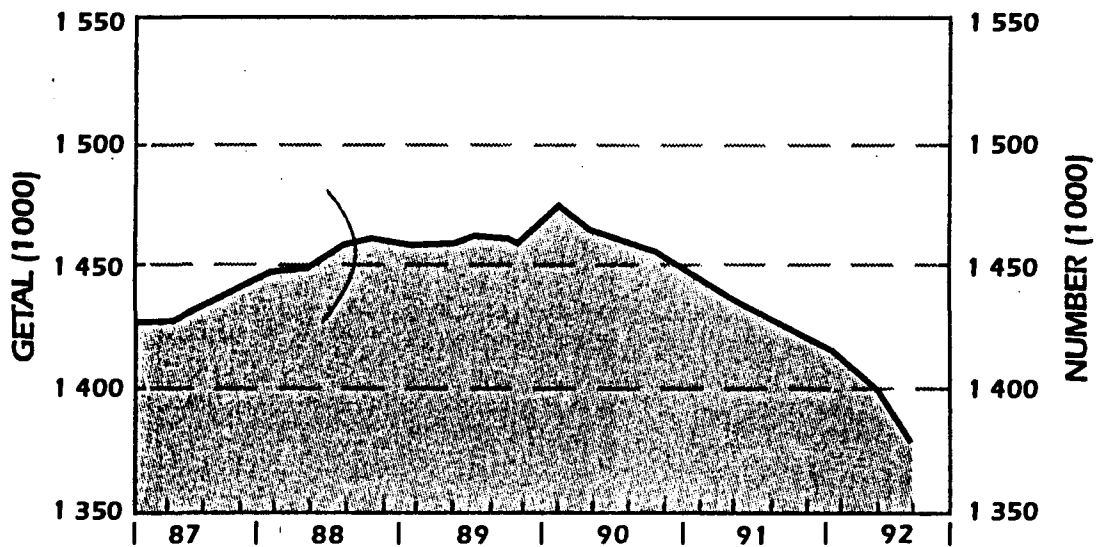
Steady Growth: 1970 – 1981  
No Growth: 1981 – 1993

**Manufacturing Employment** rose in the 1970s, but it is no higher now than in 1980. Employment has been falling rapidly since 1990.

We note however that, even in those countries which are at a similar stage of industrial development and which have recently experienced much more rapid growth in manufacturing output, this has not led to high rates of growth in employment in the manufacturing sector.

**FIGURE 2**

**EMPLOYMENT: ALL MANUFACTURING**



End 1992, manufacturing employment same as in 1980

**Gross Investment** was high in the 1970s and the early 1980s; it has declined significantly since 1982.

**Net Investment** (investment additional to that required to replace plant and equipment as it becomes worn-out) is now negative. We are not adding to our stock of plant and equipment. We are currently disinvesting from our own economy.

***TABLE 1***  
**INVESTMENT OVERALL**

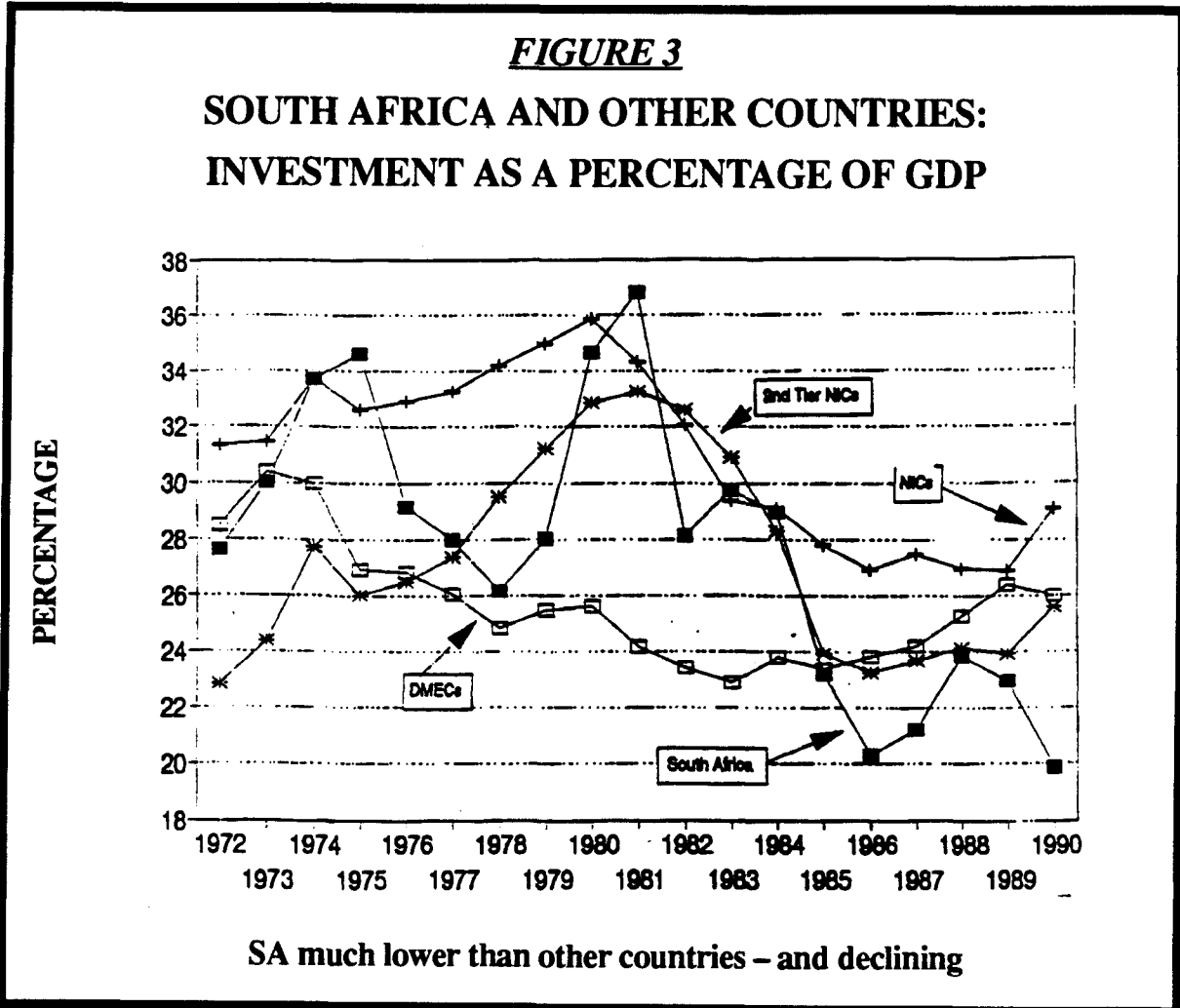
Year	Gross Domestic Fixed Investment to GDP
1978	26.4
1979	26.2
1980	26.2
1981	27.8
1982	27.9
1983	26.8
1984	24.4
1985	23.3
1986	20.2
1987	19.1
1988	19.9
1989	20.8
1990	20.0
1991	18.0
1992	15.9
1993	15.0*

\* First quarter, 1993

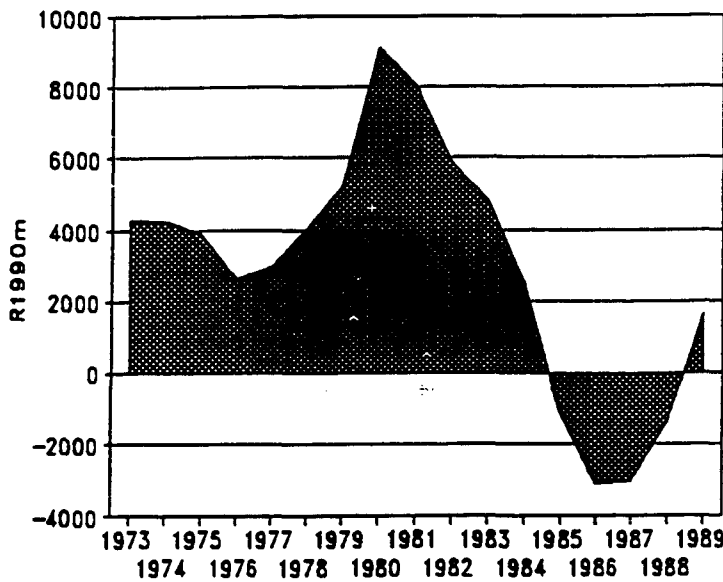
Source : SARB

1970s - 29% GDP Invested  
 Currently - 15% GDP Invested  
 Net Investment now negative

By comparison with our competitors our investment levels are very low and declining.



**FIGURE 4: ANNUAL NET INVESTMENT/DISINVESTMENT ALL MANUFACTURING (RAND 1990 MILLION)**



Source: Calculated from IDC (1992)

**Manufacturing Investment** has not been as bad as in other sectors. However, manufacturing investment has declined dramatically since the early 1980s and is currently way below that of our competitors. Capital stock in the South African manufacturing industry is currently increasing at about 2% per annum while most of our competitor countries have increases of more than 8% per annum.

In addition, much of our manufacturing investment has been in those parts of industry which create relatively few jobs. In particular, Chemicals and, to a lesser extent, Steel. Chemicals share of the manufacturing capital stock has almost doubled. But, to create just one more job in Chemicals, an investment of R219,000 is needed. Footwear and Clothing's share of the manufacturing capital stock has declined very significantly and plant and equipment in these industries is now less than it was twenty years ago. To create one more job in footwear an investment of R7,400 is needed, and for clothing just R2,400.

**TABLE 2**  
**SECTORIAL CAPITAL INTENSITIES AND SHARE OF CAPITAL STOCK, 1972 TO 1990**

	Capital stock per employee	Share of Capital Stock	
	1990 (R1000)	1972	1990
Chemicals	219.0*	19.7	37.7
Basic metals	187.9	29.7	22.1
Non-metallic minerals	58.3	6.2	5.3
Food, drink, tobacco	58.3	12.7	14.0
Pulp, paper	51.2	6.2	4.7
Fabricated metals	28.1	16.0	11.5
Textiles	20.5	4.8	2.4
Other Manufacturing	10.1	0.7	0.4
Wood, furniture	12.9	2.2	1.3
Leather, footwear	7.4	0.6	0.3
Clothing	2.4	1.2	0.3

Massive increase in share of Chemicals  
Decline in share of clothing, footwear, etc.

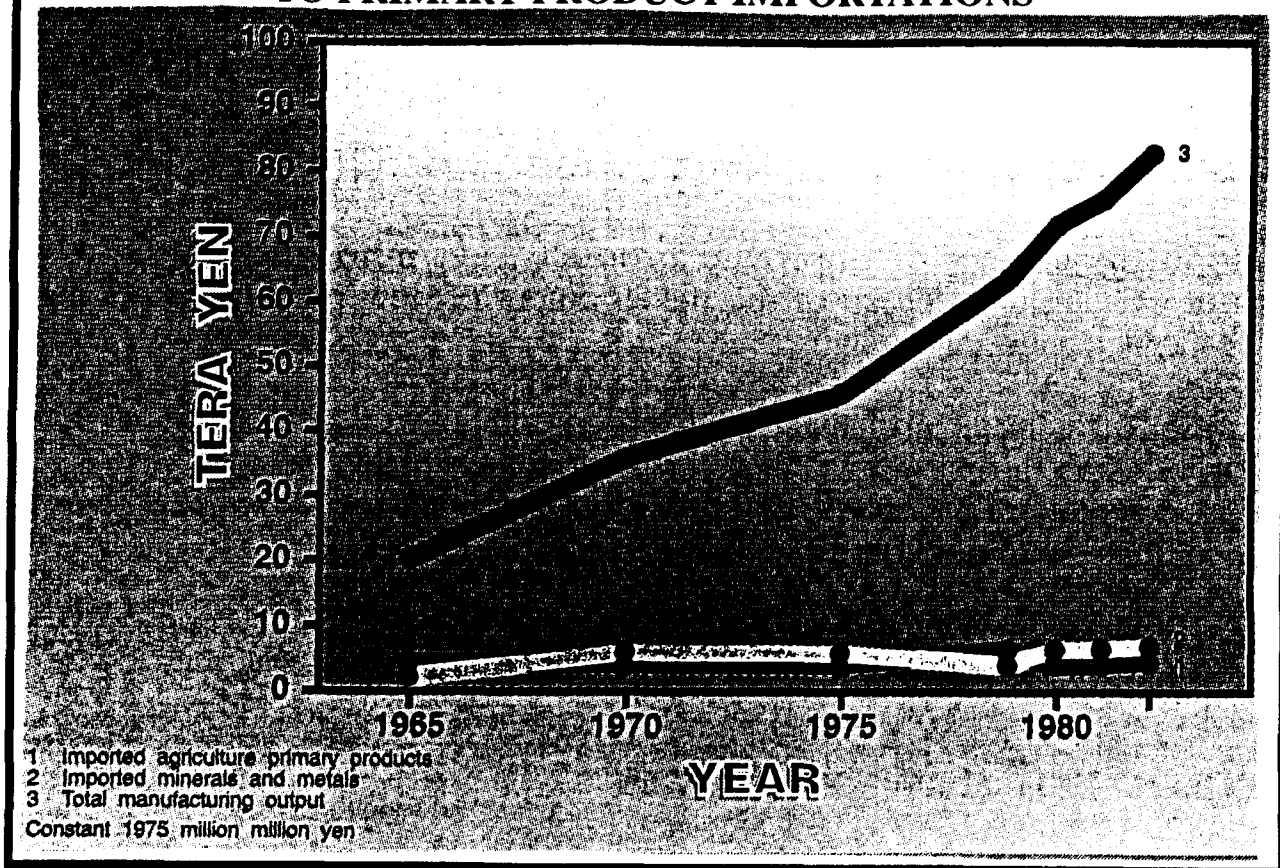
Investment in Chemicals was predominantly by government (SASOL and later Moss gas). Thus, even in those sectors where investment has been high, this has been government-led and has created relatively few jobs.

South Africa has also performed poorly in *International markets*. Our exports are concentrated in primary products. International demand for these products is growing slowly. The developed countries (the main market for primary products) are expanding their output of manufactured goods but without increasing their need for primary products.

In Japan manufacturing output has expanded very rapidly, but Japanese demand for imported primary products, agricultural and mineral, has remained static.

**FIGURE 6**

**VALUE OF PRODUCTS MANUFACTURED IN JAPAN COMPARED TO PRIMARY PRODUCT IMPORTATIONS**





**Manufactured Exports** have been increasing, since the early 1980s.

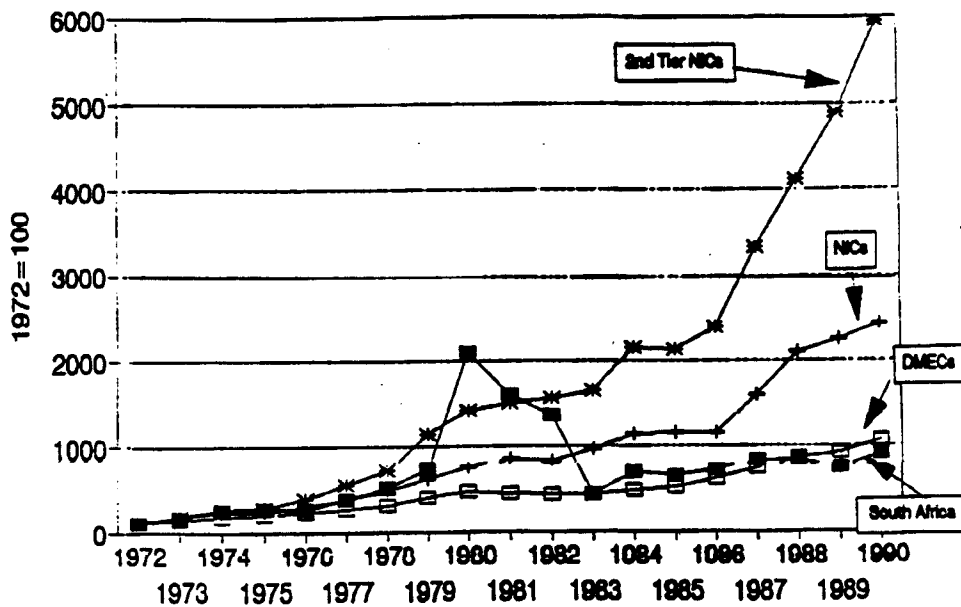
However:

- our rate of increase has been slower than that of our competitors
- a number of factors have contributed to the recent rise in our manufactured exports c export incentives, especially GEIS; a fall in the value of the Rand; and especially important, a prolonged recession and low level of demand in the domestic market.
- While there are exceptions, our researchers in the Industrial Strategy Project (ISP) found that firms were not significantly investing in new plant and equipment to produce for the export market.

All of this suggests that the increase in manufactured exports is still far from satisfactory. The increase does not arise as a consequence of our becoming significantly more competitive and is unlikely to be sustained.

**FIGURE 7**

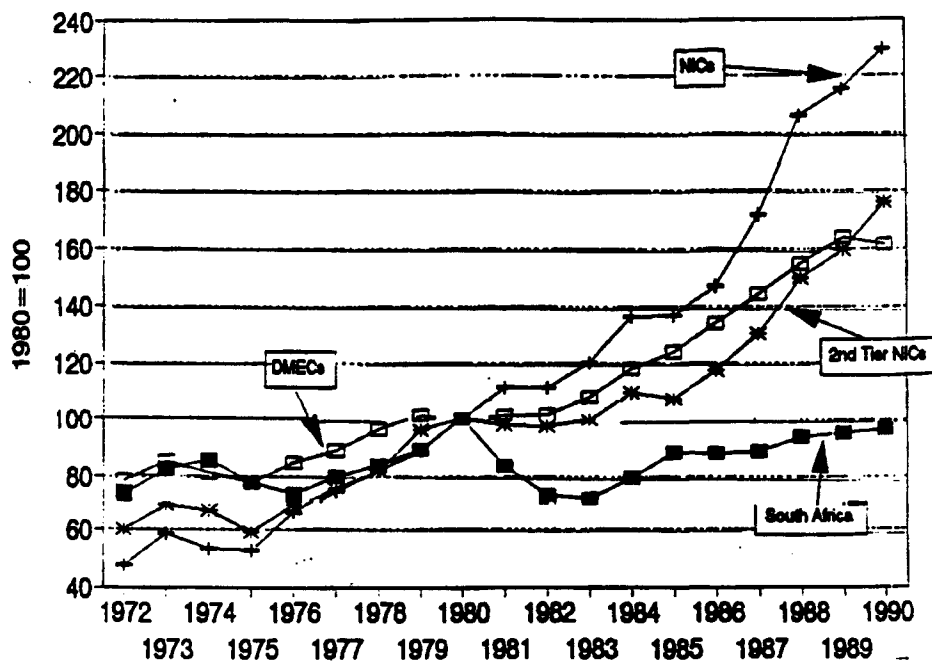
**INDEX OF MANUFACTURED EXPORTS  
( IN US \$ 1972 = 100 )**



SA manufa red exports still growing comparatively slowly

Poor performance on export markets has been the major factor prohibiting the entire economy from growing at a faster rate. We are heavily dependent on our need to import, especially capital equipment. When the economy expands, the demand for imported capital equipment rises very rapidly. The major constraint on our growth is therefore our Balance of Payments. The amount of imports that we can pay for by exporting is no higher now than it was at the end of the 1970s.

**FIGURE 8**  
**CAPACITY TO IMPORT**

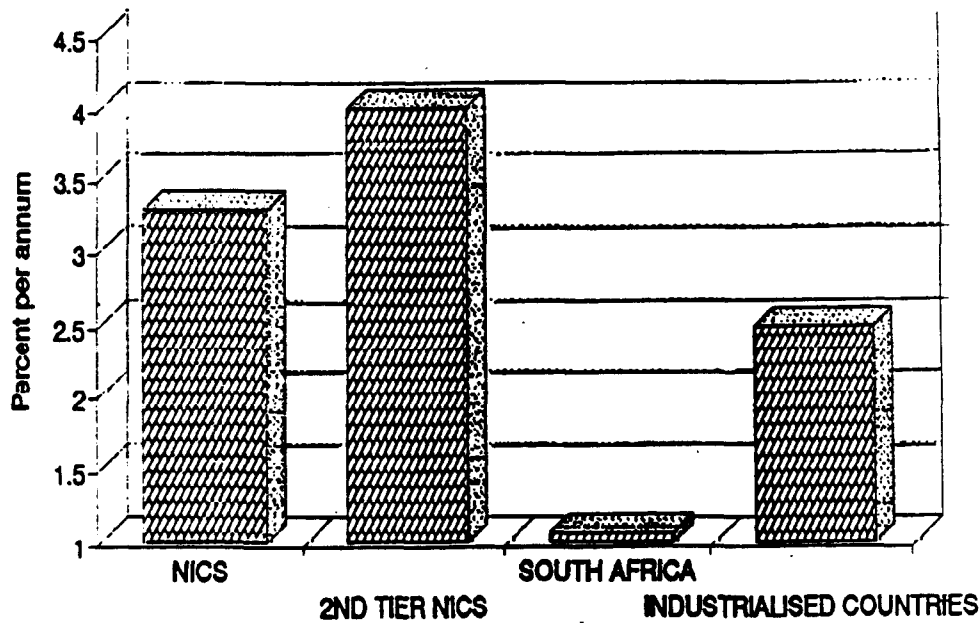


SA capacity to import same as in 1979-1980

Currently, because of our low level of exports and our need for more imported plant and equipment as the economy grows, we can only sustain a growth rate of about 1.5% per annum. This is about one-half of our increase in new work-seekers.

Productivity measures the output produced by labour and by plant and equipment. Measurement of productivity is not easy. However, this much seems clear: South African manufacturing industry has seen very low productivity growth over the last 20 years. Indeed, there has been little or no overall productivity growth. Productivity increases have been very low for both capital and for labour.

**FIGURE 2**  
**SOUTH AFRICA: OTHER COUNTRIES**  
**GROWTH OF MANUFACTURING VALUE ADDED**



Minimal increases for SA large increases elsewhere

Such sustained low growth rates in manufacturing productivity are very unusual. Many of our competitor countries have had sustained high levels (above 5%) of productivity growth over the same period.

One way of measuring productivity is to look at the increase in the value added. Value added is the difference between a firm's sales and what it buys in from other companies. Higher value added means that firm's create more value for their customers and the more value they create the more they are able to create higher-skill and higher-wage jobs. South African manufacturing has performed very poorly in value added by comparison with other countries.

ISP studies showed that in most manufacturing sectors, firms performed particularly poorly in terms of enhancing the value to their customers by producing quality products; in designing and developing products which meet the particular needs of individual customers and in delivering products as and when the customer needs them. These "non-price factors" are becoming increasingly important. If local firms cannot perform these tasks well, they will be increasingly unable to compete with foreign firms on international or domestic markets.

A large variety of factors influence productivity. **Explaining changes in productivity**, (and hence suggesting policies to advance productivity) requires detailed examination of firms and industrial sectors. The ISP studies indicated a number of factors which were retarding productivity. However, in most sectors, including the weakest sectors of local manufacturing, researchers were able to identify some firms which were very productive. These firms were not a significant distance from the productivity of leading firms internationally c what might be called "international best practice." At the same time, at the other end of the spectrum, our researchers also identified many other firms in the same sectors which were, by contrast, very inefficient and unproductive. One critical part of our Industrial Strategy is to examine why, within the same sectors, firms can vary so significantly in their productivity; why the pressures of market competition do not induce such firms to become more productive and what policies can 'prod' and entice firms to become more like the more productive firms, and therefore help to close "the productivity gap."

## CASE STUDY

### A Firm Producing Small Electrical Appliances

In small electrical appliances (eg. toasters, irons, kettles) our researcher compared the productivity performance of a local plant with that of a world class Australian plant.

**SECTORAL FACTOR  
PRODUCTIVITIES  
SMALL ELECTRICAL APPLIANCES**

SA plant comparable to  
Australian plant in physical productivity.

**BUT SA PLANT :**

- ★ high cost
- ★ higher input costs
- ★ need to maintain large stocks
- ★ high overheads

Making allowances for different levels of plant and equipment, turnover levels etc., in terms of the output per worker or output per machine, the local plant is as productive as the Australian plant.

However, the local plant is less competitive and charges higher prices for similar products. The reasons for the local firm charging higher prices are: The local firm has higher input costs; it has to pay higher duties on imported components and higher prices for local raw materials eg. steel, plastics, aluminium than does the Australian firm.

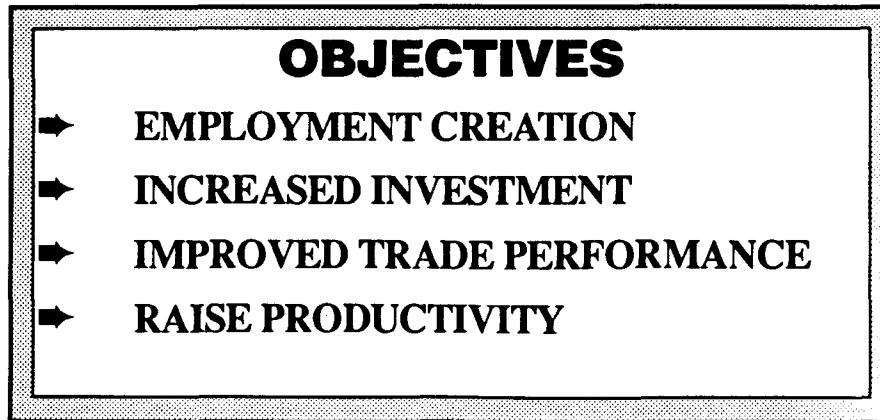
The local firm needs to keep higher stocks of inputs (inventories); this is because, unlike the Australian firm, the local firm is unable to secure input deliveries as and when it needs them. The local firm is not fully utilizing its plant and equipment; unlike the Australian firm, the local firm's turnover is low and has declined over time.

In this case, the 'sources of the problem' are primarily external to the firm. The policy emphasis here would not lie in measures to raise the firm's productivity, but rather in altering the broader environment. Altering tariff duties (the trade regime); securing lower prices for local raw materials; ensuring better coordination and linkage between firms and/or better transport infrastructure; ensuring a more buoyant domestic economy. With regard to the latter, there is a clear linkage here with the extension of electrification.

This problem is illustrative. Local firms can, and in a number of cases have, achieved levels of productivity which are comparable with "international best practice." There are enormous gains to be made by ensuring a wider diffusion of such "national best practice." However, the principal problems for many of the more productive firms, rests in the broader environment within which they operate. Policy is accordingly needed to address these problems.

# OBJECTIVES AND OVERALL STRATEGY

Our analysis of the poor performance of the manufacturing sector leads us to suggest **FOUR INTER-LINKED OBJECTIVES** of industrial policy:



## ■ EMPLOYMENT CREATION:

Manufacturing's *direct* contribution to employment creation will be in the area of high productivity/high wage jobs. Whilst, realising this objective will also make it possible for jobs to be created elsewhere in the economy, for example in the services sector and in the provision of social infrastructure, it would be unrealistic to expect significant aggregate job creation in the manufacturing sector itself. This has not even occurred in those of our competitor countries whose manufacturing performance has been far more successful than our own.

## ■ INCREASED INVESTMENT:

Private manufacturing investment depends upon a wide range of factors, many of which an industrial policy can affect only marginally and indirectly. The tools of industrial policy are principally concerned with the productivity of investment rather than the level of investment. However, realisation of our broad objectives does require an increase in the level of private manufacturing investment. We have identified instruments of industrial policy that will influence the level of investment and consider increasing investment one of our principal objectives.

## ■ AN IMPROVED TRADE PERFORMANCE:

In order to reduce our dependence on slow growing and volatile raw material exports, our Industrial Policy aims to substantially increase manufactured exports. This would more easily enable us to finance the level of imports that accompanies economic growth. But, our industrial policy is not only focused on the export side of our trade balance. Another key aspect of this objective is to reduce our overwhelming dependence on imported machinery and other capital goods, and to compete efficiently with imported consumer goods.

## ■ RAISING PRODUCTIVITY:

This is the heart of any industrial strategy. Our objective is to bring the performance of leading South African firms closer to the world frontier and to close the gap between those leading firms that are in striking distance of this frontier and those that lag far behind.

We must emphasise that we see these four objectives as an interdependent package, all aspects of which must be realised. There are considerable dangers in meeting some of these objectives, whilst neglecting the others. For example, if significant increases in productivity are not accompanied by vigorous growth of domestic manufacturing investment and entry into international markets, the result will be a loss in employment.

Realisation of these objectives will require significant policy interventions that will challenge some long established practices and interests. Ownership structures, market power, trade protection, overvalued exchange rates, vocational training systems, remuneration packages, collective bargaining structures, technological capacity and diffusion, regional development - these are some of the more important arenas of industrial policy, and intervention in any of them disturbs powerful interests.

In order to deal with this complex mix of interests something more than ad hoc policy is required - an overall industrial strategy that guides and informs consistent policy must be developed.

## THE LIMITS OF INDUSTRIAL POLICY

**Manufacturing has the capacity to generate more high paying jobs, to produce basic commodities at affordable prices, to ease the balance of payments constraints, and to raise the general level of productivity in the economy.**

**However, it is important to appreciate the limits of industrial policy. We have already noted that, whilst manufacturing growth will contribute significantly to generating additional high productivity, well paid employment opportunities, its short run impact on aggregate employment will be limited. Industrial policy should not substitute for other employment creation programmes and strategies.**

**Industrial Policy does not then allow us to avoid the difficult choices explicit in, for example, an employment generating and poverty alleviating strategy that will continue to rely heavily on contentious redistributive programmes through the fiscus.**

## INTERLINKED OBJECTIVES

### *A case study from the auto sector*

**Internationally, manufacturing is currently undergoing major organisational changes. These include changing the way production is organised within the firm and altering factory lay-out.**

**Our researchers found that such organisational changes were diffusing only slowly in most sectors of local manufacturing. Where they have been adopted, these organisational changes have often secured major changes in productivity. This has been particularly so when these changes have had the support of the labour force. For example, with no additional investment, organisational reform in a local auto producer resulted in a 30% gain in output. With no increases in costs, the producer was able to lower the output price by 10-20%.**

**However, since the auto producer is selling into a domestic market where overall demand is effectively static, this has also resulted in significant employment loss, approximately 30%. An expanding domestic market, in combination with a growing export orientation, are critical if productivity gains are not to result in job loss. Moreover, without this, workers are far more likely to oppose new forms of work organisation, and so substantially limit the potential gains in productivity.**

Our OVERALL STRATEGY rests on four pillars

## OVERALL STRATEGY

- ➡ **SPECIALISATION: 'up the value chain'**
- ➡ **REDISTRIBUTION: 'productivity raising redistribution'**
- ➡ **TARGETING: 'improve the competitive fundamentals'**
- ➡ **BASIC WAGE GOODS: 'reduce the cost of living'**

The first demands a more **SPECIALISED** or **FOCUSED** manufacturing sector. A popular myth asserts that South African manufacturing is narrowly focused at middle and high income earners, in the process ignoring the requirements of low income earners. In fact the domestic manufacturing sector is unusually diversified, characterised by its lack of specialisation. Typically, local firms produce a far larger product range, by comparison with similar sized firms elsewhere. The problem is that South African consumers - especially low income consumers - bear the cost of this excessive diversification in the form of commo-



ties of a quality and price inferior to that available on the international markets.

A strategy aimed at forging greater specialisation must not lock South Africa into narrow areas of production based only on its natural resource advantage. It is vital to identify, in broad terms at least, those areas in which South Africa is advantaged or in which advantage may be created. Our overall conclusion here is that industrial policy should encourage South African manufacturing to focus 'up the value chain'. This does not suggest a strategy focused on narrow, high technology, niche markets. It rather directs South African manufacturing away from those sectors in which low wages (and low skill) are a principal component of the value added in the production process.

In each sector our strategy will be to focus South African manufacturing on those processes in which elements of production such as skill, design capability, our rich and varied natural resource base, and a sophisticated financial and physical infrastructure are central. This approach put a far greater emphasis on maximum utilisation of our existing human resources and the further development of these resources.

## **"MOVING UP THE VALUE CHAIN"**

### ***A textile case study***

**Our researcher identified seven particularly productive firms and attempted to identify whether there were characteristics common to these firms which differentiated them from the other less productive firms in the sector.**

**The key characteristic that was common to all the productive firms was that they produced higher value-added textile products. Precisely how they added value differed as between the various firms, but they were all exclusively focused on the production of value added differentiated products as opposed to the production of basic, undifferentiated cloth, 'commodity' textiles. Concomitantly, many (but not all) of the least productive textile firms were focused on the low-value commodity end of textile production.**

**This example suggests that the higher value-added end of textile production offers far greater potential for development. The maintenance of commodity textiles, on the other hand, relies heavily on forms of protection for this end of production. The heavy presence of unproductive and undynamic firms at the commodity end of textiles suggests that, if these firms are to remain in business, levels of protection will need to be increased.**

**More productive firms will tend to have both the competitive capacity and the need to export, since they are located in the higher value added end of textiles where local demand tends to be more limited. But this is not universally so. Two of the seven firms, are only marginal exporters, and one firm sells only to the domestic market.**

**Linked policies designed to encourage and facilitate the movement of firms in the textile industry into the higher value-added end of production, and policies designed to 'pressurise' firms at the commodity end of production, would be a critical part of an industrial strategy for this and other sectors.**

A strategy of 'moving up the value chain' will, if successful, generate export growth. Ours is not, however, a strategy that is fixated upon the international market. Indeed the second pillar of our overall industrial strategy is directed at making **BASIC WAGE GOODS AFFORDABLE** so as to 'lower the cost of living' of working class South Africans.

Compared with the advanced industrialised countries and the newly industrialised countries such as Korea and Taiwan, South African wage levels are low. However, in comparison with countries like Malaysia and Thailand, the so-called 'second-tier NICs', and the developing countries of south Asia, South African wages are high. Paradoxically however, the living standards of low income South Africans, by comparison with many in this second group of countries, are low. There are a variety of factors that explain the apparent paradox. One important factor is the high cost of basic wage goods.

Our basic wage goods strategy relies, in part, on focusing our manufacturing sector, on gradually vacating those sub-sectors in which we are unable to compete efficiently with imports. But it is also directed at lowering the cost of South African basic wage good production. This is obviously crucially important where non-tradeables such as bread or key construction inputs are concerned. But there are also areas of potential competitiveness where traded basic wage goods are concerned. Here we have a number of policy proposals focused on wage structures and differentials, on the informal sector, and at addressing the

## **"PICKING WINNERS"**

**Our preference for targeting our policy on improving the broad underlying 'competitive fundamentals' does not mean that we reject all forms of 'hard targeting', that is, targeting directed at providing additional resources for developing specific manufacturing sub-sectors. A few examples will outline some of the particular circumstances that demand a measure of hard targeting:**

- **once the Alusaf project comes on stream, South Africa will have a world-class aluminium refining capacity and this suggests that resources be targeted at developing a capacity to utilise a portion of this natural resource rent in downstream manufacturing processes. This may be extended to other basic minerals that South Africa produces competitively and exports but does not utilise in downstream manufacturing processes.**
- **there is widespread agreement that housing construction will occupy a high priority in the agenda of a post-apartheid government and this suggests a targeted effort at developing the capacity of those sectors that produce construction and civil engineering components. Similar considerations apply to those processes that produce inputs required for mass electrification.**
- **an important element of South African manufacturing, representing considerable employment and capital stock, is engaged in 'low value' ends of several sectors - the clothing and footwear sectors are examples here. If our industrial strategy suggests ultimately vacating these ends of the sector, then it must simultaneously target the higher value ends of those sectors so as to facilitate the rapid movement of labour and capital stock into these new areas of employment.**

impact of monopolistic and oligopolistic markets, that will promote our competitiveness in the production of basic wage goods. 'Lowering the cost of living' will assist in alleviating poverty and, by reducing the upward pressure on wages, in enhancing export competitiveness.

Moving up the value chain and lowering the cost of basic wage goods presupposes a measure of **TARGETING**. In general, however, our approach does not favour selecting specific sectors or sub-sectors in the manner associated with other successful industrial policies as, for example, in South Korea. Because of our highly diversified industrial base, South Africa is not faced with entering industrial processes from scratch. Our strategy is then focused on targeting those '*underlying competitive fundamentals*' that will enable South African manufacturers in general to compete in the higher value ends of their chosen sectors. Hence our detailed policy prescriptions focus on manufacturing 'fundamentals' such as skills acquisition and technology diffusion, and the building of an institutional fabric designed to generate these key capabilities.

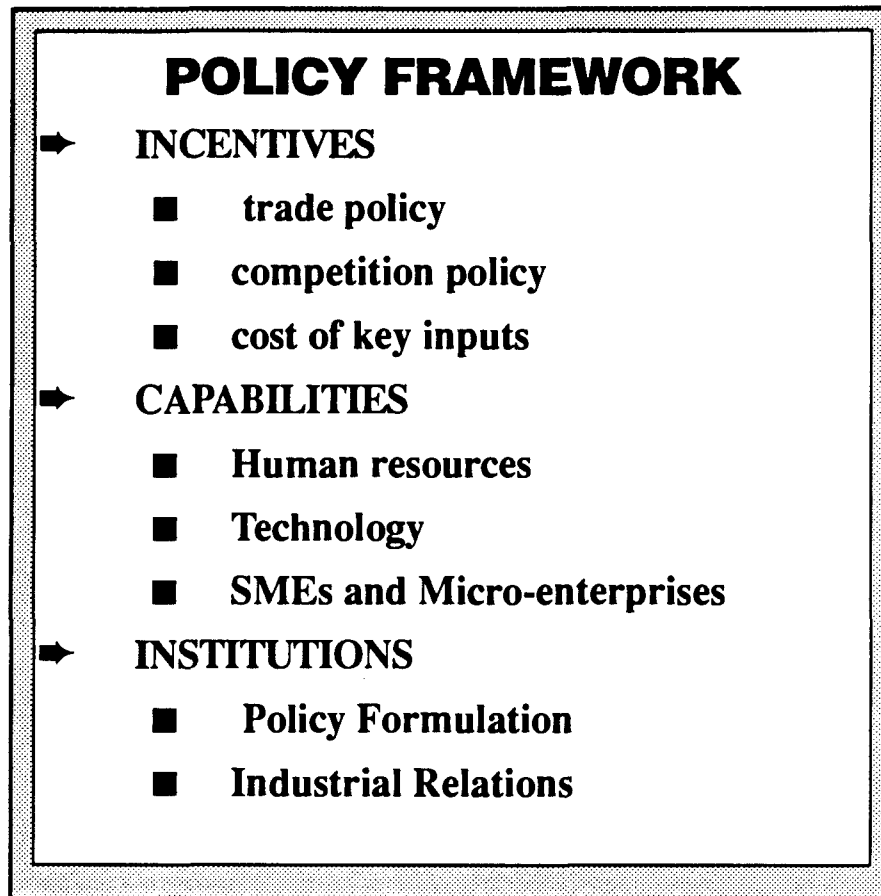
Our industrial strategy relies heavily upon rapid growth of productivity. In order to achieve the required productivity increases, the fourth pillar of our strategy is focused on **REDISTRIBUTION**. Here we are not referring to the mode of redistribution that will, of necessity, be directed through the fiscus in the form of income transfers and improved access to social and physical infrastructure. We are concerned with redistribution at two levels: Firstly, with redistribution of power relations both at the level of industrial policy formulation and implementation, and at the level of shop floor relations. Secondly, with the greater equality of income that accompanies the creation of more productive and more highly paid employment. In essence, we are concerned with *redistribution that generates and accompanies increases in productivity*.

We have already indicated that a successful industrial policy presents a challenge to the policies and practices of a range of important interests. In some societies, powerful authoritarian states have confronted these vested interests and have imposed a successful industrial strategy over the short term, parochial demands of these groups. Others have developed more consensual modes of governance at the level of the state and the firm that have assisted in making the trade off between sectional requirements and national imperatives.

Our strategy - in keeping with the rise, at sectoral and national level, of tripartite policy formulation - is deeply rooted in consensus, and this requires, in and of itself, a considerable redistribution of power relations in a society long characterised by rigid, authoritarian hierarchies in both the state and the firm.

However, productivity increases are principally a reflection of developments on the shop floor. Hence the redistribution of power relations at the policy formulating level must also be reflected at the factory level. Here industrial relations structures and practices are key elements of the productivity enhancing redistributive process, as are ownership and other corporate governance structures. Concretely this will be manifest in flatter hierarchies and reduced earnings differentials. This shift in power relations on the factory floor and at the policy formulating level will complement the redistributive elements associated with more highly productive and highly paid jobs, that flow from a strategy of specialisation 'up the value chain', and on the gains from our attempts to reduce the cost of living via a basic wage goods strategy.

# INDUSTRIAL POLICY FRAMEWORK



Our policy framework is rooted in the requirement to **RESTRUCTURE** South Africa's manufacturing sector.

By 'restructuring' we infer the need to create a more focused and specialised manufacturing industry, with an increasing emphasis on movement into higher value added areas. However, this could simply mean surrendering a part of our existing industrial production unless it is accompanied by increasing productivity that underpins expansion in these more focused areas.

The principle mechanism, therefore, for successfully restructuring manufacturing is enhanced productivity. If productivity does not increase, restructuring will simply wipe out important parts of South African manufacturing and throw us back onto our natural resource base. This is effectively what has occurred in consequence of many of the structural adjustment programmes that have exposed the lower ends of manufacturing without underpinning productivity increases at higher ends of the manufacturing sector.

How then to enhance manufacturing productivity? This is the question that industrial policy is dedicated to answering.

Our policy framework incorporates three broad variables. The first recognises the high-powered, productivity-enhancing incentives that flow from market relations. Our concern to sharpen the flow of market-based incentives is reflected, firstly, in a *trade policy* that seeks to expose domestic producers to international competition, and, in particular, that seeks to refocus local manufacturing on the opportunities that exist in international markets. Secondly, our *competition policy* seeks to increase the competitive temperature in domestic markets, by policy designed to deconcentrate markets and to influence the conduct of key participants in these highly concentrated markets.

In general our concern to harness the power of market forces does not imply that policy designed to expose South African firms to unmediated market relations will, in and of itself, revitalise the manufacturing sector. The key capacities that underlie competitive manufacturing will not necessarily be generated by market forces alone. Moreover, harsh competitive winds may well destroy scarce and valuable capacity. In other words, at least as important as recognising the high-powered incentives of the market, is the recognition that the 'freeing' of markets can lead to the destruction of capacity and that market failure is commonplace. This suggests an important role in industrial policy for extra-market intervention.

Recognising the limits of the market implies a carefully constructed, pragmatic trade policy and competition policy. This does not entail passively protecting our basic capacities from market forces. Rather it entails a proactive commitment to *building the institutions* and to establishing processes that generate the *underlying competitive capabilities* that enable local manufacturers to respond to market incentives.

These then are the other two variables in our policy framework - *capabilities and institutions*. Indeed in our policy armory, pride of place is given to the need to *enhance underlying capacities*, in particular, our *human resource and technological capacities* as well as our very *weak SMEs and micro-enterprises*. This is why we are so concerned with *institutional development* - if the market is unable to generate, and indeed may destroy, underlying capacity, then we have to develop institutions designed to address this shortcoming.

## INCENTIVES

### ***The International Market***

- **TRADE POLICY**
  - Rationalised Tariff Structure
  - Gradual Tariff Reduction
  - Temporary Protection for Capability Building
  - Export Support
  - Institutional Reform
  - An appropriately Valued Exchange rate

A surprising degree of consensus - both internationally and domestically - has developed around areas of trade policy that were previously hotly contested. This consensus reflects, firstly, support for a *rationalised tariff structure* where the number of tariff lines and the degree of variance between these lines is limited. The South African tariff system is characterised by the vast number of minutely specified tariff lines and the massive divergence between the tariff lines imposed. This tariff structure is fertile ground for rent-seeking and lobbying (it is, in part, the product of rent-seeking behaviour), it generates considerable uncertainty, and is an administrative nightmare.

However, rationalisation must be pragmatically implemented. We are mindful that some of the most successful industrial policies have relied upon a generally low average level of tariffs, but a high degree of divergence effectively using the tariff structure as a means of softening the decline of a 'loser' or to target specific potential 'winners'. In general we would prefer to minimise the use of tariffs as a targeting device, although there are instances - in the automobile sector for example - where an unusually high tariff may be justified as a temporary expedient.

We are also aware that rationalisation of a highly complex tariff structure may disguise a very sharp reduction in the protection afforded a wide range of products. In general we support a *gradual reduction in tariff protection*. Whilst the average level of tariff protection in South Africa is not particularly high by international standards - in a study of 32 developing countries, South African average tariffs were slightly above average - protection of key intermediates raises the cost structure of South African manufactures with a predictable impact on our export competitiveness and on the domestic cost of living. Protection of basic consumer goods, frequently designed to offset the impact of protected intermediates, is an important factor underpinning the unusually high cost of living of low-income consumers.

However, whilst for these and other reasons, we support a reduction in the overall level of tariff protection, we believe that it must be gradually applied. In particular the reduction that we propose must be timed so that the impact of employment loss in fundamentally uncompetitive sub-sectors is cushioned. Most critically, tariff protection may be maintained in order to allow 'supply side' or 'capability building' programmes to bear fruit - in the shape of new employment opportunities - in other sub-sectors where there is competitive potential.

By the same token, we support, in carefully selected cases, the use of *temporary protection to promote competitiveness*. In the clothing industry, whilst we identify limited competitive potential in the 'low-end' of the sector, we discern considerable potential in mid- and high-end production. There is an argument for protecting the latter sub-sectors, but only in order to enable the longer-term capacity-building measures to take effect. Similarly we have identified potential areas of competitive advantage in the heavily protected auto assembly sector and in the auto components sector. What is required in order to realise this potential is considerable capacity building, a measure of rationalisation of the large number of assemblers, and the building of more effective relationships between component manufacturers and assemblers. Again, temporary protection is necessary to implement these changes.

It is vitally important, however, that manufacturers who benefit from protection in order to advance their competitive potential be subject to detailed, pre-announced performance criteria, criteria that demonstrate concretely a positive relationship between temporary protection and increasing competitiveness.

It is now recognised that tariff liberalisation will not, in and of itself, promote export growth. Indeed, as we have shown, the judicious and temporary use of protection may be necessary in order to promote the underlying competitive fundamentals that underpin sustained export growth. As important, though, is a *proactive export support* programme. The core of South Africa's export programme is the General Export Incentive System (GEIS), and various sectorally specific subsidy schemes. These subsidies are costly and open to considerable corruption. Moreover, GEIS is structured so as to reward manufacturers who would have exported without the subsidy. Nevertheless, our sector studies have found clear evidence that GEIS has a positive impact on manufactured exports. We therefore support the maintenance and refinement of export subsidy programmes.

In the near future GATT requirements will constrain export subsidies, and there are strong grounds for devoting resources to developing GATT-legal or, at least, GATT-evading, subsidies. However, recognising that subsidy schemes will be limited by GATT requirements, should focus policy on developing the *institutional framework to support trade policy* and export growth in particular. The export promotion infrastructure which presently incorporates several institutions in an ad hoc and disorganised effort needs to be rationalised and refined; the development of a financial institution - an export bank - specifically designed to support export production and marketing is recommended; employer associations should be encouraged

to turn their attention away from securing protection to the more productive activity of marketing the output of their sectors in international markets. Sectoral employer and trade associations may be particularly well placed to assist small and medium enterprises in penetrating international markets.

Whilst international experience evidences little or no correlation between trade liberalisation and export growth, there is a definite relationship between an *appropriately valued exchange rate* and export growth. A recent study of 17 industrialising countries found that an appropriately valued exchange rate was characteristic of all the successful exporters. On the other hand, an overvalued exchange rate was characteristic of all those who performed poorly in export markets. Notwithstanding other policy measures, an appropriately valued exchange rate is critical to the promotion of manufactured exports.

There is a broad consensus that the Rand is somewhat overvalued, partly in consequence of the Reserve Bank's use of the exchange rate as an anti-inflationary instrument. There remains a significant inward-bias of local manufacturers and there is no evidence of substantial investment in export-oriented manufacturing production facilities. While we are not able, at this stage, to quantify the extent of this overvaluation, the exchange rate should be set at a level which will act as an incentive to investment in non-traditional manufactured exports.

In addition to an appropriately valued exchange rate, it is important that manufacturers operate with stable exchange rates. Stability in exchange rates has similarly been shown to be critical in inducing long-term investments in export-oriented manufactures in a wide variety of countries. South African manufacturers have had to contend with very unstable exchange rates - more unstable than those facing most other producers still reliant on primary product exports.

There are, however, widely acknowledged problems that potentially arise from such a policy.

**Foremost amongst these are:**

- ★ the inflationary consequence of an increase in import prices. We do not support the use of the exchange rate as a primary anti-inflationary instrument, and nor do we accept that fighting inflation should take precedence over the need to enhance export growth. Furthermore, it is unlikely that, in an economy as depressed as South Africa's, prices would rise by the full extent of a currency devaluation;
- ★ a currency devaluation will only 'stick' - and hence the need for further devaluation will not arise - if it results in a decline of real incomes. Whilst there is little point in devaluing if real incomes in the aggregate do not decline, it is possible to take compensating action to secure a distribution of this decline that bears least upon low income consumers. A general reduction in tariffs - many of which bear disproportionately on the poor - will help offset the decline in real incomes. Tariff reductions in basic wage goods would be particularly significant and warrants further examination. It may also be possible to design safety nets to support those most directly implicated by the currency devaluation.
- ★ stability is not easily achieved in the context of real shocks to which South Africa is prone, especially fluctuations in the price of many of our principle primary product exports. There are however tested mechanisms - such as the use of a stabilisation fund - for insulating the real exchange rate from changes in commodity prices.

### **The Domestic Market and Ownership**

It is well known that South African product markets are exceptionally concentrated and that ownership is highly centralised. Public attention has focused on these features of South Africa's industrial structure because of their intensely inegalitarian character.

Relatively little attention has focused on their negative impact on the performance of the manufacturing sector. Indeed it is frequently argued that large scale and centralised ownership are inextricably linked and



that they are preconditions for competitiveness - large scale is a precondition for entry into international markets, and conglomeration promotes the sharing of scarce financial, managerial and technical resources. It is also argued that a few well resourced firms dominating an industry may be the most effective market structure for ensuring high levels of competition.

Our research does not, in general, support these arguments. We find considerable evidence of anti-competitive collusion between the large firms and little evidence of productive inter-firm sharing in the large conglomerates. The possibility of developing vibrant small and medium scale enterprise (SME), is particularly undermined by the dominant ownership and market structures. However, policy must proceed carefully in this area. Frequently, it is not the structure of the market or the corporate group or the size of the firm that is objectionable, but rather its behaviour or conduct. In key areas, however, conduct will not change unless policy challenges the underlying structure.

What then is our policy response in these crucial areas? We will deal with market concentration first.

### ■ COMPETITION POLICY

- strengthen competition authorities
- monitor inter-conglomerate relations
- defend small producers

There is a strong line of argument that states: 'subject local producers to competition from international producers and South Africa's biggest manufacturers and most concentrated markets will receive all the competition that they need'! Whilst lowering protective barriers will raise the competitive temperature in South Africa's domestic markets, this is not enough. Trade policy, like competition policy, is determined by a variety of objectives and, whilst co-ordination of these two important instruments of industrial policy is vital, they are not always interchangeable. Moreover, we may find that trade liberalisation does not work as effectively as its proponents often assume: for example, trade liberalisation may nominally challenge a dominant firm's position in its market. However, the dominant firm's close corporate links with its major suppliers and retailers may continue to blunt competition in its favour.

Whilst there are examples of competing oligopolies in South Africa - for example in the highly protected auto and white goods sectors - our research confirms that collusion is commonplace. Frequently this collusion takes the shape of an implicit agreement between conglomerates to refrain from activity in selected markets resulting in effective single-firm domination of these markets.

There is no ideal market structure. Consequently, our policy generally *favours strengthening the ability of the competition authorities to monitor the behaviour of South African corporations*, rather than the imposition of a predetermined industrial structure. Whilst strengthening the competition authority involves increasing both its investigative and punitive capacity, it also involves an organisational re-arrangement that relocates the Competition Board in the policy making and implementation structure of government. Currently the competition authorities report to the Minister of State Enterprises whilst the other aspects of industrial policy - for example trade and technology - are the responsibility of the powerful Ministry of Trade and Industry. As long as competition policy is not viewed as an important aspect of industrial policy it will - regardless of the financial and physical resources thrown at it - continue to occupy a somewhat 'cinderella' status.

Collusion - more often accomplished by a nod and a wink than at formal inter-company meetings - is notoriously difficult to monitor and prove in a court of law. The victim is generally the most effective monitor but only if confident that the law will afford relief and future protection. Lengthy investigations, light



punishment and a low-key Competition Board do not inspire the confidence necessary to encourage monitoring by those on the receiving end of collusion and other anti-competitive practices.

In South African circumstances it is particularly important - and, possibly, particularly difficult - to *monitor inter-conglomerate relations*. There is widespread acknowledgement - from our researchers and others, including the Competition Board - of the practice of 'conglomerate forbearance', where a conglomerate encourages one of its subsidiaries to refrain from competition against the subsidiary of a fellow conglomerate, lest the latter retaliate in an unrelated market, thus effectively dampening the level of competition in two unrelated markets.

Our preference for tackling behaviour rather than structure should not be seen as a blanket opposition to structural intervention in this area. Hence, there may be a case-by-case argument for breaking up clear monopolies. The US anti-trust experience establishes that the biggest corporations can be broken up and there is no reason for excluding this possibility in South Africa. Where conglomeration is concerned, structural features like interlocking directorships are increasingly commonplace - a recent survey has 27 individuals holding just under 650 directorships of JSE-listed companies. Cross-shareholdings between conglomerates and between their operating companies are also increasingly common. Both these structural features underpin conglomerate forbearance and there is a strong case for prohibiting or limiting them.

Competition policy is generally intended to protect consumers. However in South Africa it is important to use competition policy to protect *small producers*, a constituency severely compromised by high levels of concentration. Vertical integration between producers and their customers and suppliers, including the suppliers of finance, makes entry extremely difficult for small producers. Single firm domination of key markets renders small producers particularly vulnerable. The Competition Board has a brief to assist small business development. Its interpretation of this brief has been limited to identifying those elements of the broad regulatory framework - labour regulation, tendering requirements, etc - that allegedly militate against small business development. This interpretation needs to be extended to incorporate how private regulation of markets undermines small business development and a proactive programme of support for small business.

Support for small business would include encouraging inter-firm co-operation that effectively amounted to a suspension of key aspects of competition policy where small business is concerned. In particular, where small firms face dominant suppliers and customers they should be encouraged to co-operate with each other. There is an important role for competition policy here, but it underlines the importance of its integration with the mainstream of industrial policy.

## ■ OWNERSHIP

- promote corporate 'unbundling'
- examine control of mutuals
- limit equity stakes of financial institutions
- promote broader stakeholder ownership
- strengthen corporate disclosure requirements

Although distinct issues, there are important links between concentrated markets and concentrated ownership structures. At the most general level, large conglomerates, frequently grouping several vertically integrated production chains and always linked into a major financial institution, are responsible for raising the costs of entry into many South African markets.

Moreover market concentration and ownership concentration generate broadly similar problems. Where control is as tightly concentrated as in South Africa, the powerful incentives that attach to a share of ownership and control extend over a very limited range - minority shareholders, managers, employees have no direct incentive to raise the productive performance of their enterprises. Hence rigid and extensive hierarchies, tempered occasionally by profit sharing schemes and performance bonuses, are the principle means of motivating managers and workers.

In addition to these incentive related problems, ownership concentration in a small economy results in a small number of highly diversified corporations controlling a major slice of the private sector. The six conglomerates that dominate the private sector - Anglo American, Anglo Vaal, Rembrandt, Sanlam, Mutual and Liberty Life - each control major groups in the mining, manufacturing and services (including financial services) sectors. The manufacturing groups controlled by these conglomerates are themselves highly diversified.

The degree of diversification, particularly when coupled with tight control held in the group head office, underpins important managerial and productive inefficiencies. It leaves strategic control - in particular control over retained profits and other sources of capital - in the hands of the controlling shareholders and their head office managers with little concrete knowledge of their operating companies; it encourages head office monitoring of the operating companies that is narrowly concerned with the financial ratios.

There is substantial evidence that key South African companies have belatedly recognised these problems and have begun the process of 'unbundling', essentially a process of focusing their corporate activities. This process is most pronounced in the Sanlam controlled Gencor Group, and recently in the Old Mutual controlled Barlow's Group.

*This process of unbundling needs to be extended.* Many of the recently 'unbundled' corporations still remain highly diversified and the majority, it appears, display little interest in pursuing this option. One way of extending this process is to prohibit the listing on the Johannesburg Stock Exchange of 'pyramids', companies that exist only for the purpose of securing the control of a single shareholder.

Whilst we are persuaded that the process of unbundling will result in more flexible and more focused firms, it must be appreciated that this will not necessarily broaden the spread of corporate ownership and control. The unbundling of Gencor and Barlows, has not disturbed Sanlam and Mutual's respective control of the underlying operating companies. When this process is extended to the family controlled corporations - for example Anglo and Rembrandt - it is possible that the big institutions, in particular Mutual and

Sanlam, will extend their control by buying up the equity in those companies extruded from the conglomerate stables in which they are presently located.

A shift of control from Anglo to Mutual, represents, in nominal terms, a spread of ownership. The Old Mutual, like Sanlam, is a mutual society nominally controlled by its policyholders, representing a broad spectrum of society. In reality however these corporations are controlled by their managers. *The control and structure of the life offices, in particular Mutual and Sanlam, must be investigated as a matter of urgency*, with a view to enhancing actual policyholder control.

Furthermore, there may be grounds for *limiting the maximum equity stake that these institutions hold in listed corporations*. This may encourage these institutions to lend their financial resources to groups currently excluded from controlling major corporations - small business people, or managers, or community trusts, or workers enabling these stakeholders to purchase ownership shares. It may also encourage the institutions to turn their attention to long term loan financing, thus enabling non-conglomerate owners to raise long term capital without selling a share of control to the conglomerates.

However, policy should recognise that South Africa will (and should) continue to have large companies and possibly the most important reform in the area of ownership and control is to *extend corporate disclosure requirements*. Currently these requirements are very lax and should be extended to incorporate information of pertinence to stakeholders other than the shareholders - if corporations were judged by their ability to generate employment, or to bring new products onto the market, or by their level of exports, or by their R&D spending, this would help create a different climate, a different set of expectations, around the corporate sector. This process would be strengthened if unions and government negotiated a set of performance criteria with firms that determined their access to government support programmes and collective bargaining concessions.

### **The Cost of Inputs**

It is widely argued that the premium on international prices that South African producers have to pay for their key inputs, is an important factor accounting for the poor performance of the manufacturing sector. These input price premia are held up as evidence of the negative impact of interference in the free play of market forces. Hence, this line of argument holds tariff protection responsible for the premium on raw material and intermediate inputs; the unions and labour market regulation responsible for labour costs; and political factors responsible for the high cost of capital.

The premium paid for key *raw materials and intermediates* is frequently accounted for by tariff protection, particularly significant in the protection of basic chemicals and textiles. Our support for a gradual reduction in tariff protection is our policy response to this problem.

TABLE 2 (below) drawn from our study of the white goods sector - shows the impact of input price premia on the prices of basic consumer durables. Note, however, that many of the higher priced inputs - particularly the metal inputs - rely on South Africa's natural resource base and yet domestic producers are still paying in excess of the world price. Our researchers have been told tales, possibly apocryphal, of local manufacturers purchasing South African produced raw materials abroad at a lower price than that available from the domestic producer.

Where South Africa produces these inputs at competitive prices and quality, they must be made available locally at the FOB international price. Where - as in the chemicals industry - South African producers are uncompetitive, special care must be taken to ensure that, if the tariff is to be temporarily maintained, that it does not exceed that which is absolutely necessary to keep the local producer in business.

TABLE TWO: RAW MATERIAL INPUTS

RAW MATERIAL	AUTO WASHER	TWIN TUB WASHER	TUMBLE DRYER	EYE LEVEL OVEN	HOB	EFS STOVE	FRIDGE	FREEZER
MILD STEEL	R10.69	R4.49	R8.88	R15.88	R3.30	R14.92	R8.31	R10.00
STAINLESS STEEL	R2.98							
ALUMINIUM	R19.88	R3.01		R8.81		R5.17	R1.15	
CARDBOARD	R0.75	R1.29	R1.02	R4.69	R0.59	R3.62	R1.42	R2.65
POLYSTYRENE		R4.73	R1.80		R0.43		R3.25	
PVC							R2.84	R2.96
POLYPROPYLENE		R18.96	R1.59					
ABS	R0.59	R1.68	R0.78			R0.91	R5.91	R0.50
KPS	R8.62	R6.02					R4.73	
POLYURETHANE				R5.99			R9.72	R9.74
NORYL/ACETYL			R1.23	R1.74		R1.20		
EXPOXY POWER							R3.22	
TOTAL	R41.27	R40.18	R13.08	R37.09	R4.32	R25.82	R38.55	R25.85

Evaluating the cost of the *labour input* is more complex. The earnings index in TABLE 3 shows that, South African wages are, predictably, way below those of the advanced industrialised countries and also lag significantly behind the Asian NICs - Korea and Taiwan. South African wages tend to be roughly equivalent to the Latin American NICs - Brazil and Mexico. South African wages are substantially higher than some of the rapidly expanding developing economies of Asia - China, Thailand and Indonesia.

Comparative wage statistics are difficult to work with - for one thing, these indices incorporate wage and salary costs, and given the exceptionally large earnings differentials and the elaborate managerial and supervisory hierarchies that characterise South African manufacturing, South Africa's relative wage for productive workers is somewhat overstated. They also do not reflect the social wage - the extent to which the costs of housing, transport, education and health are borne by the state or the employer - an area in which South African workers are particularly poorly served. However, these important qualifications notwithstanding, the rough relativities shown in this table are plausible.

What is, of course, absent from this table is a measure of relative productivity, the feature that, for example, makes Italy a major clothing exporter despite its labour cost 'disadvantage' relative to most of the other countries in the table. The thrust of our policy proposals focuses on increasing productivity, in line with an approach that treats labour as an asset whose value-creating ability is to be maximised, rather than a cost to be minimised.

There are, however, important aspects of our policy proposals that attempt to tackle the cost side of the equation directly. Hence, our overall strategy of 'moving up the value chain', recognises that our relative wage costs will ultimately exclude us from areas of low-value added production, and accordingly focuses South African manufacturing on higher productivity areas that support higher and increasing wages; our emphasis on policy measures aimed at lowering the cost of basic wage goods, evidences our concern to reduce the upward pressure that the exceptionally high cost of living imposes on wages; our policies with respect to the informal sector and multi-tiered wage structures recognises that the segmented character of South Africa's labour market will impose downward pressures on wages in key areas of production, and suggest an approach to this that is consistent with the overall objectives of our industrial policy.

TABLE 3: COMPARATIVE INDEX OF WAGES IN FIVE SECTORS

COUNTRY	TEXTILES (1990)	CLOTHING (1990)	AUTO MOBILES (1990)	ENGINEE- RING (1990)
USA	100	100	100	100
AUSTRALIA	103			
CANADA	128		86	
FRANCE	127		85	
GERMANY	164	125	115	91
GREECE	58	36		
ITALY	161	92	75	
JAPAN	139		75	95
PORTUGAL	28	33		
SPAIN	77	63		
TRUKEY	18	14		
UK	102	81	62	
HUNGARY	12			
POLAND		16		
RUSSIA		29		
KOREA			26	43
TAIWAN	46	31	22	33
HONG KONG	30	39		29
SINGAPORE	28			18
INDIA	7	4		4
CHINA	4			
INDONESIA	3			
MALAYSIA	9			14
SRI LANKA	2			
THAILAND	9			
BRAZIL	20			26
CHILE				
MEXICO	22			16
KENYA	6			
SOUTH AFRICA	16	18	17	16

Dealing with the *cost of the capital input* into the production process is equally complex. In part, the cost of capital is exogenously determined by political uncertainty; in part, it is determined by macro-economic factors that are beyond the scope of industrial policy; in part, the high returns demanded by South African investors and the premium that this imposes on the cost of South African capital, simply reflects a corporate governance structure in which shareholder interests predominate over those of managers or employees or suppliers or customers.

However the cost of capital is part of the explanation for the low and declining levels of investment in manufacturing. Our policy proposals here focus on the role of government investment and that of key para-statal and public corporations. Investment in housing and electrification programmes - to name two of the most likely public investment programmes - will support investment activity in a range of manufacturing sectors, from building materials to consumer durables. Industrial policy has to ensure that complementary investments are undertaken in these sectors.

Private investors are, to a significant extent, positioning themselves to take advantage of these possibilities. It will, however, undoubtedly be necessary for quasi-public industrial banks, such as the Industrial Development Corporation and the Small Business Development Corporation, to catalyse private investment by supporting commitments of their own considerable resources. In general there is an important role for these institutions in lowering the cost of capital by 'socialising' part of the risk, that is, by using the public funds that they effectively control to underwrite private investment.

## CAPABILITIES

*Human resource development and technological capacity* are two indispensable elements in establishing a competitive industrial economy. However the market is generally deficient in ensuring sufficient investment in these underlying competitive fundamentals. Whilst the returns that flow to society from investment in education and R&D are unquestionably positive, the private risk attached to any single investment is high, the returns often accrue with a substantial lag, and, above all, it is difficult to guard against 'free riding' - the potential for the returns to be captured by someone other than the investor, as for example in the case of expenditure on worker training where the trained worker accepts employment in another firm. For all these reasons, private investors tend to under-invest in human resource and technological development and extra-market intervention to secure these competitive fundamentals is essential.

*Micro-enterprise and small and medium-scale enterprise* - increasingly identified as a vital component of a competitive industrial structure - are also not well served by unmediated market forces, particularly in highly concentrated market structures.

## ***Human Resource Development***

- **HUMAN RESOURCE DEVELOPMENT AND WORK ORGANISATION**
- **focus on vocational training and ABE**
- **establish a wage/skill nexus**
- **promote an 'intelligent production strategy'**
- **increased corporate emphasis on human resource management**
- **integrate education and training systems**
- **investigate a training levy**

A racially entrenched division of labour characterises work organisation in the manufacturing industry. This division of labour has necessitated strict, highly paid, but largely unskilled, supervision. It has provided little incentive to management for acquiring, much less deploying, enhanced skills.

Manufacturing firms are constrained by poor basic skills (45% of adult blacks cannot read or write) and task specific skills. Less than 10% of our manufacturing workforce is trained to the level of artisan and immense problems exist with respect to technical skills. In addition, wage gaps within manufacturing are high, not only within the workforce (between labourer and artisan), but also between management salaries and workers wages. Racial differentiation in earnings remains a feature of industry.

There is also a general underinvestment in enhancing human capabilities outside the factory gates. Whilst there has been an increase in the number of matriculants, the mean education level of the workforce is a mere 7,1 years.

The education system is racially based and skewed towards the tertiary level. The tertiary education system is, in turn, fragmented with no movement from technical colleges to technikons or from technikons to university. More significantly, post-secondary education in science and technology is more racially biased than other element of post-secondary education - the overall proportion of matriculants passing maths and science declined during the '80s with less than two per cent of African matriculants passing maths in 1990. This severely limits the number of people able to embark on science and engineering training. Moreover, labour market opportunities tend to privilege universities rather than technikons - this largely accounts for a ratio of technicians to engineers of 0.8:1, compared with a ratio of 20:1 in South Korea.

Whilst there is widespread acceptance of the need to prioritise state intervention in education generally, a coherent human resource development policy should *focus on skill acquisition and adult basic education (ABE)* for the incumbent workforce and other adults who were deprived of basic schooling. This proposal is starkly highlighted by the recognition that substantial changes are required to the organisational structure of production if firms wish to sustain long term productivity improvements. However, international evidence suggests that the effectiveness of these new organisational technologies is dependent on the level of training and skills at all occupational levels. The development of human resources represents an essential

capability for industrial efficiency.

We therefore propose a set of policies which draws together the separate components of human resource development, work organisation and skill formation with the remuneration system - *a wage/skills nexus*. The institutions of collective bargaining that are necessary to sustain these developments also require substantial modification and these are discussed later. This set of proposals promotes two central, interlinked objectives: to increase productivity and promote efficiencies in firms, and to empower workers and their organisations in this process.

We propose the promotion of an *'intelligent production strategy'* which is a comprehensive approach to work organisation and which rests on three interlinked ideas: constant skill acquisition, work organisation premised on team work, and, thirdly, co-determinist practices on the shop floor. This holistic approach is to be distinguished from piecemeal attempts, increasingly popular in South African management circles, to introduce selectively elements of a Japanese 'lean production' strategy as evidenced in the proliferation of 'quality circles', 'suggestion schemes' and 'participative management'.

*Constant skill acquisition*, achieved through the establishment of a nexus between skills, grading, training and wages is at the heart of these human resource development proposals. This nexus will provide a mechanism to allow workers to be promoted up a career path based on skills, through the provision of training modules which are accredited by tripartite bodies. It relies on three aspects: first, a decline in the number of job grades and defining grades according to skills rather than tasks; second, the recognition of existing skills acquired on the job or through prior learning; and, third, the fixing of a particular wage rate to each level of skills. It operates through a career structure so that through training courses, the lowest paid worker can, over time, progress along a 'career path' linked to the acquisition of clearly established skill levels with the incentive provided by the new appropriate wage rate.

*Team work* is designed to deliver two outcomes: efficiency and more interesting and rewarding jobs. Firstly, efficiencies are achieved through higher productivity, increased flexibility, better management and use of facilities and greater attention to quality and cost reduction. Secondly, more interesting and rewarding work is achieved through more self-determination to the work force, better work content, higher qualifications, regulated working conditions and improved social relations. The abandonment of restrictive work practices resulting from narrow skills and strict job demarcations can lead to working conditions that deliver more interesting and rewarding jobs. More important, employment security and reward (in pay) for skill upgrading and improvements in productivity all provide an incentive (alongside the provision of career paths) to the workforce.

The *co-determinist practices* should mesh with these teams and provide for a co-operative and skilled approach to the design of products and processes. These co-determinist practices are such that worker rights to representation are acknowledged and respected, and unions are treated as joint partners in designing and overseeing innovations in work organisation and human resource practices.

The most significant policy implications for companies arising from this set of proposals are first, to *put human resource considerations high on the agenda in corporate strategic decision making and governance processes* in such a way that employees are regarded as legitimate stakeholders in the corporation; and, second, to combine any investment in new hardware or embodied technology with investments in human resources and changes in organisational practices.

These reforms require the *integration of the education and training systems* to give effect to the idea of career-paths, to ensure portability of skills, and to engender flexibility in the provision of learning with ease of entry and exit. A system of structured, national training is necessary with national competency standards set for each industry.

A restructured National Training Board is an important part of establishing a nationally coherent system. It has the potential to set frameworks for training and for developing occupational certifications and standards. This training would be provided in local, company or industry wide education and training institu-



tions and would be available to those outside of formal employment as well.

The focus of this system should be on adult education and vocational training so that the incumbent workforce can be upgraded not only in terms of technical skills in the workplace, but general skills needed for current and future promotion. This is crucial for lifelong learning. To ensure that all firms invest in ABE and training and that this meets uniform standards, the possibility of a training levy should be investigated.

To support these proposals, a range of reforms to the current industrial relations system are proposed which need to be negotiated and, where necessary, legislated. These are discussed below.

### ***Technology***

Enhancing South Africa's technological capacity is one of the most urgent and important tasks confronting industrial policy. South Africa's weakness in this area bears a strong measure of responsibility for an industrial structure that relies on imported technologies and on key commodities - machinery and other capital goods - that are technology intensive. It underlies our weakness in exporting high value manufactured commodities.

We have already noted the shortcomings of the market mechanism in the development of technological capacity. However, it is important to recognise that, in part, the failings of the market in the South African context are rooted in the structure of the domestic market and in the barriers imposed by trade policy on the flow of incentives from the international market. A more competitive environment for South African industry will be an important factor in compelling firms to enhance their technological capabilities.

There is clear evidence to the effect that in some sectors, notably electronics, the smaller firms operating in the more competitive sectors of the domestic market undertake far more expenditure on R&D (in relation to their turnover) than do the large firms which tend to dominate in their particular product markets. We also note that in a variety of sectors, there does seem to be an association between a more active participation in export markets and the tendency of firms to enhance their technological capacities. This is evident in, for example, the auto and auto components sector and in the telecommunications equipment industry. A more export oriented trade regime, import liberalisation and the promotion of competition on the domestic market will be integral to the design of policies aimed at enhancing the technological capacities of South African firms.

However, merely enhancing competitive pressures on local manufacturing firms will not lead, in the absence of substantive policy measures, to the development of technological capabilities to the extent necessary to support export expansion, particularly in more demanding and discriminating product niches. A more proactive set of policies is required.

### ■ ENHANCING TECHNOLOGICAL CAPABILITY

- tax credits for firm-level R&D
- support for sectoral level technology development
- encourage and support inter-firm linkages
- more effective assimilation of imported technology
- facilitate the diffusion of new organisational practices
- link tertiary science education and research to manufacturing
- support technology acquisition and diffusion in SMEs

South African firms have, off a relatively low base, shown a reduced commitment to R&D expenditure. In the chemicals industry, for example, South Africa's three largest companies devoted a little under 1% of turnover to R&D spending in 1990 - which is much lower than for comparable sized chemicals companies located elsewhere.

There is currently no government support for technology development at firm level and private sector R&D is currently declining at a significant rate. We propose a *permanent tax credit for firm level R&D expenditures*. A tax credit may be open to abuse and does have revenue implications, but the social benefits generated are significant. R&D is a long term investment and the permanent nature of the credit is designed to allow businesses to plan their research activity.

Promoting R&D at a firm level is important, but, in itself, will not guarantee innovation. This requires additional policies.

Policy must also support *innovation in particular sectors*. Government has supported innovation in the Electronics Industry under the Innovation Support for Electronics Programme. The justification for the programme was a growing nett trade deficit in electronics products and the objective was to promote new technology to aid import replacement and/or export achievement. The support scheme was, in fact, a highly selective or targeted policy - applicable only to this sector. The programme has been assessed by government to have had highly favourable results. Unfortunately, the declared "success" of the scheme, has been used to justify its extension to manufacturing industry as a whole, making the scheme non-selective. What has determined this response is the firmly entrenched belief that government cannot and should not 'pick winners'.

However, there are likely to be sectors which may be assessed to have a dynamic potential or be able to make a major contribution to the Balance of Payments or to generate particularly significant externalities. Such sectors, *in the context of an overall industrial policy* for that sector, are deserving of special state support for innovation.

We support, therefore, sectorally specific policies to promote technology development. Such policies would require an assessment of the level of existing capabilities in different industries and would need to determine precisely where support for advancing such capabilities could have the prospect of realising international competitiveness within a reasonable time period. The precise form of support which would most facilitate this process should then be investigated.

A key element of technology policy is *support for inter-firm linkages that facilitate innovation*. Networks of linked firms within and across industry sectors result in an interplay of competitive and cooperative relationships which stimulate innovation and technology transfer. Local firms have few of these relationships and there is a role for state policy here in encouraging and facilitating the development of such linkages.

In particular, the State should play a more pro-active role in the support for pre-competitive collaborative R&D between firms. This is widely supported internationally. But, there is a particular opportunity here for South Africa, linked to the expansion of social infrastructure in the post-apartheid period. Technological inputs into the design and development of products for large scale infrastructural projects such as housing, electrification and telephony could be developed by a number of local firms jointly with state support.

The State could also support cooperative projects undertaken by groups of firms within a sector and sector-level projects. One mechanism of support could be the creation of a *Sector Partnership Fund*. This would make funds available which could be accessed by approved sector wide organisations for projects that strengthen the sector's capabilities. These could be projects to develop the sectors technological capacities or to allow the diffusion of new technologies. The more broad based the support for the proposal, the more deserving it would be of support from this fund. Apart from the obvious advantages of enhancing local technological capabilities, such a fund would help build cooperative relationships between firms within the same sector, and between management and labour and reinforce the processes of advancing cooperative solutions to sectoral problems.

Apart from a very few areas where South African firms have achieved leading-edge status, the importation of foreign technology is critical. Technology importation can enhance capabilities, notably operational capabilities, and South African firms have acquired good operational capacities in respect of imported technologies. Even in complex technologies, South African firms are, for the most part, able to successfully commission and operate imported production processes and frequently to exceed nameplate capacities.

However, there is a pronounced tendency to passive dependence on imported technology rather than utilising imported technology as complementary to the process of local technological capacity building. The primary channel for technology acquisition is via licence agreements. The Department of Trade and Industry monitors applications to licence technology and has always operated a very lax regimen focused solely on seeking to limit the price of the technology, that is, the royalty paid.

Policy intervention can play a role in ensuring that licence agreements enhance the development of local technological capacities. A number of countries have focused their policies on the maximisation of technology transferred rather than the minimisation of the price of transfer. Access to 'know-why' as opposed to mere 'know-how' is the objective. Insistence on extensive training provision as a condition of technology transfer, has been of particular importance in enhancing local capacities. Where extensive training has accompanied technology transfer, this has been the outcome of policy measures rather than of untrammelled market processes.

We therefore advocate more rigorous *policies to limit restrictive clauses entailed in the licensing of technology from abroad and measures to encourage the more effective assimilation of imported technology*, especially via enhanced training on the part of the licensor.

Our research shows that anachronistic forms of organisational practice continue to pervade South African manufacturing and are a major factor underlying low productivity in many firms. New forms of intra-firm work organisation and inter-firm organisation - so-called disembodied technological change - are diffusing only slowly. This is not unique to South Africa but is accentuated here by a combination of strongly hierarchical work structures with paternalistic and racist practices.

Some of the measures that we have earlier advocated - measures to enhance multi-skilling and enhance inter-firm co-operation, for example - *will facilitate the more rapid diffusion of these new organisational*

*practices.* In addition, we propose that a number of other measures, be investigated including the provision of incentives to encourage firms to utilise the services of 'innovation consultants' as has occurred, for example, in the UK.

South Africa's rich tertiary education and research base is inadequately interfaced with the requirements of the manufacturing sector. In developing policies, *to more effectively link university based science to technological advance in manufacturing*, it is important to stress firstly that this will only be achieved in consultation with the universities themselves. Secondly, there are limits to this process. The primary aim of the universities must remain undergraduate and postgraduate education and advanced research. Universities should not be turned into short-term contract research organisations. Moreover, international experience suggests that academics do not themselves make good entrepreneurs.

There are, however, several policy measures that could be pursued in order to make the link more effective. These include, more government funding for applications oriented research in the universities; government support for a program which would allow manufacturing specialists from industry and labour to teach in universities and other tertiary institutions; government support for university programs which emphasise the management and operation of manufacturing activities (graduates of these programmes may be an important source of entrepreneurship in small and medium-scale start ups); science research parks have a role in establishing closer links between educational establishments and industry, although evidence on their success in building such links is mixed.

Technology policy must specifically *facilitate and support the acquisition and diffusion of technology for SMEs.* We have developed several proposals in this area:

Firstly, it is important to recognise that SMEs are not a homogeneous group and the support that different types of SMEs require will differ significantly. However, all categories of SMEs will require some institutional support. This may involve direct technology transfer; assistance in training and development of skills; assistance with quality control and meeting standards or improving production. For all SMEs, information on production techniques, materials and components is critical. Given the heterogeneity of SMEs and the wide-range of their needs, support institutions in other countries are offering an increasing range of services including technology transfer and support in conjunction with business advice, venture capital, training etc. These are one-stop-shop institutions. The support that most SMEs require is likely to be near-market and non high-tech. Such support should be immediately locally accessible.

All of these factors suggest that the existing science councils - centralised, high tech., not near-market and driven by a market imperative that advantages larger and well- resourced customers - are unlikely to be appropriate vehicles to support SMEs.

Our policy recommendation therefore would be for the establishment of new institutional supports for SMEs. The broad institutional characteristics of such should follow the needs of the SMEs as outlined above. Moreover, since SMEs have proven to be effective in creating jobs, such institutional support for SMEs should be conceived of and devised as a constituent part of regional development initiatives.

## SMALL AND MEDIUM-SCALE AND MICRO-ENTERPRISE

The impact of firm size on manufacturing performance has provoked intense debate in industrial policy discussions. Close examination of the international experience reveals that, with few significant exceptions, industrial success is rooted in a diversified industrial structure. Hence, whilst Taiwan's small enterprises have undoubtedly played an important role in that country's remarkable manufacturing performance, this should not blind us to the critical significance of some very large, usually state-owned, enterprises at key points of the production chain. Nor should an acknowledgement of the contribution of Germany and Japan's great factories and groups, cause us to ignore the critical significance of SMEs in the economic fortunes of these leading industrial economies.

South Africa's industrial structure is acutely imbalanced. Large factories and corporate groups that span the manufacturing sector are coupled with weak SMEs and a particularly low level of manufacturing activity in the informal sector.

- **SMALL AND MEDIUM-SCALE ENTERPRISE**

  - competition policy**
  - technical support**
  - multi-tier wage structure**
  - financial support**
  - inter-firm co-operation**

Many of the policy proposals already developed in this report are intended to encourage the growth of dynamic SME. Hence, we have explicitly called for a *competition policy* that is directed at supporting small producers; our *technology policy* is strongly critical of the near-exclusive orientation of current policy and practice towards large corporations, and makes proposals designed to support technology development and diffusion amongst SMEs; the proposal that the parties to collective bargaining arrangements accept, in specified circumstances, a *multi-tier wage structure* is partly intended to support SMEs.

SMEs' require a more *supportive financial environment*. The adage that 'it is much easier to borrow a billion rand than a million rand' is strongly borne out by our research. The unusually high level of concentration of savings in the hands of the extremely risk averse life assurers, makes for a financial environment that does not serve the needs of SMEs. The strong ties between the financial institutions - both the banks and the life assurers - and the dominant manufacturing and mining groups, exacerbates the financial marginalisation of SMEs, and, particularly, potential new entrants.

Although our policy proposals directed at deconcentrating the ownership and market structures and at monitoring and influencing the behaviour of the dominant corporations, will ultimately ease the financial constraints that confront the SMEs, the financial environment for SMEs needs to be improved as a matter of urgency.

Currently the IDC and the SBDC are the major financial institutions with a specific mandate to support SMEs, although the private sector institutions have also begun to develop capacity specifically directed at this end of the market. However, despite this attention, SMEs still fall through the cracks of the financial system. The suppliers of long term finance are not easily accessible to SMEs and whilst the commercial

banking sector has greater institutional capacity in this area, it is not only short term finance that is required. The SBDC, though frequently criticised for lending directed at SMEs rather than the informal sector, remains focused on the smaller side of the SME spectrum. The IDC is, in its lending activities, focused on supporting an industrial policy in which very large, capital intensive, mineral beneficiation products, are central.

Whilst, the financial constraints are severe and must be addressed by policy, international experience offers powerful support for the view that *enhanced inter-firm co-operation between SMEs* may be the most effective means of supporting these enterprises. Our technology policy has underlined the importance of inter-firm co-operation in the area of technical support and technology diffusion and this may be extended to the area of worker training, industrial relations, export marketing, and numerous other key productivity enhancing activities outside of the scope of a single SME.

There is very little evidence of this type of co-operation in South Africa. However a variety of institutional and geographical factors lend themselves to the promotion of inter-firm co-operation. Policy directed at promoting inter-SME co-operation should be sector specific and should be focused on existing local agglomerations.

There are important existing local agglomerations of small firms in South Africa - the Western Cape clothing factories, the metal bashing establishments on the East Rand, and the furniture factories clustered in Johannesburg and the West Rand, are but three examples amongst many. These geographical agglomerations are complemented by a rich institutional framework. At the sectoral level there are trades unions, employer and professional associations and, frequently, industrial councils; the significant national institutions charged with supporting industrial development - for example the IDC and the SBDC, but also the various government departments and agencies - have local offices in the major industrial centres; each important regional centre has at least one readily accessible university and technikon; local government, despite obvious legitimacy problems and current uncertainties, is long established and well resourced.

However there is little evidence of concrete effort aimed at bringing together these regional agglomerations with those institutions that may be able to enhance inter-firm co-operation. For example, the officials of Roodepoort were surprised to learn of its status as a centre of South Africa's furniture sector and were expending resources and energy aimed at turning Roodepoort into a centre of high tech industry.

A measure of responsibility for this failure to develop potential regional and inter-firm economies must be laid at the door of our principal industrial support institution, namely the Industrial Development Corporation. The IDC appears overly centralised, and the most significant flows between the head office and actual manufacturing operations are - as with the private sector conglomerates - financial. There are industrial support services that again flow from the IDC head office to the recipients of IDC funding and that seem principally aimed at securing the IDC's capital or loan commitment. There is however little evidence of any attempt to concretely support the industrialisation process by means other than funding and these rather narrowly conceived support services. There is certainly no evidence of effort designed to forge inter-firm economies, or, much less, to take the lead in focusing institutional support on this type of activity.

The issues presented by the weakness of micro-enterprise - or the 'informal sector' as it is more commonly known - are quite distinct from those outlined above. Informal sector manufacturing activity in South Africa is extremely weak, its weakness largely a direct and indirect consequence of apartheid - low skill levels, poor residential infrastructure, prohibitions on land ownership, and severe limitations on the type of economic activities permitted in Black residential areas, are a few of the most serious barriers to the growth of the informal sector.

## ■ MICRO-ENTERPRISE

- improvement in general physical environment
- access to finance
- training and education
- sub-contracting
- institutional support

### Policy

designed to *improve the general physical environment* for the majority of the population will have a more dramatic impact than more targeted policies designed to ease access to finance or to enhance managerial and technical skills. Our research has confirmed that poor housing, and poor access to telephones, transport and electricity, are the most substantial obstacles to the growth of the informal sector.

This is not to suggest that there is no value in policies targeted *at easing access to finance* or *at improving managerial and technical skills*, although our researchers encountered scant respect for many of these training programmes - derisively referred to as 'bush MBA's' - from members of the informal sectors. They were generally viewed as means of access to other facilities - finance or premises - that the training institution offered.

The institutional environment surrounding the informal sector is extremely crowded and confusing. Primary amongst the unco-ordinated array of public and private organisations supporting the informal sector is the Small Business Development Corporation. The SBDC is extremely well resourced and has made extravagant claims regarding the number of jobs that its lending and other programmes have created. It is however widely criticised, in particular for its tendency to support small business rather than the informal sector, and, accordingly, for an effective racial bias in its programmes. Whilst we have a certain sympathy for a programme directed at the top end of the informal sector or the bottom end of the small business sector, the SBDC lending programmes - like those of its bigger sibling, the IDC - appear inappropriately risk averse for a development agency.

The majority of the programmes aimed at the informal sector are inadequately focused. As with so much of industrial policy, measures aimed at the informal sector have to be sectorally focused - there is a world of difference, with powerful implications for policy, between the opportunities and constraints facing the burglar bar manufacturers on the East Rand and the clothing sub-contractors in the Western Cape.

Furthermore there are key intra-sectoral differences that policy has to take into account. For example, in clothing - a growing site of informal sector manufacturing - there are three clear deliniations. There are highly skilled tailors and seamstresses producing high quality garments to order. There are groups of 'houseworkers' entering into contracts with formal sector producers, designers and retailers. And there are poverty stricken individuals producing cheap and undifferentiated pinafores for other, often equally poverty stricken, individuals.

The first of these subsectors is unlikely to benefit from the attention of industrial policy. The third is more likely to benefit from a general rise in working class income, than from small business hives and management courses.

The second sector - the houseworkers - warrants very close attention. This activity clearly impacts directly on the cost structure of the formal centres of activity in the industry. Moreover, these groups of houseworkers are frequently co-ordinated by a skilled clothing worker-turned-entrepreneur earning considerably more than he, or, usually, she, earned in the formal sector. The houseworkers employed by this entrepre-

neur are generally themselves experienced clothing workers, working in appalling conditions with little security and no fringe benefits, but often earning not much less than they took home from their erstwhile formal sector employers. And, finally this sub-sector is growing, and if, both our own research results and international experience is anything to go by, it will continue growing.

This is a sensitive area for policy intervention. Many of the jobs in this sector reflect direct job losses in the formal sector, and much employment is 'sweated' in the most miserable sense of the term. However, we are not confident that this activity could or should be regulated out of existence.

Above all, our small sample already persuades us that a core of these micro enterprises are on the cusp of becoming effective formal small enterprises. Promotion is likely to bring them into this fold swelling regulated employment; repression will drive them back into the ranks of sweated labour.

## **INSTITUTION BUILDING**

Institutions and institutional reform have played a central role in our analysis to date. For example, in the section on trade the necessity for developing export support institutions is emphasised; our technology policy comes down strongly on the side of developing new institutions and reforming key existing institutions like the universities; in the area of human resource development, institutions like the National Training Board are accorded a significant role in policy formulation and implementation; in order to ensure necessary levels of investment in appropriate areas, we have emphasised the critical importance of industrial banks and extension services like the IDC and SBDC.

**Our concern with institutional development is driven by two broad considerations:**

The first, arises from the well-documented failure of the market to generate and nurture key capacities that underpin manufacturing competitiveness. In this report we have identified critical market failures in the areas of technology, human resource development and small and medium enterprise. Market failure has to be countered by institutions that guide or substitute for the market.

Secondly, industrial policy is not a document or a plan, it is not concluded by identifying a number of policy levers which, if pulled in the right direction by the right pair of hands, yield the desired outcome. Industrial policy is a complex and endless process of policy formulation and implementation, reformulation and further implementation. It is, moreover, a process that must incorporate and galvanise the key actors in the manufacturing realm - labour, business and government - whose interests are often sharply divergent, as well as actors who may not readily see the impact of industrial policy on their work: educators and scientists for example.

We focus here on two key institutional aspects of industrial policy. The first, concerns the critical arena of industrial relations and the trade unions, employer associations and statutory bodies that make up the industrial relations system; the second concerns the process of industrial policy making and implementation.



## ***The Industrial Relations System***

### ■ **INDUSTRIAL RELATIONS AND GOVERNANCE PROCESS**

- develop a multi-tiered industrial relations system**
- legislation to facilitate bargaining at all tiers**
- enhance organisation of employers and workers**

A central conclusion of the ISP is that the key to successful industrial regeneration is a form of corporate governance and industrial relations which taps latent skills and human capacities. This requires both significant investments in human resources as well as the structured, continuous engagement of labour in corporate decision making. This, in turn, necessitates the transformation of our industrial relations system.

The first proposal is to *develop a multi-tiered system of industrial relations* operative at three levels: the **national level** will deal with the integration of policies concerning labour, employment, education and training. Tripartite institutions such as the National Manpower Commission and the National Training Board are operative at this level. These activities and institutions must interface with other pertinent national initiatives, such as the National Economic Forum.

At the **sectoral level**, industrial council type negotiations covering traditional collective bargaining issues, including the determination of the minimum wage applicable to each level of skill and across the board increases, will continue and should be extended across the economy. It is at this level, that increased flexibility should be built into the system to allow for exemptions from the agreed wage rates for particular companies or regions for a specified period. The sectoral level will also set the framework for enterprise bargaining for that industry. Again, activities at this level must interface with other pertinent sectoral initiatives, for example the restructuring initiatives in the clothing and textile and automobile sectors.

The third level then, is the **enterprise level** where bargaining over the organisation of work, job design and access to skills and training occurs. Different forms of governance that enhance greater worker involvement in company decision making, including participation on boards of directors, should be explored at this level. In addition, provision should be made for productivity bargaining at this level. Enterprise level bargaining is principally required in order to alter and reorganise outmoded forms of work organisation, thus securing the productivity increases that are central to our industrial strategy.

The approach developed here suggests a legislative framework which provides for the inclusion of employees in corporate governance and strategic decision-making. This bargaining would be facilitated by appropriate legislation concerning managerial prerogatives at plant level; board level co-determination and mechanisms to facilitate bargaining at the sectoral level over skill levels, wages, training and grading. Outside of legislation, mechanisms should be found to provide for joint management labour consultative committees, or, to develop workplace institutions of industrial democracy, at enterprise level for the wide ranging negotiations entailed there.

*The industrial relations system must be comprehensive in its coverage rather than rooted in voluntarism;* establish clear bargaining forums for every industry; embody a system of positive rights and duties both collective and individual; and, encourage the emergence of strong centralised union and employer bodies.

Currently, key sectors of manufacturing - for example, paper and pulp and chemicals - do not have employer bodies and, hence, unions in these sectors do not have bargaining partners. Incentives must be

extended to employers to organise themselves at industry level. One such incentive derives from the expected productivity improvement flowing from the enhanced skill levels of the workforce achieved through the nexus of skills, wages, grading and training. Since this nexus can only be bargained at the sectoral level for industry as a whole, unorganised sectors will be denied these likely benefits.

For this bargaining to be successful, for it to promote effective negotiation and adherence to agreements, *the parties to the industrial relations system will need to enhance their organisation and representivity* as well as, where necessary, upgrade their professional and technical expertise. The union movement, for example, needs to reflect on its current structure and organisation and assess whether it is conducive to an active engagement in industrial restructuring issues on the shop floor and in national fora. The questions of capacity and human resource infrastructure will be highlighted as demands are made for sophisticated plant level negotiations over work design, productivity enhancement and co-determination. Both unionists and managers are going to require increasing skills and expertise. The sector partnership funds could be fruitfully applied for the purpose of enhancing these industrial relations skills.

### **The Industrial Policy Formulations and Implementation**

- **POLICY FORMULATION AND IMPLEMENTATION**
  - **strengthen the national economic forum**
  - **strengthen and extend tripartite sectoral institutions**
  - **co-ordinate and integrate economic and social policy**

Tri-partite policy formulation and implementation requires an institutional basis. This requires the *strengthening of the National Economic Forum*, the embryonic institution of industrial policy formulation. Strengthening the NEF would take the form of statutory protection of the institution. It would also require government financial support for the normal running of the NEF - for example for the holding of meetings, the secretariat functions, and necessary research and information support. Without this support, resources are clearly very unevenly spread amongst the three parties to the NEF.

Similar considerations apply at the all-important sectoral level. Again tri-partite structures in the clothing and textile, automobile and electronic sectors are embryonic forms of the required institutional structure at this level. *Existing sectoral institutions need to be strengthened and extended to other sectors of the economy*. It is envisaged that the proposed sectoral partnership funds would be controlled by these tri-partite sectoral institutions.

Finally, these *national and sectoral institutions and initiatives must be co-ordinated, as must the relationship between industrial policy formulation and other pertinent activities and institutions*. This co-ordination would of necessity extend across the full range of economic and social policy. The Reconstruction Accord currently under discussion between COSATU and the ANC is the first attempt at comprehensive co-ordination of these initiatives. The institutional form of this co-ordination is a democratically elected government, an accountable civil service, and an independent and well organised civil society.