

## EXECUTIVE SUMMARY

The Metals and Engineering industry is one of the most significant contributors to South Africa's manufacturing employment and performance. For the purposes of this study the Metals and Engineering industry has been taken to be constituted by the sectors represented in the Metal and Engineering Industries Bargaining Council, namely:

- ❑ Electronics and Electrical Engineering;
- ❑ Machinery and Equipment;
- ❑ Basic Metals;
- ❑ Heavy and Light Engineering (incorporating Metal Products and Fabrication as well as the automotive components sectors); and
- ❑ Plastics Converters.

According to official data, the Metals and Engineering industry constitutes 29.3% of formal manufacturing employment – a total of 371 000 jobs (IDC 2002). The industry accounted for 41.5% of total manufacturing sales in 2002 with much of the growth coming over the period of this study, namely 1999-2002.

### 1.1 Employment

Over the period 1999-2002, metal and engineering employment loss appears to have slowed with official data showing a decline of 0.5%. This is comparatively better than the general manufacturing sector that experienced a loss of 3.5% jobs in the same period, bringing total manufacturing job loss to 173 960 (ibid). The official data is slightly different to the results generated by our survey that show a 1.9% compound average growth rate over the same period. However, surveyed growth was generated largely through higher levels of atypical employment.

### 1.2 Structure of employment

The Metal and Engineering industry has seen substantial changes in the structure of employment between 1999 and 2002. Although permanent employment continues to constitute 90% of total employment in the industry, atypical employment has risen rapidly. In 2002, atypical employment constituted almost 10% over total employment in the industry compared with 3% of total employment in 1999.

Notwithstanding the existence of Employment Equity legislation, as well as targeted training plans, senior levels of the industry continue to be disproportionately occupied by white males across all the sectors.

### 1.3 Sectors

The sectors constituting the metals and engineering industry are in turn composed of a total of 7 sectors and sub-sectors. These contribute to total employment in the industry as follows:

- ❑ Metal products and fabrication (21%)
- ❑ Automotive components (19%)
- ❑ Basic metals (19%)
- ❑ Machinery and equipment (16%)
- ❑ Electrical engineering (11%)
- ❑ Plastic converters (10%)
- ❑ Electronic engineering (5%)

(IDC, 2002)

Our survey found that these sectors grew employment at variable compound annual growth rates between 1999 and 2002, with metal products and fabrication growing most rapidly and the electronic engineering sector declining most rapidly. This can be seen below.

- ❑ Metal products and fabrication (8%)
- ❑ Automotive components (4%)
- ❑ Plastic converters (4%)
- ❑ Electrical engineering (-1%)
- ❑ Basic metals (-3%)
- ❑ Machinery and equipment (-5%)
- ❑ Electronic engineering (-8%)

Within these sectors and sub-sectors, automotive components grew permanent employment most rapidly, while most of the employment growth in metals products and fabrication sub-sector came from increases in atypical employment.

## **1.4 Job champions and job losers**

Each of the sector chapters deals with employment trends in each sector. Perhaps what is most striking about the analysis presented in these chapters is that employment gains or losses are not experienced uniformly across the industry or within particular sectors or sub-sectors. In each instance there have been clearly identifiable categories of firms that have been relatively unsuccessful at retaining employment (job losers) or by contrast, have been particularly successful at growing jobs (job champions) employment numbers over the period of the survey<sup>1</sup>.

The identification of job champions and job losers is a critical feature of the sector chapters. Through the systematic identification of the performance drivers of each of these companies we have been able to devise policy and programme interventions targeted both at the drivers of employment loss and employment creation.

## **1.5 Key drivers of employment trends**

While the impact and effect of the various forces on employment trends vary slightly between the sectors and sub-sectors, it is nevertheless possible to discern common drivers of employment performance. Our recommendations are based on emphasising the positive drivers of employment creation while at the same time seeking solutions to impediments to employment creation.

### **Input costs**

Import Parity Pricing was consistently raised as an impediment to the employment creating potential of the downstream sectors within the metals and engineering industry. Given that downstream sectors are more labour-intensive, the impact on employment and competitiveness is perceived by employers in those sectors to be considerable. Although, IPP is currently the subject of a number of other investigations, its dampening effect on the employment creating potential of downstream sectors needs to be addressed. In some instances co-operation between consortia of downstream companies and upstream suppliers have been able to reduce input costs in order to pursue particular markets.

Employer responses to the survey indicated that the cost of salaries and wages were a constraining factor in creating employment. Employment costs tended to be more of an issue for employers in sectors that were using higher levels of atypical employment. Together these trends indicate that these sectors are under pressure to manage overall employment costs.

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<sup>1</sup> The methodology used to derive the job champions and job losers is elaborated in Appendix B - Methodology

This was much more pronounced in industries more subject to cyclical or project driven demand such as the machinery and equipment and heavy and light engineering sectors than in more capital-intensive sectors such as basic metals, where employers did not perceive wage and salary costs to be a constraining variable. Thus employment costs were more of an issue for employers in sectors in which demand was unpredictable.

### **Atypical employment**

Atypical employment has been a key driver of both the employment gains made between 1999 and 2002 while simultaneously fundamentally changing the labour market structure within metals and engineering.

The increase in atypical employment has been driven by a variety of trends including:

- ❑ Employer responses to the erratic nature of demand in more project driven environments such as metal fabrication;
- ❑ The unpredictability of the exchange rate which has meant that companies have been uncertain as to whether they will maintain gains in the export market and have accordingly opted for short-term contracts and other forms of atypical employment to minimise costs should they lose the market due to the appreciation of the Rand's value;
- ❑ Employer's perceptions of risk associated with permanent employment including potential retrenchment costs; accidentally transgressing procedural elements of the Labour Relations Act and the potential risk and associated cost of CCMA cases.

### **Domestic market demand**

Domestic market demand continues to be the primary source of sales for most of the metals and engineering industry. However, conditions in the domestic market have worsened for the industry due to:

- ❑ Increasing levels of import penetration;
- ❑ Increasing uncertainty of demand from both public and private sector customers. In certain sectors, large variances in demand have resulted in the demise of domestic manufacture and those market needs are now met through increasing import penetration; and
- ❑ The absence of a clearly articulated and implemented government and parastatal procurement policy favouring domestic manufacturing.

The combination of these trends has both served to reduce the metal and engineering industry's total market as well as heightened levels of uncertainty and insecurity in the industry.

There is little doubt that stable domestic market demand is the lynchpin of any strategy to grow the employment creating capabilities of the sector.

### **Export market demand**

Although the export market has grown dramatically since 1994, our survey results indicate that even in sectors that have experienced dramatic increases in export revenue, only 18.7% of companies in the metals and engineering industries have grown export revenues to greater than 10% of their turnover.

Export growth is undoubtedly integral to the future growth of the industry, however it is clear that to-date only a few leading companies have managed to make the transition to being export-driven. Accordingly there is a substantial need for initiatives to boost export growth.

Factors impeding export market growth include a lack of market intelligence and insufficient capital to finance export costs.

### **Exchange rate**

Exchange rate volatility has also served to dampen the willingness of companies to explore export markets. Recently the appreciation of the Rand has resulted in some companies incurring significant losses as their margins on dollar denominated contracts have been reduced. This volatility and attendant uncertainty about the sustainability of future export demand has both served to dampen exploration of export markets as well as to drive increased levels of atypical employment as employers try to limit the risk of pursuing export markets.

### **Skills**

The sectors in which the majority of surveyed respondents experience the availability of skills as a constraint are also those that are more 'design-intensive'. The 'design-intensive' sectors are those sectors in which South Africa potentially has an advantage, as our engineering costs are internationally competitive.

While these sectors will not necessarily be key drivers of employment growth over the medium term, a strengthening of skills in these areas is important to the maintenance of the

manufacturing base and employment that has been established in these areas of the economy.

Although an increasing number of companies are positive about the role of the Merseta in skills development, the majority of the industry, especially smaller companies continue to experience administrative difficulties.

### **Innovation**

Metals and engineering companies have displayed remarkable innovations in both product and process. Strengthening this competency within the sectors concerned will both be a consequence of supporting the ongoing development of the engineering and management skills base in the industry and in particular instances providing support for ongoing product and process innovation. The system of supply-side incentives encourages research although little support is offered in terms of the commercialisation of innovative products. We accordingly recommend a strengthening of this element of the design cycle. With respect to the process innovation we have recommended the industry-wide implementation of the 'kaizen-blitz' or Best Practice Workshops that were successfully piloted in the Workplace Challenge.

### **Information**

Information, or rather the lack thereof, has consistently been identified as a key impediment to growing the output and the employment creating ability of the industry. Primary information needs were identified as:

- Areas and product types in which import penetration was growing rapidly and therefore raising the risk of undermining domestic manufacture; and
- Countries and product lines in which SA manufacture may be able to grow market share.

Further, information regarding levels of employment, types of employment and employment trends continue to be a source of much dispute with discrepancies existing between most sources of data on employment. The lack of accurate information in this realm as well as the fact that existing information is often not clearly incorporated into industry analyses or strategies continues to hamper the potential to create employment enhancing strategies.

### **Operating environment**

A range of impediments to employment creation were identified in the study and are explored in-depth in each of the chapters. Included in these are:

- ❑ A lack of collaboration between downstream and upstream sectors;
- ❑ Closer integration between government operations and leading companies in the sector;
- ❑ More specific targeting of government policies, programmes and operations in areas that have employment creation potential
- ❑ Enhanced marketing of government offerings

### **1.6 Prioritising employment creation**

Although employment creation is an often-stated goal of public policy it is not systematically prioritised across all spheres either of government or in the daily operations of the social partners. Our strategy has therefore demanded an explicit commitment in the daily operations of the social partners to employment creation. This includes, amongst others:

- ❑ Alignment of procurement policies and practises to employment creation objectives;
- ❑ Linking of all supply-side measures more explicitly to the promotion of employment creation; and
- ❑ Early warning systems to identify sectors and sub-sectors that are at risk from increased import penetration or declining demand.
- ❑ A quarterly sectoral performance review incorporating indicators of sales, exports, balance of trade, employment to be conducted by dti/TISA and communicated to industry associations

In addition, we have suggested that government implement a Presidential Award for Employment Creation and that this Award together with the existing Innovation and Export Awards form the basis for government identifying cohorts of companies with which it will both develop a closer relationship to understand the forces that drive these companies while simultaneously ensuring that these companies have priority access to a range of government services. The award will enable government to both identify companies that should receive privileged access to government support in order to strengthen employment creation as well as to provide an ongoing pool of case studies of companies that are successfully growing

employment. This latter feature is an important element of providing the information flows necessary to the ongoing enhancement of policy to support employment creation.

## 1.7 Framework for employment creation

Having taken into consideration all of the quantitative and qualitative analysis as well as the extensive consultation process on which this study is based, we have proposed a framework for employment creation in the metals and engineering industry.

In doing so, we have identified priority sectors in which the most employment creation or loss is likely to occur. On the basis of this analysis we have suggested that the metal products and fabrication sector should be prioritised for employment creation, while the machinery and equipment sector is in need of urgent attention to avoid potentially large employment losses in the near future. Between these two poles, the remaining 5 sectors are ordered in terms of priority. However, it is important to note that:

- The strategy that we have proposed will be largely applicable across much of the industry and indeed will have positive ramifications for the entire manufacturing sector; and
- Within each sector and sub-sector, much can be done to strengthen the employment creating or retaining capacity of the sector that need not be ignored simply because the returns are not as great as in other sectors.

Our strategy identifies key areas where interventions need to be made or enhanced. In some instances our proposals require government to drive changes in either the policy environment or in the daily practices of government, most notably this would be in the arena of managing public procurement. In others, government's role is more that of facilitator providing information and it is the private sector that acts on this. However, each set of recommendations has institutional consequences. In some instances collaboration is required, in others change, and in yet others, the social partners need to engage in problem solving dialogue to address issues that dissatisfy both of them. In broad terms, we recommend that the following roles be strengthened for organisations in the metals and engineering industry:

- The social partners represented either by NEDLAC, Proudly South Africa or a more industry-specific body must:
  - Ensure the implementation of a procurement policy that favours domestic manufacture;

- Systematically monitor government and parastatal expenditure to ensure that it promotes domestic manufacture;
  - Interrogate instances in which significant government or parastatal tenders have been awarded to foreign companies.
- The dti has to:
- Take a more proactive role in the systematic generation and dissemination of data relating to demand and import penetration. While this information is currently generated it is not done so in a systematic manner nor is it disseminated effectively;
  - Ensure that all supply-side measures, at the very least, are assessed in terms of their employment impact;
  - Develop mechanisms, such as the Presidential Award proposed above, to identify and understand companies and sectors that are creating employment.

Industry associations, within our proposals, assume a much more prominent role in the dissemination of information to their members, the creation of forums in which the potential for collaboration may emerge as well as in the building of internal competencies to assist companies in bringing applications for tariff relief. In brief they become the pivot that enable companies to access, interpret and act on information and opportunities provided for by government. This role requires industry associations to become more proactive than has historically been the case. This new role will move industry associations into the realm of providing strategic plans, direction and platforms tailored to growth.

Existing points of contact with companies be strengthened to ensure a more effective flow of information between government and the private sector. One such proposal is to broaden the knowledge base of the Skills Development Facilitators and Skills Development Advisors such that they are able to provide companies with a wider range of information. In each of the sector reports we identify more specific roles for each institution.

### **Supply side factors**

Our strategy seeks to find mechanisms to sustainably reduce primary input costs. In particular, we focus on raw materials and import parity pricing and second labour costs/the structure of employment.

Downstream manufacturers have identified raw material inputs as being key cost drivers. The need to address import parity pricing was a consistent result of the research. In this context we have recommended three interventions:

- ❑ The first intervention is to promote collaboration between downstream manufacturers and raw material suppliers in return for the guaranteed purchase of particular products from these suppliers
- ❑ The second intervention would be to either remove existing tariffs on basic metal sector products or alternatively to remove the impact of the existing tariff on IPP calculations, address alliances between suppliers and distributors of raw materials and developing a charter on the long term growth of the industry
- ❑ The third intervention relates to the export of scrap metal where we support the announced changes to scrap metal policy that attempt to ensure that domestic manufacturers' requirements are met before scrap is exported.

In addition, we recommend that the social partners closely monitor the outcomes of ongoing investigations into import parity pricing.

In terms of labour costs and the structure of employment we have recommended;

- ❑ A process of proactively managing atypical employment whereby the stakeholders – government, labour and business seek to pursue a combined carrot and stick option in terms of which labour-intensive employers, which can clearly demonstrate an inability to pay MEIBC wage rates in particular categories, are granted a 3 year exemption provided that there would be a clear benefit for workers in the form of higher wage rates than those currently paid by labour brokers and an undertaking to progressively reduce levels of atypical employment in the company over the period. In addition, these companies should be part of dti competitiveness improvement exercises to assist them in employing on a more permanent basis. This recommendation is based on research results that indicated dissatisfaction from both employers and employees with the current system of labour broking which is failing to meet both their needs.

In terms of improving skills development we propose the following;

- ❑ The Merseta should prioritise identified sectors in which job creation is most likely over the medium term; in particular should seek to collaborate with industry associations in design intensive sectors;
- ❑ The Merseta should increase its focus on promoting apprenticeships, learnerships

- The Merseta work with the Department of Education and industry associations to devise an innovative approach to attracting learners into the industry by influencing subject choices and careers;
- The Merseta should ensure that all its bursary programme recipients have placements at engineering firms, thus enabling them to develop some level of work experience whilst studying
- A Key Performance Indicator system for Merseta should be developed to allow Merseta to measure whether or not it is achieving its goals and to institute remedial action where necessary.

We also note increasing concerns from industry about levels of high school Maths and Science education and propose that the industry associations together with individual companies and the Merseta implement:

- Programmes at schools to strengthen general maths and science education; and
- Bridging programmes for students who may be interested in engineering related occupations but are hampered by the lack of an adequate maths and science education.

### **Manufacturing processes**

In terms of the manufacturing process, we propose that;

- TISA and industry associations assist companies through a variety of measures to take products from the research and development stage to commercially viable products;
- The dti consider making Workplace Challenge-type support available at highly subsidised rates to companies in the industry. Skills development facilitators should participate in these workshops.

### **Demand conditions**

Managing demand conditions requires being able to protect and grow both the domestic and export markets for South African metals and engineering companies.

In terms of domestic demand we propose that;

- The development of an early warning system utilising the existing Global Economic Strategy System (GESS) that links the dti, industry associations and individual companies. This would analyse import penetration as well as export trends by

product line. This would enable industry associations together with companies to proactively identify areas in which they may be under threat and therefore bring applications for relief to the International Trade Administration Commission (ITAC);

- Parastatal, national, provincial and local government procurement from local manufacturers be mandatory and that in instances that they choose to source from foreign sources they be required to prove that no local capacity exists to meet the order;
- Industry associations engage government departments and parastatals with a view to smoothing the demand cycle to ensure both that there is regular demand in the industry as well as ensuring that the work does not go 'off-shore' because South African companies do not have the capacity to meet a once-off large order. A better management of demand would ensure that the entire order can be met over a longer time period within the existing capacity of the industry. Furthermore, it is likely that increased predictability will result in a steady conversion of atypical work into more permanent positions.
- All government departments be compelled to report on the breakdown of their expenditure between South African and foreign sources.

In terms of export demand we recommend the following;

- That the dti, the customs commissioners office, together with industry associations undertake a proactive drive to register companies as exporters;
- The dti regularly supply industry associations with information on significant export markets. Industry association in turn disseminate this information to members both through news letters as well as quarterly briefing sessions with companies. This interaction will serve to get more intelligence to companies, strengthen industry associations and provide a platform for dialogue between companies.

We further suggest that Skills Development Facilitators and Skills Development Advisors are regularly exposed to both import penetration and export demand information, as they are in regular contact with companies and could potentially constitute an ongoing source of information provision to companies.

### **Operating environment**

We recommend a series of initiatives to ensure that employment creation becomes part of the daily performance of government, company and trade union officials, this includes the creation

of an ‘employment-creators’ award. Put most simply, our detailed recommendations seek to ensure that the question; “What does this mean for employment creation?” becomes foremost in the minds of every individual making decisions about procurement and dispensing of supply-side measures.

### **Government leadership and co-ordination**

We recommend the following;

- ❑ TISA create a department for the implementation of the strategic recommendations contained in this report
- ❑ Improved co-ordination of government initiatives.

### **Sector co-ordination**

We recommend that each sector convene a small forum composed of business, labour, Merseta, MEIBC and TISA representatives to ensure the implementation of this strategy.

### **Transformation**

We recommend the adoption of targeted programmes to fast-track the promotion of employment equity and that progress be benchmarked and monitored.

### **Towards implementation**

Throughout this report we propose numerous interventions to strengthen the employment creating potential of the metal and engineering industry. Many of these recommendations will be implemented concurrently and some may have longer time-frames (for example ensuring the smoothing of public sector and infrastructure demand cycles). However we believe that there are a number of recommendations that could literally be implemented within the next 6 months. It is to these that we now turn our attention.

Central to meeting the challenge of employment creation is strengthening the co-operation between the social partners to identify areas of threat and opportunity. Accordingly we believe that it is a priority that the dti in collaboration with TISA implement our recommendation to develop, distribute and communicate quarterly sector performance reports.

These results of these reports, in particular the identification of sectors and sub-sectors that are experiencing fast-growing import penetration and in which the potential exists to grow

export markets, should be presented by the dti/TISA to quarterly meetings convened by industry associations or existing Export Councils. This will serve to:

- ❑ Immediately strengthen the level of competitive intelligence available to the industry to develop strategy;
- ❑ Increase the level of dialogue between industry associations and dti/TISA about opportunities and threats present in the industry;
- ❑ Start to position the industry associations as institutions in which strategic discussions about the future of the individual sectors occur; and
- ❑ Provide a flow of information critical to the types of collaboration detailed in the below chapters that have led to sector growth.

While dti and TISA hold the responsibility for the analysis and presentation of the data, industry associations will hold the responsibility for convening the meetings. Industry associations will need to ensure that company representatives and Skills Development Facilitators and Advisors attend these meetings. The information dissemination that occurs at these meetings lays the foundation for the next steps required in strengthening employment creation namely growing export markets and protecting domestic demand. For this to happen the following is necessary:

- ❑ First, the dti and industry associations should use these quarterly workshops as a vehicle to register more companies as exporters as a step towards increasing the export base of the sector; and
- ❑ Second, companies and industry associations must use the information provided to identify areas in which they may be under threat and, on the basis of this information, apply to ITAC in cases that there are sectors are under threat. Linked to this the dti needs to strengthen the capacity of industry associations to create awareness of and the ability to bring cases to the ITAC.

We believe that this first step will:

- ❑ Provide the informational base critical to addressing the employment challenges faced by the industry and can be implemented both easily and at relatively low cost. Linked to this recommendation is the extension of Skills Development Facilitators and Advisors' existing roles. The SDFs and SDAs currently form a vital point of contact between government institutions, the SETAs and companies. We believe that by exposing these people to a broader range of information we would be able to expand

the level of information that companies have access to. In addition to the quarterly meeting discussed above, we recommend that the dti and TISA convene bi-annual meetings with the SDFs and SDAs to inform them of major industry trends, new supply-side measures and procedures for accessing such measures; and

- Create pressure on government to improve the administration of ITAC as it will undoubtedly receive more applications as industry's awareness of the need for and possibility of bringing applications to the body exists.

Our analysis has identified that domestic demand remains critical to the success of the majority of companies in the metals and engineering industry. We believe as a second critical step in implementing this strategy; Nedlac's Trade and Industry Chamber needs to meet with appropriate government departments with a view to establishing obligations on government and parastatals to:

- Give procurement preferences to domestic manufacturers; and
- Report and explain instances where tenders are awarded to foreign manufacturers.

Critical to implementing these first steps as well as driving the remainder of the strategy is the development of appropriate levels of capacity within the dti and TISA. Accordingly we recommend the immediate establishment of a unit or working team that will be responsible for the implementation of this strategy and should be regularly measured against its progress.