

# Productivity gains at Gabriel

**G**abriel is a US-owned, medium-sized producer of shock absorbers for the domestic market and for export. Over the past five years it has been engaged in a process of production re-organisation aimed at implementing Japanese styled production with a view to increasing productivity and thereby reducing costs.

The Gabriel case illustrates both the large productivity gains that can accrue to plant re-organisation, as well as the complex issues that this raises for unions sensitive to the employment implications. Rapid productivity growth in a situation of falling domestic demand is likely to lead to retrenchment. This points to the need for rapid export expansion as well as more generalised policies to encourage growth and new investment in the sector as a way of easing the adjustment process. Without this, workers are far more likely to oppose new forms of work organisation, and so limit the potential gains in productivity.

Gabriel has had to face up to the issue of raising productivity in the face of changing market conditions. Weak growth in the domestic economy has meant that exports are the main growth area. Gabriel is targeting the foreign aftermarket and its competitive strengths lie in the large range that the company can offer, high quality levels and small niche market capabilities.

The main innovation in production reorganisation has involved the introduction of Just-in-Time (JIT) manufacturing and a cellular layout. The objective is to supply "only the necessary items at the right time and correct volume to the prescribed quality specifications". This was to be achieved by introducing

the following changes:

- Quick machine changeovers
- Small lot sizes rather than continuous runs
- "U-shaped" lines and cellular layout to improve proximity of operators to a number of machines
- Frequent parts supply with no interruptions
- Continuous improvement achieved by the introduction of action teams (consisting of members of the cell, engineering maintenance and toolroom personnel) and suggestion schemes.

Implementation has so far been partial with greater success in some areas than others. The main feature has been the gradual introduction of a number of JIT manufacturing cells. The first major project was a gas spring assembly cell which has realised large productivity gains as well as increased flexibility (Table 1). The latter is an important attribute, both in the South African market, which is characterised by a wide range of vehicles produced in low volumes, as well as in the foreign aftermarket. Fifty percent of production from this cell is now being exported as a direct result of productivity improvements. The main source of productivity increase has been a radical reduction in machine set-up times. Set-up times used to range from 30-120 minutes. This has been reduced to 2-10 minutes in most cases. World class cell performance requires that all machines can be changed within 5

**Table 1**  
**Productivity impr**

No of workers  
Output per shift\*\*  
No of machine ch  
per shift  
Set-up times  
\*\*Shifts were no long



minutes. Under the old system, downtime resulting from lengthy set-up times meant that 50-70% of potential production was lost. Machine setting was previously performed by a special category of setters. This task is now performed by the operators themselves. In addition, large numbers of adaptations to machinery have been introduced to reduce set up times.

Table 2 indicates how overall plant productivity has improved. With domestic demand stagnant at best and exports taking

time to materialise, employment has fallen sharply (by 45% over the past four years). While workers are fully aware of the need for productivity improvement to maintain the viability of the plant in the face of international competition, from their perspective the main impact of restructuring has been retrenchment. However, exports are now set to expand rapidly and the firm claims to have established a firm base for future expansion. ☆

#### new Gas Spring Cell

Old assembly line	New JIT cell
8	3
500-1000 units	100-1500 units
3-4	7-8
30-120 minutes	2-10 minutes
assembly line	

**Table 2: Productivity improvement at Gabriel (Unit per person per day)**

1990	25
1992	30
1993 (January)	45-50
1993 (November)	58
Since 1990, work hours per week has fallen from 45 to 41,5 hours and overtime has been reduced from 30% to 18%.	

investment. However, the realisation of our broad objectives does require an increase in the level of private manufacturing investment.

- ❑ Improved trade performance: our industrial policy aims to substantially increase manufactured exports, and to reduce imports of machinery and consumer goods. This will reduce our dependence on slow-growing and volatile raw material exports and enable us to finance the level of imports that is necessary for economic growth.
- ❑ Raising productivity: our objective is to improve the performance of South African firms and close the gap between these and the world's leading firms. This is the heart of any industrial strategy.

These four objectives are interdependent. There are considerable dangers in meeting some of these objectives and neglecting 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 (see box, page 52).

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 these changes were only being adopted 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 the labour force has supported these changes.

#### 4. Proposed industrial strategy

In order to achieve the objectives outlined above, we propose an industrial strategy which seeks to achieve the following:

(a) **'Move up the value chain'**: SA manufacturing is unusually diversified. Typically, local firms produce a larger product range than similar-sized firms in



*The workers of South Africa: what will industrial p*

other countries. The problem is that South African consumers – especially low-income consumers – bear the cost of this excessive diversification in the form of poorer quality and higher priced products than on the international markets.

South African manufacturing needs to become more specialised by focusing on areas in which South Africa is advantaged or in which advantage may be created: areas where skill, design capability, our rich and varied natural resource base, and our sophisticated financial and physical infrastructure are central. This approach emphasises maximum utilisation of our existing human and other capacities and the further development of these resources (see 'A paper case study', page 56). It implies gradually vacating sub-sectors in which low wages (and low skill) are a principal



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component of the value added in the production process (this should not be taken to imply that there will be policies to 'close down' low value production; rather, policy measures should encourage high value production).

This strategy should be distinguished from one which is narrowly focused on high-technology niche markets. It should also not lock South Africa into narrow areas of production based only on natural resources.

For example, in the textile sector our researcher identified seven particularly productive firms.

The key characteristic common to all these firms was that they produced higher value-added textile products (see box, page 58). Concomitantly, many (but not all) of the least productive firms produced low-

value commodity textiles.

This example suggests that the higher value-added end of textile production offers far greater potential for development. The heavy presence of unproductive and undynamic firms at the lower value 'commodity' end of textiles suggests that, if these firms are to remain in business, levels of protection would need to be increased.

Industrial strategy for this and other sectors should design policies to encourage the movement of firms in the textile industry into the higher value-added end of production, and at the time to put pressure on firms at the commodity end of production.

**(b) 'Reduce the cost of living':** The second pillar of our overall industrial strategy is directed at making basic consumer goods affordable so as to reduce the cost of living of working-class South Africans. The intention here is to help alleviate poverty and, by reducing the upward pressure on wages, enhance export competitiveness.

Compared with advanced industrialised countries and newly-industrialised countries (NICs) such as Korea and Taiwan, South African wage levels are low. However, they are high when compared with the second-tier NICs (Malaysia and Thailand).

Paradoxically, however, the living standards of low-income South Africans are low, even in comparison with the second-tier NICs. One important reason for this is the high cost of basic consumer goods.

Our basic consumer goods strategy relies, in part, on gradually vacating those consumer goods sub-sectors in which we are unable to compete efficiently with imports. But it is also directed at lowering the cost of South Africa's basic consumer goods production. ISP has policy proposals to improve the competitiveness of basic consumer goods production, dealing with wage structures and differentials, the informal sector and the impact of monopolistic and oligopolistic markets.

**(c) 'Improve the competitive fundamentals':** In general, our approach

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Carlton paper strike: South African mills have too much conflict

## *'Moving up the value chain': a paper sector case study*

Anyone who has travelled through the Eastern Transvaal or Northern Natal will have seen the large forest plantations which form the basis of a number of industries. Wood from these forests is used to produce pulp and paper, which is in turn used to make paper products as diverse as packaging, tissues, books, stationary and magazines. The forestry, paper, packaging and printing industries could be seen as a pipeline – a chain of industries that rely on one another.

South Africa has a great advantage when it comes to growing wood. Because of our hot, moist climate, trees grow much more quickly here than they do in colder countries like Sweden, Germany, Canada and the

northern parts of the USA. As a result, it is much cheaper to grow wood in South Africa than it is in the northern countries. At present, our wood costs are approximately 25% cheaper.

The cost of wood has a great influence on the cost of producing pulp and paper, since wood is the most important raw material for these goods. The pulp and paper industry also benefits from low energy costs. Consequently, South Africa is a highly competitive producer of wood chips, pulp and low-value papers such as newsprint and packaging paper. In addition to supplying the local market, South African companies export large quantities of these products every year.

Despite the raw material advantages, and the success in the production of lower-value products, South African companies have been much less

successful in the manufacture of higher value products such as fine papers, tissue products and printed goods. South Africa imports a relatively high proportion of its fine papers and paper products, and the local goods tend to be expensive and suffer quality problems. If South African companies could become more efficient and more competitive in the manufacture of these products, there would be a number of advantages including:

- ❑ The preservation of current jobs, and the creation of new ones;
- ❑ Foreign exchange savings; and
- ❑ Lower prices for consumers – including cheaper books and educational materials.

Why has the industry failed to translate its raw material advantage into competitive production of more complex products? There are four main reasons:

**(a) Inefficiency:** Given the high cost of running pulp and paper mills, production efficiency is very important. South African mills, however, tend to face productivity problems. Local mills produce higher levels of defects and waste, and achieve lower yields on their inputs. We use many more people to produce a ton of a given product than, for example, mills in Scandinavia. In addition, local mills have higher levels of 'downtime' – time when the machines are not running due to various production problems. These inefficiencies are linked to the way that work is organised and managed in South African mills. We tend to have many more levels of management, more supervisors, less teamwork and more conflict than comparative mills, for example, in Europe (1). Our skill levels also tend to be much lower, as a result of South Africa's education system and low levels of formal training in the industry over the last few decades.

**(b) The small market for printing and writing papers in South Africa:** The market is relatively small because the majority of South Africans have had limited access to books, magazines, printed materials and writing papers. In addition, the market is highly fragmented. Local paper companies therefore have to produce many different types of paper, which is much less efficient.

**(c) Old technology:** Efficiency will also be influenced by the state of the equipment being

used. Many of South Africa's pulp mills are large and relatively new, and employ state-of-the-art technology. However, some of the mills which produce board, and printing and writing papers are small, and use old technology. Compared with newer, world-scale mills, a number of South African mills are technologically inadequate. Substantial investment will be required at these mills to make them more internationally competitive.

**(d) The extent of local and international competition:** The price of paper is not only determined by the actual cost of producing paper, but also by the extent of competition in the market. A lack of competition may inflate prices as consumers have limited choices. In South Africa, there are very few paper producers. Certain types of paper are produced by only one company, and other types by two companies. In addition, foreign competition is limited by tariff barriers, sanctions, and our physical distance from other major producers. As a result, local producers are relatively protected from international competition. This allows local companies to charge high prices for paper, without the fear of losing out to more efficient producers.

What would it take to translate our raw material advantages into successful manufactured products? The following recommendations are designed to improve the prospects of the paper sector:

- ❑ A strategy for efficiency improvement, co-determined by management and organised labour.
- ❑ A plan to lower the price of locally-produced papers, partly through tariff reduction.
- ❑ A programme of investment in the local industry – particularly in the board, fine paper, and printing sectors.

The ISP has also made recommendations to tackle social, labour and environmental problems in the industry. These include raising wages in the forestry sector, and limiting the environmental damage caused by forestry and by paper production. ☆

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does not favour selecting specific sectors or sub-sectors ('picking winners') in the manner associated with other successful industrial policies (such as in South Korea, for example). Because of our highly diversified industrial base, South Africa is not faced with developing industrial processes from scratch. Our strategy therefore focuses on improving underlying competitive fundamentals such as skills acquisition and technology diffusion. This will enable South African manufacturers in general to compete in the higher-value ends of their chosen sectors.

**(d) 'Productivity-raising redistribution':** Our industrial strategy relies heavily upon the rapid growth of productivity. In order to achieve the required productivity improvements, the fourth pillar of our strategy is focused on redistribution that generates and accompanies increases in productivity. This redistribution is of two kinds: redistribution of power relations, both at the level of industrial policy formulation and implementation, and at the shop-floor level; and the greater equality of income that accompanies the creation of more productive and more highly paid employment.

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. Industrial relations structures and practices are therefore 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.

### 5. Industrial policy framework

South Africa's manufacturing sector clearly needs to be restructured. By 'restructuring', we mean creating a more focused and specialised manufacturing industry with greater emphasis on higher value-added areas. However, unless such restructuring is

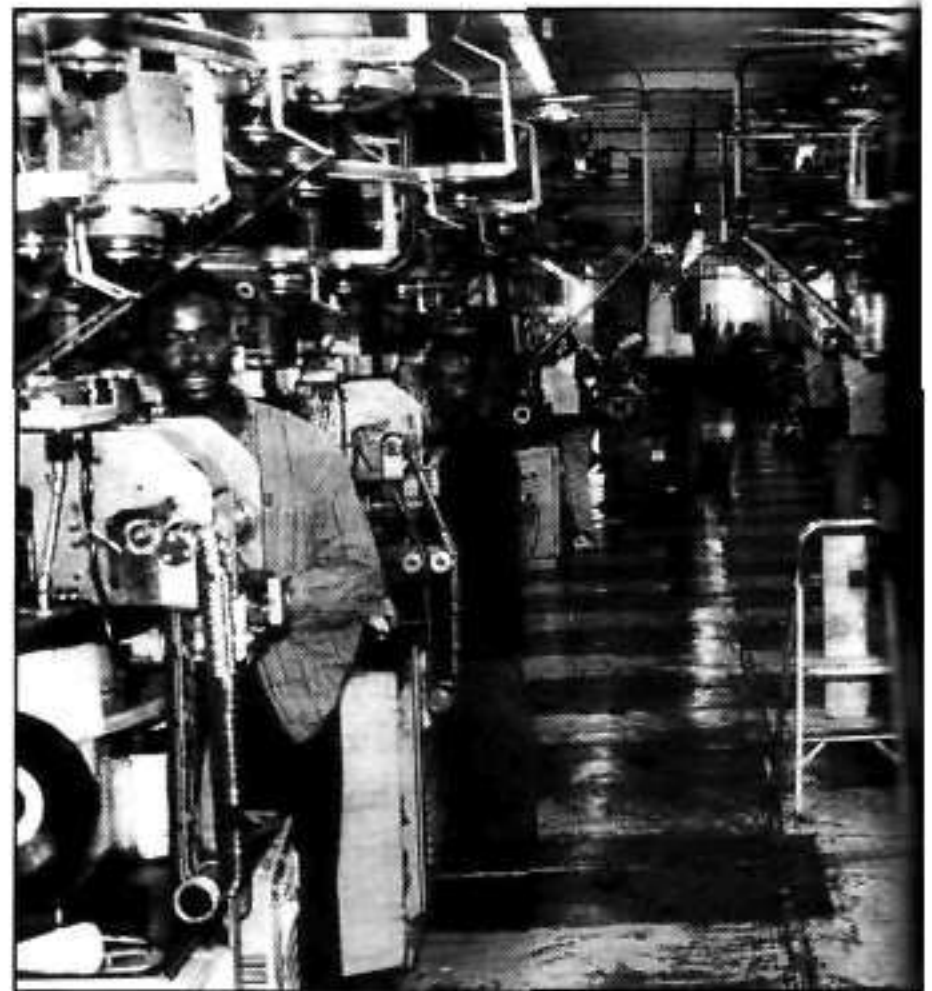
accompanied by greater productivity in these more focused areas, this could simply mean wiping out important parts of South African manufacturing and throwing us back onto our natural resource base.

The principle mechanism, therefore, for restructuring manufacturing is enhancing productivity. How should this be done? This is the question that industrial policy is dedicated to answering.

Our industrial policy framework incorporates incentives, capabilities and institutions.

#### (a) Incentives

Sharpening incentives to increase productivity involves harnessing the power of market forces. This means firstly, a trade



*'Moving up the value chain': a textile case study*


policy that seeks to expose domestic producers to international competition, and, in particular, to refocus local manufacturing on the opportunities that exist in international markets. Secondly, our competition policy and ownership policies seek to increase competition in domestic markets by policy designed to deconcentrate markets and to influence the conduct of key participants in these highly concentrated markets. Finally, there is also policy on the cost of inputs, including the costs of raw materials and intermediates, labour and capital.

None of this implies 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 market incentives, is the recognition that the 'freeing' of markets can lead to the destruction of capacity and that market failure is common-place. This suggests an important role in industrial policy for extra-market intervention.

### (b) Capabilities

Recognising the limits of the market implies a carefully constructed, pragmatic trade policy and competition policy. It also implies systematic policies to build the



**O**ur researcher identified seven particularly productive firms and attempted to identify whether they had common characteristics which differentiated them from the other, less productive firms in the sector.

The key characteristic common to all the productive firms was that they produced higher value-added textile products rather than basic undifferentiated cloth. Companies did this in different ways:

- three on the basis of product design
- two on the basis of specialised technology production processes
- one on consistent quality
- one through making its fabric into jeans by subcontracting and obtaining franchises to make brand names.

Of the seven companies four have export-oriented strategies in which exports have deliberately been sought and increased. Two

of them export only sufficient amounts to qualify for duty-free import permits while only one company concentrates on the South African market. It has a record of reliability, consistency, and closeness to the customer which has ensured its continued success.

The seven companies shared other characteristics:

- they had all invested extensively in new technology over the last decade
- they all have a drive to improve quality
- there is a general effort to improve processes (although this has not always worked well: most of the companies still have high stock levels, for instance).

This example suggests that the higher value-added end of textile production offers far greater potential for development. The production of basic undifferentiated cloth, on the other hand, relies heavily on protection. The heavy presence of unproductive and undynamic firms in the production of basic cloth suggests that, if these firms are to remain in business, levels of protection would need to be increased. ☆



### **'Picking winners'**

Our preference for targeting 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. Resources should be targeted at developing a capacity to utilise a portion of this aluminium 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 be a priority for a post-apartheid government and this suggests a targeted effort to develop the capacity of sectors that produce construction and civil engineering components. Similar considerations apply to the production of 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. ☆

institutions and establish the processes that generate the underlying competitive capabilities, which will enable local manufacturers to respond to market incentives.

These then are the other two variables in our policy framework – capabilities and institutions. 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.

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 areas. Private investors tend to under-invest in human resource and technological development.

Despite the market's deficiencies, the returns that flow to society from investment in education and R&D (Research and Development) are unquestionably positive. Extra-market intervention to secure these competitive fundamentals is therefore 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 markets.

### **(c) Institutions**

Institutions and institutional reform play a central role in our analysis. For example, the necessity of 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; and, 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:

- ❑ Firstly, 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, and 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 an ongoing 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 the trade unions, employer associations and statutory bodies that make up the industrial relations system; while the second concerns the process of industrial policy making and implementation. ☆

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# The ISP policy framework: *incentives, capabilities, institutions*

## **1. Incentives**

### **1.1 Trade policy**

In respect of trade, our policy proposals include:

**(a) Rationalised tariff structure:** The South African tariff system is characterised by a 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 generates considerable uncertainty, and is an administrative nightmare. However, rationalisation must be pragmatically implemented. 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.

**(b) Gradual reduction in tariff protection:** In general, we support a gradual reduction in tariffs. Whilst the average level of tariff protection in South Africa is not particularly high by international standards, protection of key intermediates raises the cost structure of South African manufacturing with a

predictable impact on our export competitiveness and the domestic cost of living. Protection of basic consumer goods, frequently designed to offset the impact of protected intermediates, is an important cause of the unusually high cost of living of low-income consumers.

The reduction in overall tariff levels should be timed so that the impact of employment loss in fundamentally uncompetitive sub-sectors is cushioned by new employment opportunities in other sub-sectors where there is competitive potential.

**(c) Temporary protection for capacity building:** We support the selective use of temporary protection to promote competitiveness. For example, while competitive potential in the 'low-end' of the clothing industry is limited, it is considerable in mid- and high-end production. There is an argument for protecting the latter sub-sectors, but only 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 and auto components sectors. Realising this potential requires considerable capacity-building, 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. However, manufacturers who benefit from protection to advance their competitive potential must be subject to assessment in terms of detailed, pre-announced performance criteria which demonstrate concretely a positive relationship between temporary protection and increasing competitiveness.

**(d) Export support:** Tariff liberalisation alone will not promote export growth. A proactive export support programme is therefore essential. Despite the fact the General Export Incentive System (GEIS) is structured so as to reward manufacturers who would have expanded anyway, our sector studies found clear evidence that GEIS has a positive impact on manufactured exports. We

therefore support the maintenance and refinement of export subsidy programmes.

**(e) Institutional reform:** 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. Examples include establishing an export bank, re-directing employer and trade associations away from securing protection towards international marketing of their output, and assisting small and medium enterprises to penetrate these markets.

**(f) Appropriately-valued exchange rate:** 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, all those with an overvalued exchange rate performed poorly in export markets.

In many countries stability in exchange rates has been critical in inducing long-term investments in export-oriented manufactures, and a stabilisation fund may be necessary in South Africa.

### 1.2 Competition policy

It is well known that South African product markets are exceptionally concentrated and that ownership is highly centralised. This is not only inequalitarian, but this also has a negative impact on manufacturing performance. ISP research has found considerable evidence of anti-competitive collusion between the large firms. This undermines the possibility of developing vibrant small- and medium-scale enterprise (SME).

It is not enough simply to subject conglomerate producers to international competition. For example, trade liberalisation may nominally challenge a dominant firm's position in its market, but its close corporate links with its major suppliers and retailers may continue to blunt competition in its favour.

ISP suggests the following policy response:

**(a) Strengthen competition authorities:** There is no ideal market structure.



*Durban docks: can South African industry compete with cheap imports?*

Consequently, our policy generally favours strengthening the investigative and punitive capacities of the competition authorities, rather than imposing a predetermined industrial structure. In addition, the Competition Board should be relocated to place it in the centre of the policy-making and implementation structure of government, namely, the Ministry of Trade and Industry. Currently the competition authorities report to the less-powerful Minister of State Enterprises.

**(b) Monitor inter-conglomerate relations:** In South African circumstances, it is particularly important to monitor inter-conglomerate relations. The widespread 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, effectively dampens the

level of competition in two unrelated markets. In addition, structural features like interlocking directorships and cross-shareholdings between conglomerates and between their operating companies are increasingly commonplace. Such features underpin conglomerate forbearance and should be monitored. There is a strong case for prohibiting or limiting them.

**(c) Defend small producers:** Competition policy is generally intended to protect consumers. However, in South Africa, it is also important to use competition policy to protect small producers. 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 should encourage inter-firm co-operation between small firms, particularly where they face

dominant suppliers and customers. This underlines the importance of integrating competition policy with the mainstream of industrial policy.

### 1.3 Ownership policy

Concentrated markets and ownership structures are linked and generate broadly similar problems. Large conglomerates are responsible for raising the costs of entry into many South African markets. Where control is as tightly concentrated as in South Africa, few people experience the incentives associated with a share of ownership and control. Hence minority shareholders, managers, and employees have no direct incentive to raise the productive performance of their enterprises. Rigid and extensive hierarchies, tempered occasionally by profit-sharing schemes and performance bonuses, are the principal means of motivating managers and workers.

Ownership concentration also results in a small number of highly diversified corporations controlling a major slice of the private sector. The six dominant conglomerates – 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.

This degree of diversification, particularly when coupled with tight control held in the group head-office, results in important inefficiencies. Strategic control is in the hands of controlling shareholders and managers who have little concrete knowledge of the operating companies. Monitoring of the operating companies therefore tends to be narrowly concerned with financial ratios.

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

Mutual-controlled Barlows Group.

ISP policy recommendations include:

**(a) Promote corporate 'unbundling'** by, for example, prohibiting the listing on the Johannesburg Stock Exchange of 'pyramids' (companies that exist only for the purpose of securing the control of a single shareholder). Although unbundling will result in more flexible and more focused firms, it 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).

**(b) Examine control of mutuals:** The Old Mutual and Sanlam are mutual societies nominally controlled by their policy holders, representing a broad spectrum of society. In reality, however, these corporations are controlled by their managers. The mutuals' control and structure must be investigated as a matter of urgency, with a view to enhancing actual policy holder control.

**(c) Promote broader stakeholder ownership:** Small business people, community trusts, workers, managers and other stakeholders are currently excluded from controlling major corporations. There may be grounds for limiting the equity stakes that financial institutions hold in listed corporations. This should encourage these institutions to lend their financial resources to the above groups, enabling such stakeholders to purchase ownership shares. It may also encourage the financial institutions to turn their attention to long-term loan financing.

**(d) Strengthen corporate disclosure requirements:** South Africa will (and should) continue to have large companies. Possibly the most important reform in this area, therefore, is to extend corporate disclosure requirements. Currently these requirements are very lax and should be extended to incorporate information such as the number of jobs gained or lost, new products brought onto the market, the level of exports, and R&D spending. This would create a different climate and set of expectations around the corporate sector. The process would be strengthened by tripartite

negotiations on performance criteria which determine companies' access to government support programmes and collective bargaining concessions.

#### 1.4 The Cost of Inputs

It is widely argued that South African producers have to pay a premium on international prices for their key inputs, and that this is an important reason for poor manufacturing performance (see box: paper sector case study, page 56).

The premium paid for key raw materials and intermediates is frequently blamed on tariff protection. This is particularly significant in the protection of basic chemicals and textiles. ISP research in the white goods sectors noted, however, that many of the higher priced inputs – particularly the metal inputs – are produced from South Africa's natural resources, and yet domestic producers are still paying in excess of the world price. Our policy responses to these issues are:

- (a) support for a gradual reduction in tariff protection;
- (b) where South Africa produces these inputs at competitive prices and quality, they must be made available locally at the FOB international price;
- (c) 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, it does not exceed that which

### Electrification: boost, but no kick-start

The current institutional structure of the electrical supply industry holds back the electrical equipment industry.

Only 3.1 million of an estimated 8.8 million dwellings in South Africa have an electrical supply. Widening access to electricity and accelerating existing electrification is likely to be a priority for a democratic government. Spending on infrastructure, such as electrification projects, will provide a boost to the metal industry, especially the electrical distribution equipment industry. The electrical distribution industry gets electricity to where people can use it in their homes by manufacturing the cables, poles, switches, transformers, insulators and meters required to distribute power. To date, progress in electrification by ESKOM and some municipalities has resulted in 200 000 new connections in 1992 and up to 300 000 in 1993.

The key problems for the electrical distribution equipment industry are not internal but linked to the structure of demand ie the fragmentation in the electrical supply industry. There are 410 authorities responsible for distributing electricity and a multiplicity of tariffs and standards. Political and financial obstacles have to be overcome to implement a comprehensive national mass electrification programme – a goal set by the National Electrification Forum. Agreement on this programme will provide the boost the industry has been waiting for, as it has the capacity to supply equipment for treble the present rate of new connections.

Will this boost turn electrical distribution equipment into a winning industry to help kick-start the economy? Unfortunately, it is not so simple. Firstly, the demand for equipment for electrification at the present rate of connection is not, on its own, enough to keep factories fully occupied. Many are sitting with idle capacity of 25% or more. Secondly, this industry's biggest customers are other commercial and industrial firms, but the poor state of the South African economy has weakened those markets. Thirdly, the market for electrification equipment was about R450 million in 1992, and its share of employment was about 21 000. Thus accelerated electrification will not, on its own, kick-start the economy, but it will provide a significant stimulus that may presage a revival in the rest of the economy. ☆

is absolutely necessary to keep the local producer in business.

Evaluating the cost of labour is more complex. Generally speaking, SA wages are much lower than in the advanced industrial countries, and also lag significantly behind the Asian NICS – Korea and Taiwan. They are comparable to the Latin American NICs (Brazil and Mexico), and substantially higher than some of the rapidly expanding developing economies of Asia – China, Thailand and Indonesia.

Comparative wages must be evaluated in the context of relative productivity (for example, Italy is a major clothing exporter, despite its high labour costs). 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.

Important aspects of our policy proposals tackle the cost side of the equation directly:

- (d) ISP's 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.
- (e) ISP's emphasis on policy measures aimed at lowering the cost of basic wage goods should reduce the upward pressure on wages.
- (f) ISP's policies on the informal sector and multi-tiered bargaining provide for flexibility in recognition of the segmented character of South Africa's labour market.

Dealing with the cost of capital is equally complex. The cost of capital is to a large extent determined by factors beyond the scope of industrial policy (including political uncertainty and the high returns demanded by South African investors). However, the cost of capital partly explains low levels of investment in manufacturing. Our policy proposals here focus on the role of government investment and that of key parastatals and public corporations. There is an

important role for quasi-public industrial banks (such as the IDC and the SBDC:

- (g) to catalyse private investment by committing their own considerable resources;
- (h) to lower 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;
- (i) to ensure that complementary investments are undertaken in sectors (from building materials to consumer durables) which will be supporting the Reconstruction and Development Programme, for example in housing and electrification.

## 2. Capabilities

### 2.1 Human resource development and work organisation

The development of human resources represents an essential capability for industrial efficiency. 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 depends on the level of training and skills at all occupational levels.

In the South African manufacturing industry, work organisation is characterised by a racially entrenched division of labour and strict, highly paid, but largely unskilled, supervision. This provides little incentive to management to acquire and deploy enhanced skills. This hierarchical form is bolstered by large earnings differentials, both within the workforce (between labourer and artisan), and between management and workers. Racial and gender differentiation in earnings remains a feature of industry. In this system, workers are treated as a cost to be minimised, rather than as an asset.

Manufacturing firms are constrained by poor skills:

- 45% of adult blacks cannot read or write less than 10% of our manufacturing workforce is trained to the level of artisan.



Students at Benoni Training Centre: a key component in 'intelligent production' strategy

- ❑ 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 biased 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. Moreover, labour market opportunities tend to privilege universities rather than technikons. This largely accounts for the fact that South Africa has only eight technicians for every ten engineers. South Korea, by contrast, has 200 technicians for every ten engineers.

The objectives of ISP policies in this field are to increase productivity and promote efficiency in firms, and to empower workers and their organisations in the process. This requires a set of policies which draw together

the separate components of human resource development, work organisation, skill formation, and the remuneration system – *an intelligent production strategy*.

This rests on four interlinked ideas:

1. Constant skill acquisition: the establishment of a nexus between skills, grading, training and wages which allows workers to move up a career-path through the provision of training modules accredited by tripartite bodies.
2. Team work should be a consequence of the abandonment of restrictive work practices associated with narrow skills and strict job demarcations. This can lead to working conditions that deliver more interesting and rewarding jobs while promoting greater efficiency. The command style of supervision needs to give way to mentoring and leadership – 'from cop to coach' is the slogan.
3. Broadening the notion of productivity to include multi-factor measurements (labour, capital, materials, services) as



well as the social determinants of productivity. Productivity is not simply an economic ratio of inputs nor is labour productivity the only component of an enterprise's productivity index.

- 3.1 Multi-factor productivity measurements would need to include the areas of capital, management efficiency and work organisation. Management's ability to make available on time, the necessary materials and tools of sufficient high quality and to systematise the work flow in a rational manner to avoid unnecessary movement of work in progress and any bottlenecks are relevant to the measurement of productivity.
- 3.2 A number of social determinants also affect this measurement. These include low job satisfaction among workers, limited participation, racial animosity, lack of promotion or increase in earnings resulting from training, multi-tasking to avoid enhancing skills, racist and incompetent supervision, attempts to undermine the union and broader social problems such as poor transportation and inadequate housing.
4. Co-determinist practices which provide for a co-operative and skilled approach to the design of products and processes. This requires that worker rights are acknowledged and respected, and unions are treated as joint partners in designing and overseeing innovations in work organisation and human resource practices.

This holistic approach is to be distinguished from piecemeal attempts – increasingly popular in South African management circles – to selectively introduce elements of a Japanese 'lean production' strategy as evidenced in the proliferation of 'quality circles', 'suggestion schemes' and 'participative management'.

Further policies include:

- (a) A national education and training system which links schooling, adult education, tertiary education and corporate training into a coherent human resource development policy. This should allow portability of skills

*South African industry spends too little on R&D: ISP proposes strategy to change this*

and engender flexibility in the provision of learning with ease of entry and exit.

- (b) Within this system, the focus should be on skill acquisition and adult basic education (ABE) for the incumbent workforce and other adults who were deprived of basic schooling, rather than a blanket and unfocused investment in general education.

- (c) Companies will need to combine any investment in new hardware or technology with investments in human resources and changes in organisational practices.

- (d) Restructuring the National Training Board set frameworks for training, develop occupational

certifications and set competency standards for each industry.

- (e) Providing access to this education and training system to those outside of formal employment.

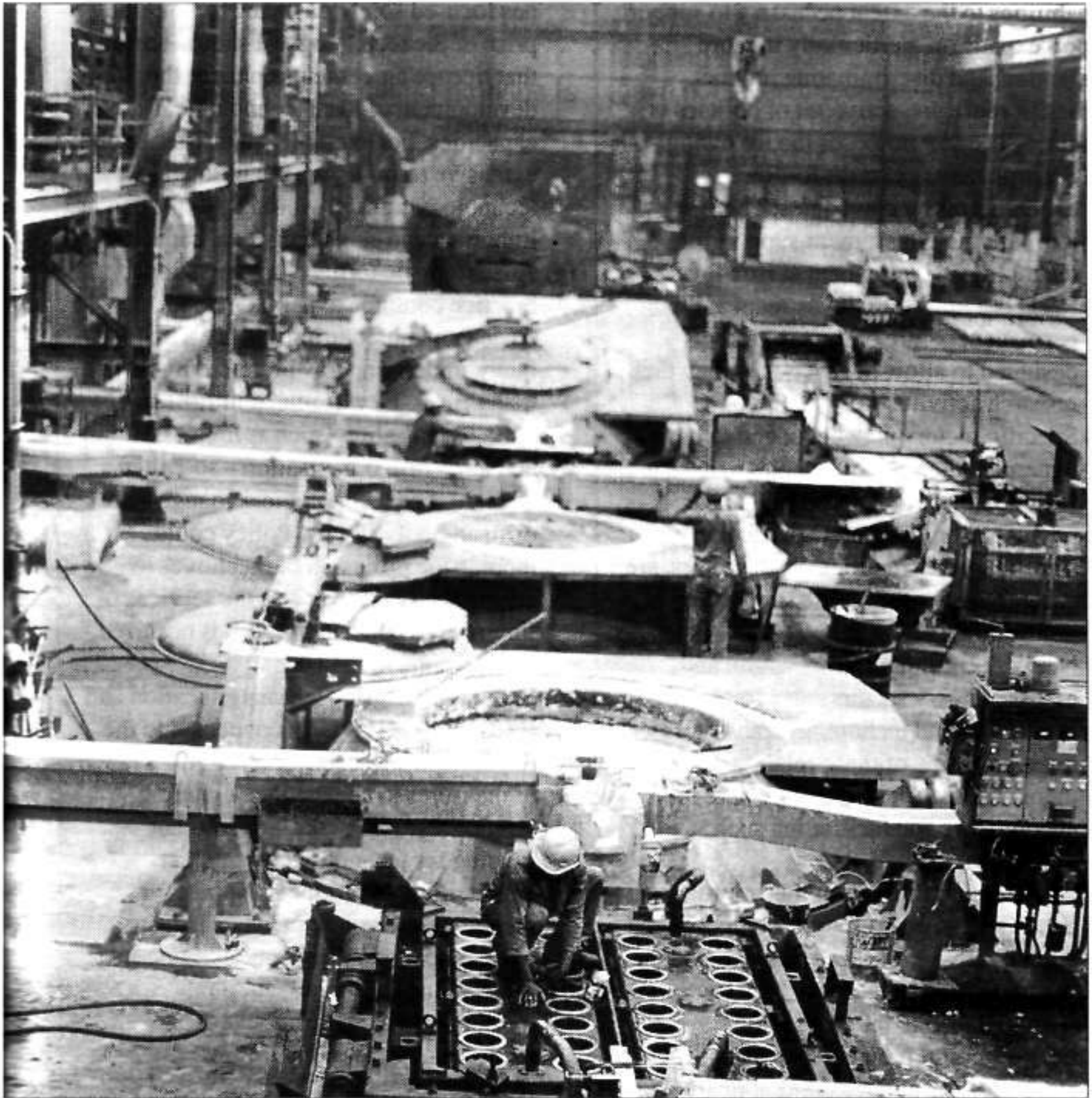
- (f) Ensuring that all firms invest in ABE and training (and that this meets uniform standards), possibly through the imposition of a training levy.

## 2.2 Technology

Enhancing South Africa's technological capacity is one of the most urgent and important tasks confronting industrial policy.

ISP research has highlighted several





issues in relation to technological capacity. 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 – much lower than similar companies in other countries.

There is clear evidence that in some sectors, notably electronics, smaller firms operating in the more competitive sectors of the domestic market spend comparatively far more on R&D than do large firms which dominate their particular product markets.

There also seems to be an association (for example in the auto, auto components, and telecommunications equipment sectors) between more active participation in export markets and firms' tendency to enhance their technological capacities. Those findings suggest that 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 to the development of technological

capabilities to the extent necessary to support export expansion, particularly in more demanding and discriminating product niches. A more pro-active set of policies is required. The ISP proposes the following:

- (a) A permanent tax credit for R&D expenditures by companies. There is currently no government support for technology development at firm level R&D is a long-term investment and the permanent nature of the tax credit is designed to allow businesses to plan their research activity.
- (b) Specific sectors may be judged 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, are deserving of special state support for innovation.
- (c) Networks of linked firms within and across industry sectors can 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 such networks.
- (d) In particular, there should be more pro-active state support for pre-competitive collaborative R&D between firms. There is a particular opportunity here for South Africa, linked to the large scale infrastructural projects such as housing, electrification and telecommunications.
- (e) Creation of a Sector Partnership Fund to make funds available for projects that strengthen the sector's technological capabilities. Such a fund would help build co-operative relationships between firms within the same sector, and between management and labour, and would reinforce processes which advance co-operative solutions to sectoral problems.
- (f) Policies to promote the more effective assimilation of imported technology, including limiting the restrictive clauses entailed in the licensing of technology from abroad. Currently, the Department of Trade and Industry monitors applications to licence technology, but

has focused solely on trying to limit the price of the technology. It should ensure that licence agreements enhance the development of local technological capacities. For example, an insistence on extensive training as a condition of technology transfer would be of particular importance in enhancing local capacities.

- (g) 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 (such as multi-skilling) and inter-firm organisation – so-called disembodied technological change – are diffusing only slowly. Policy could include the provision of incentives to encourage firms to utilise the services of 'innovation consultants' as has occurred, for example, in the UK.
- (h) South Africa's rich tertiary education and research base is poorly connected to the manufacturing sector. ISP suggest a range of measures to change this including science research perks, government funding for technology research at universities, government support for increased interaction between industry, labour and tertiary institutions.
- (i) Policy must specifically facilitate and support the acquisition and diffusion of technology for SMEs. We have developed several proposals where SMEs could gain access to technology, finance, training, advice and information.

### 2.3 Small and Medium-Scale Enterprise

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, some very large, usually state-owned, enterprises at key points of the production chain have also been crucial. Similarly, the contribution of Germany and Japan's great factories and groups should not allow us to ignore the critical significance of

## The textile-clothing pipeline

The textile-clothing-retailing pipeline is one of the longest pipelines transforming raw materials into consumer goods.

A US study, showed that for 85% of the time the textile product is in the pipeline it is not actually in production, but in the stores before or after production.

Thus, for 83% of the time, no value is being added to the material. Even worse, it is adding to the cost of the producer as storage-cost and opportunity-cost of the capital tied up in stock holdings. It is therefore important for the survival of all the sectors in the pipeline to increase their organisational efficiency by reducing stock levels and work-in-progress time throughout the pipeline. One way of doing this is to develop a Quick Response (QR) approach.

The first concerted effort to apply QR in South Africa took place in 1988, when a Textile Pipeline Workshop was organised and attended by representatives of the textile, clothing and retail sectors. No less than six potential pipeline projects were suggested, with two of them even specifying targets they wished to achieve in reducing the pipeline cycle.

However, not much progress has been made in the projects between the pipeline partners, even though considerable effort has been made by individual retailers and manufacturers to undertake QR pilot schemes.

Dr Boer of the NPI, without mincing his words, has attributed the lack of success of QR in South Africa's textile pipeline to retailers.

"In the USA the quick response programme was initiated and driven by some of the most highly respected textile and clothing manufacturers such as Milliken, Levi Strauss and Haggard Apparel. Retailers are sophisticated and were quick to co-operate in order to gain

the financial benefit. In South Africa, the clothing and textile industry leaders have not taken the challenge and clothing retail is controlled by approximately six leading retailers who have on the whole failed to honour the co-operative Quick Response agreements with their suppliers. Quick Response means a partnership and a partnership can only succeed if there is no duplicity. Regrettably, local retailers have not played the game, and as they hold a position of power over the other partners in the textile pipeline, Quick Response has not succeeded in South Africa to date."

There are other problems. Many retail chains engage in such high mark-ups that they stifle demand for the products of textile and garment producers. One consultant gives the example of two clothing factories that sold certain garments for R120 to R180 to chain retailers which marketed them for between R700 and R800. Upon his recommendation, the factories found alternative retail outlets where the garments marketed for between R300 and R400. Once the prices fell, the factory demand for the garments rose again. He also maintains that cost savings made by textile and garment factories are not passed on by major retailers to the customers.

Another very important factor in adopting a Quick Response in the textile industry in South Africa is the need for industrial stability. An industry characterised by frequent or unpredictable strikes and work stoppages would have difficulty adopting 'Just In Time' methods of production. It then makes more sense to adopt a 'Just In Case' approach with large amounts of stock. In this, the roles of the union, company management, and the industrial relations system are all crucial. ☆

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. Many of the policy proposals already developed in this report are intended to encourage the growth of dynamic SMEs and include:

- ❑ a competition policy that is directed at supporting small producers;
- ❑ a technology policy that supports 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.

In addition, SMEs require:

- (a) 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 concentration of savings in the hands of extremely risk-averse life insurers, and the strong ties between the financial institutions and the dominant manufacturing and mining groups, makes for a financial environment that marginalises the SMEs, and, particularly, potential new entrants. The IDC and the SBDC, as the major financial institutions with a specific mandate to support SMEs, should be playing a much greater role.
- (b) Enhanced inter-firm co-operation between SMEs. International experience suggests that this may be the most effective means of supporting these enterprises. Policy directed at promoting inter-SME co-operation should be sector-specific and focused on existing local agglomerations (such as Western Cape clothing factories, metal-working on the East Rand, and furniture factories

clustered in Johannesburg and the West Rand). It should include worker training, industrial relations, export marketing, as well as the technology policies mentioned earlier.

- (c) An active regional and local policy to bring together local agglomerations and those institutions that may be able to enhance inter-firm co-operation, such as trade unions, employer and professional associations, industrial councils, the IDC and the SBDC, various government departments and agencies, universities, technikons, and local governments.

### 2.4 Micro-Enterprise (informal sector)

Micro-enterprises face constraints which are quite distinct from those facing SMEs. The weakness of informal sector manufacturing activity in South Africa is largely a result 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 more serious barriers. There are five ISP policy proposals towards micro-enterprises:

- (a) Improvements to 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.
- (b) Easing access to finance and improving managerial and technical skills. Although our researchers encountered scant respect from members of the informal sector for many existing training programmes (derisively referred to as 'bush MBA's'), they were generally viewed as means of access to other facilities – finance or premises – that the training institution offered.
- (c) Measures aimed at the informal sector

should be sectorally focused – there is a world of difference between the opportunities and constraints facing burglar bar manufacturers on the East Rand and clothing sub-contractors in the Western Cape. Furthermore, there are important intra-sectoral differences that policy should take into account (see box: on this page). Most current programmes aimed at the informal sector are inadequately focused.

### 3. Institutions

#### 3.1 The industrial relations system

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 and a structured, continuous engagement of labour in corporate decision-making. This, in turn, necessitates the transformation of our industrial relations system.

The key proposal is to develop a multi-tiered system of industrial relations with three levels:

- The national level (including tripartite institutions such as the National Manpower Commission, the National Training Board and the National Economic Forum) should deal with the integration of policies concerning the labour market, employment, education and training, and the macro-economy.
- The sectoral level, where 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

#### Case study of the informal clothing sector

In clothing – a site of growing informal sector manufacturing – there are three clear groups. 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 sub-sectors 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 close attention. Their activity impacts directly on the cost structure of the industry's formal centres of activity. Moreover, groups of houseworkers are frequently co-ordinated by a skilled clothing worker-turned-entrepreneur earning considerably more than in the formal sector. The houseworkers 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 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 verge 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. ☆

should be extended across the economy. This level should provide flexibility for particular companies, sub-sectors or regions to allow for exemptions from the agreed wage rates for a specified period. The sectoral level will also set the framework for enterprise bargaining for that industry. Activities at this level must interface with other pertinent sectoral initiatives, for example, the restructuring initiatives in the clothing and textile, electronics and automobile sectors.

- ❑ The enterprise level, where bargaining over the organisation of work, job design and access to skills and training should occur. Different forms of governance that enhance greater worker involvement in company decision-making, including participation on boards of directors, should be explored here. In addition, provision should be made for productivity bargaining. 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. Productivity-related wage increases would arise out of changes to work organisation rather than as a result of reducing labour costs (through retrenchments, loss of benefits, longer hours, contract labour, factory closure and the like).

The approach developed here suggests a legislative framework which provides for the inclusion of employees in corporate governance and strategic decision-making. Bargaining would be facilitated by appropriate legislation concerning managerial prerogatives at plant level, board-level co-determination and mechanisms to facilitate sectoral-level bargaining over skill levels, wages, training and grading.

In addition, non-legislative mechanisms

should be found to develop workplace institutions of industrial democracy at enterprise level and joint management/labour consultative committees.

The envisaged industrial relations system should:

- ❑ 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, so that unions in these sectors do not have bargaining partners. Incentives must be extended to employers to



*Union organiser visits workers at workplace: ISP proposes plant level bargaining on job design and productivity*

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, and 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 active engagement in industrial restructuring issues



on the shop floor and in national fora. 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 will require increasing skills and expertise. The Sector Partnership Fund (see page 68 section 7.2) could be fruitfully applied to enhance such skills.

### 3.2 Industrial policy formulation and implementation

Tri-partite policy formulation and implementation requires an institutional basis. There are three ISP recommendations here:

- (a) Strengthen the National Economic Forum, the embryonic institution of industrial policy formulation. This could include statutory protection of the NEF and would also require government financial support for its day-to-day operations. Without this support, resources will clearly be very unevenly spread amongst the three parties to the NEF.
- (b) Strengthen and extend sectoral institutions to other sectors of the economy: Tri-partite structures in the clothing and textile, automobile and electronic sectors are embryonic forms of the required institutional structure at this level. The proposed Sectoral Partnership Fund would be controlled by these *tri-partite sectoral institutions*.
- (c) Co-ordination: 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 and Development Programme 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. ☆