increasing export volumes. Firms in growth sectors (e.g. automotive components, stainless steel tanks, pipes and tubes, structural steel, wire and wire rope) have commenced hiring staff to cope with expanded production, but the levels of hiring are slight. Overall export sales growth has been modest, due to the structural problems besetting the global economy; namely Japan's recession, very sluggish growth in the EU, and the US economy's spluttering growth (Moneymax:14/02/03).

That growth in exports has occurred at all, is a credit to the renewed strength of the South African economy, bolstered by successful restructuring in the sector, restrained government spending and some key policies such as the MIDP. However, employment growth as a result of exports has been slight, due partly to the global economy and partly to the low levels of capacity utilisation and less labour intensive nature of the light and heavy engineering sector. Both of these manufacturing process factors are ironically the result of the restructuring that occurred in the sector during the 1990's. Although they could also fuel fairly rapid export growth - global conditions permitting - the growth would have to be sustained to have a significant effect on employment. Possible impediments to the optimisation of exports as a positive trend driver are the uncertain future of the Rand and likewise the global economy, as well as the capacity of the South African light and heavy engineering sector to sustain such growth, both in capital and labour terms.

To briefly explore these possible impediments in more detail: the Rand's weakness has been a blessing to exporters, but its current appreciation may cut short exporters' price advantages. Secondly, the global economy is not set for immediate growth, or even strong growth, due to structural problems. These include record levels of corporate and individual debt in the US, following years of over-consumption and over-investment, but particularly since the 1998 emerging market crisis; bank problems dating from the late 1980s in Japan and labour market rigidities and government deficit problems in Europe. These factors mitigate against a return to the growth levels experienced during the 1990's and would probably allow for only modest growth over the next five years. Lastly, the domestic sector could run out of production capacity if enough fresh investments are not made, however, this is unlikely as firms are investing slowly, waiting until excess capacity is taken up and are concerned about the high interest rates. Labour capacity is also a potential impediment to sustained growth, with many firms operating at minimum employment levels. Rehiring may expose and exacerbate skills deficits, particularly as regards artisans and project managers.

Capacity utilisation – The majority of firms interviewed claim to be running at around 65% of maximum capacity. As a result, although most sub-sectors are expecting growth to remain fairly strong in 2003 and 2004, they expect to be able to absorb the increased demand by utilising current staff and machinery in the short term. Therefore increased demand over the short-term may not result in immediate employment growth. Further demand over the medium-term (perhaps 2004-2005) will then result in further hiring. However firms are not investing presently in sufficient additional capacity to cope with any sustained increase in demand. After the last 10 years of sluggish growth they are cautious. However, due to the lag between investment decisions and installation pf physical capacity on the ground it is necessary for firms to make prompt investment decisions in order to not cut short increased growth trends. In many cases investment in sectors precedes and prompts further growth.

Employment decline – Both qualitative and quantitative investigations suggest a stabilisation of employment levels, with the decrease experienced over the last 10 years levelling off and even a slight growth being experienced in some sub-sectors. Many firms surveyed had not retrenched staff during the last three years. The slowing employment decline seems to be borne out by the fact that most firms have allowed employment levels to decrease over the last five years through natural attrition alone, rather than direct retrenchments. The majority of firms report that employment is at an optimum level and that any increase in demand will be met with increased employment. Even in cases of increased automation, firms are not planning to retrench staff, but rather to retrain them. It is therefore not expected that the current stabilisation will turn into a renewed decline, unless global trading conditions worsen.

Employment growth - Most firms have steadily decreased employment over the last ten years (either through natural attrition or retrenchments) to minimum operational levels in order to promote competitiveness via cost-cutting and capital upgrades. This pursuit of competitiveness through labour reduction and increased capital utilisation has been a negative trend driver. Factors currently impeding the resolution of this trend include the nature of the restructuring that has occurred locally, continued modest growth domestically and increased competition globally in an uncertain global economic climate. An example of this is the fact that productivity gains make further employment losses in the automotive assembly sector likely and the potential for employment growth will be primarily in the less capital intensive component sector.

As a result, however, firms are running at minimum employment levels and will not be able to handle increases in demand without resorting to hiring. As noted above, the fact that firms are largely operating below capacity means that there will be a lag of perhaps six to nine months between increased demand and increased employment. This is an impediment to the optimisation of increased employment and output growth. Firms noted however that solid economic growth domestically would be the primary driver for new hiring. Export growth has been very useful in supplementing sluggish or flat domestic earnings, but most firms still record the majority of their earnings domestically. The incidence of labour contracting has also increased.

Growing export sales is still seen as the major route to employment creation in the South African economy. The export side of this equation has largely been achieved but employment growth has been disappointing. Research from this study and others indicates that firms have slimmed down, rationalised and improved labour productivity in order to export. This transitional phase has largely been completed, so it is possible that renewed export growth will now trigger employment growth. The bulk of exporting has also not been in particularly labour intensive sectors. This means that the recent phases of employment decline, followed by jobless growth, could now give way to employment creation. A cautionary note should be struck however, in that the process of competitiveness upgrading which occurred during the period of restructuring has produced an industry that is both less labour absorptive and less labour intensive. Technology and manufacturing processes have been changed to achieve export competitiveness and now achieve higher levels of output with fewer workers, so a return to previous levels of employment is highly unlikely unless growth of over 6% is achieved. This development is however preferable to the path of declining competitiveness which South African industry was following previously. Without the adjustments of the last ten years, the eventual survival of entire industries would have been in doubt. Although South African firms are now globally competitive, it is likely that steady growth will only lead to modest employment creation due to the factors noted above. However, even modest growth will necessitate capacity increases.

Labour legislation – Respondents across the board have cited retrenchment clauses in the labour legislation as an impediment to hiring permanent staff. Firms would rather use overtime pay or labour brokers than 'risk' hiring new staff. Wage rates are ironically not seen as problematic, with very few respondents noting them as a negative trend driver.

Exchange rates - Light and Heavy engineering relies on imported machinery for upgrades – about 60% of the imported machinery components are imported - and therefore costs are dependent on exchange rates. However, retooling and machinery upgrades are infrequent, whereas the losses experienced by a stronger Rand to export orders are continuous. The majority of firms interviewed had successfully entered the export market and were experiencing renewed growth. Respondents also predicted increased export sales and revenue over the next five years, with attendant employment growth. Exporters were anxious however that they would not be able to compete against other developing countries, especially India and China, if the exchange rate continued to improve. The effective devaluation of the currency over the last two years has acted as a classic boost to exports' competitiveness. However sharp drops in the exchange rate were also seen as unhelpful, as they increased uncertainty and placed strain on annual costs and forecasts.

Associations – Industry associations do not appear to play a main role in marketing, analysis or policy support. They largely confine their activities to industrial relations and human resources. Exceptions are the automotive and stainless steel sub-sectors, where the associations play an active role in analysing the industry, assessing drivers and attempting to build consensus around industry interventions among their membership. Such interventions have been highly successful in these sub-sectors, for example outstanding growth in the stainless steel industry has been achieved just two years after the establishment of the Stainless Steel Co-operative Development Initiative (SSCDI) in 1999. The SSCDI aims at facilitating growth in the industry, identifying market drivers, managing relevant research, encouraging investment and supporting stainless-steel-related activities. The results achieved show the value of proactively driving industry development through targeted initiatives, with the involvement of all major stakeholders in the industry. SASSDA plans to maintain growth rates by expanding development initiatives. Other successful examples of allied organisations are those of the Automotive Industry Development Centre (AIDC) and the Fabrication Industry Development Centre (FIDC), which operates in conjunction with the Pressure Vessels Manufacturers Association. These organisations are allied to the associations and operate with specific mandates. In the case of the AIDC, it is to investigate resolutions to current and future impediments and in the case of the FIDC it is to actively build supplier relationships between the industry and one of its main clients, Sasol. A new co-operative agreement has also been set up in the structural steel sector called South African Incorporated. This is a concept which will pool the skills of consulting engineers, civil and steel contractors, members from the engineering export councils and financial institutions in South Africa. The concept, proposed last year, has been well-received by the Department of Trade and Industry and Trade and Investment South Africa (Engineering News: 17/01/03). This initiative is intended to execute projects in Africa in general, but particularly projects generated by NEPAD.

Furthermore, in efforts to guide the development of the steel construction industry, the South African Institute of Steel Construction (SAISC) established a Steel Contractors Working Committee in November 2002, which will launch a fully-fledged programme to develop the industry by 2004. This will promote increased technical ability and project conceptualisation among steelwork contractors.

The various models noted above may be of significant application in other industries. In many cases, South African industry has visibly benefited from these interventions, with resulting growth in competitiveness, sales and employment. Such interventions comprise positive trend drivers. However, often industry infighting, ignorance and tough trading conditions make stakeholders wary of cooperating. Such developments also appear to require a catalyst or central driving force/individual. Government and industry associations have the ability jointly to perform this function, thus clearing away any such impediments to the optimisation of this positive trend driver.

Tariffs – Tariff barriers were not raised as a serious constraint by respondents, although local content restrictions in some African countries were a problem due to local inability to produce quality inputs. However, import tariffs in many sub-sectors have been lowered to below the WTO thresholds required and could be raised again in the case of industries which are struggling. Government seems to have a policy of only lowering tariffs and seldom uses them as a protective measure except in the extreme case of dumping. Steel product producers are however very careful when exporting to the EU and the US to remain below the thresholds set for South African goods. The recent decision by the US to impose 30% steel duties has not however affected South African exports. To date South African exports are exempt from this duty.

As noted in the report, export drives do not necessarily lead to increased employment. The research quoted shows that small firms have not shed jobs as fast as large firms when facing import competition and decreased tariffs.

Automotive components *(examined separately due to its identification by government as a key economic driver)* Based on competitive advantages and improvements in productivity levels, the Institute for Management Development in Switzerland, which compiles a listing of world competitiveness rankings, has placed South Africa in 42nd position. South Africa is currently the only African country on the list. Partly as a result of improved productivity, South African automotive manufacturers were able to penetrate the demanding markets of Japan and the US in 2000. Studies show that profitability and return on capital in the South African vehicle-manufacturing industry in aggregate terms are now in line with international norms (Creamer: 2002:26). The extension of the MIDP to 2012 has been received very positively by South African automotive manufacturers. For example, management at Nissan South African was clear in their praise for the extension of the MIDP to 2012. They believe it has given vision, direction and sustainability to the industry and allows Nissan South African to bid for export orders outside of Africa.

The quantitative export success of the MIDP is not in doubt, but while government has welcomed the rapid expansion of exports of “commodity” products such as automotive leather, catalytic converters and wheels this development has also raises policy concerns. These relate firstly to the sustainability of the rapid export expansion that has taken place and secondly, the rapid increase in duty free importation, which has potential dangers for the automotive components sub-sector. A third concern is the implications for the overall maturation of the industry if firms select the short-run expedient strategy of developing large scale exports of ‘peripheral’ components instead of reducing their cost base by expanding vehicle exports and localising major components through domestic manufacturers (Black, 2001).

Rationalisation is also vital to further growth in the components and assembly sub-sectors. The cost premiums incurred by component makers for producing a wide range of products at low volume are very high. In most cases, domestic production of large volumes depends on exports which in turn require integration with the OEM's and then allocation from the parent company. Rising production efficiencies, pressure on local margins as well as clear government policies are necessary to force the hand of the parent company. Present indications suggest that more firms may choose this route, which could act as a catalyst for direct investment by foreign first tier suppliers. Thus further integration or purchase by OEM's may see ownership transferred to the OEM's, but it secures export orders and supply orders.

Government should encourage further rationalisation of models within the assembly industry and may wish to facilitate a wider spread of component exports. Greater pressure has been placed on component suppliers relative to the assemblers. Suppliers have had to meet increasingly stringent pricing demands regardless of low domestic volumes. The result has to some extent been the emergence of dualism in the sector - the growth of a large export sector which is not very closely integrated with the remaining low-volume, low local content assembly industry supplying the domestic market. Parts of the 'traditional' component industry have not been able to adjust and have contracted (Black, 2001). Large production volumes are the key and the Australian case is of interest here. In the Australian car plan, government imposed penalties in the form of a reduced duty-free allowance for vehicle models, which did not achieve specified volumes (Automotive Industry Authority, 1992, cited in Black, 2001). This type of policy was considered during the introduction of the MIDP and also in the Mid Term Review but was never implemented due to opposition from vehicle assemblers and also the implications for free trade agreements being negotiated in the Southern African Development Community (SADC). To encourage employment growth, large volumes, and continued investment by the OEM's are the key drivers of growth.

The MIDP review actions of reducing export credits by more (30%) than the reduction in import duties (5%) should encourage further export production and competitiveness, which in turn should translate into increased employment. It also should ironically serve to increase protection slightly for the domestic industry, thus giving them more time to match global competitiveness (Black, 2002). If this growth increases the export integration of more sectors of the component industry, then employment may increase.

Automation – With few exceptions, firms across the sector noted a move towards automation and capital intensive manufacture over the last five years. Automation is undertaken not necessarily to directly replace existing workers, but to increase production capacity and throughput times in order to meet increased demand without having to hire additional staff. In this sense the net effect is the same in the long run, in that potential workers are bypassed in favour of automation. This is a conscious decision by many firms, with most companies being emphatic that they would resort to complicated financing and installation processes rather than hire a single person more than they have to. Labour is seen as too expensive, either through slow productivity increases, but primarily through the cost of retrenchments, i.e. in many sectors work volumes are cyclical or project based and companies cannot afford to hire staff because it will be too expensive to retrench them when the cycle turns down or there is a lull between projects. The solution is either automation or the use of labour brokers and overtime. Firms will only hire when they have exceeded current machinery capacity, and are not in a position to automate further. Capital outlays for automation are not seen as dangerous because the depreciation rate is seen as predictable, decreasing each year, (especially given South Africa's flexible depreciation regime) whereas labour is seen as unpredictable and labour costs rise each year. A concern is that with advances in technology machinery costs are also falling, making automation increasingly viable even for smaller firms. Machinery also allows for more consistent quality levels. However, it should be noted that in some sectors, such as automotive manufacture, automation is largely due to increased customer specifications (in terms of quality and reliability) and is not predicated upon decreasing labour inputs per se.

A distinction must also be made between automation to replace workers and equipment upgrades due to a desire to increase production volumes and throughput rates (as examined above under 'capital upgrades'). Equipment upgrades are often made in order to match increased customer specifications or too increase market share through attempts to match or beat competitors' technological or quality levels. However even equipment upgrades often come at the cost of jobs, although the impact is minimal. Firms will however have to hire more staff if consistent domestic growth is experienced, because ongoing capital upgrades would increase credit liability, even with the falling cost of technology, due to the imported nature of most automated production lines. It is not a question of skills or wage costs that has convinced firms to avoid hiring, but the cost of laying off new staff if needs be. Firms only use labour brokering and over-time because they don't want to hire additional permanent staff. Labour brokering and overtime are not seen as ideal solutions to the issue of workforce flexibility by firms. Most respondents were positive about hiring if retrenchments were not such an issue. It should be noted that these opinions were expressed across the entire spectrum of light and heavy engineering. This would possibly explain (together with sluggish growth) the phenomenon of jobless growth which has been experienced by most of the sector.

As noted in the comments on capital/labour intensity, it is also possible that the current structure of manufacturing favours the utilisation of capital over labour. The skills shortage reappears as an issue in that firms perceive capital intensive growth as their only option of increasing productivity and output.

8 RECOMMENDATIONS

When formulating an appropriate medium to long term strategy for this sector, it must be considered that although there are common issues across the two primary sub-sectors (automotive components and metal products and fabrication) within the heavy and light engineering sector, there are also marketed differences.

The performance of the automotive sector and the influential role of the MIDP obscures to a large extent an understanding of the rest of the heavy and light engineering sector that has had a dramatically different experience. While the automotive industry is undoubtedly volume driven, experiencing considerable import penetration as well as dramatically growing exports, the metal products industry has had a very different experience, trading on the basis of lower volumes. It would appear that both sub-sectors are beginning to enjoy some employment growth. However, there is little indication of rapid employment growth notwithstanding the relative health of these sectors.

8.1 Vision

There is therefore no over-arching growth strategy recommended for the sector as a whole. Instead two distinct long-term visions for the two sub-sectors are defined, with a set of strategic objectives and interventions.

What follows is therefore the respective visions followed by a number of recommendations including objectives specific to the sub-sectors. Although some strategic objectives are thematically similar within the sub-sectors, the associated interventions (e.g. management and stimulation of domestic demand, export growth etc) are so different that they are dealt with separately. The strategy and interventions proposed in this document aim to compliment the various initiatives and interventions already in place.

The medium to long-term (5 to 10 year) vision of the automotive components sub-sector is the translation of the benefits of the MIDP into sector-wide benefits and the increase in production volumes with accompanying competitive economies of scale.

The medium to long-term (5 to 10 year) vision of the metals and products sub-sector is the continued transformation towards value-added products for specific markets, achieved through micro-level interventions, with the attendant aim of retaining domestic market share whilst growing exports.

Strategic objectives relevant to all sub-sectors within the **heavy and light engineering sector:**

a) Address the potentially worsening skills shortage

b) Strengthen initiatives to transform the labour market

c) Resolve the contribution of import parity pricing as a contributor / inhibitor of competitiveness

d) Develop transition strategies for companies at risk

e) Increase competitiveness in order to expand export and domestic markets and demand

Strategic objectives pertinent to the **automotive components sub-sector:**

a) Deepen domestic sourcing and diversify component exports

b) Rationalise production of models and achieve economies of scale

c) Pro-actively manage and stimulate domestic demand

Strategic objectives pertinent to the **metal products and fabrication sub-sector:**

a) Pro-actively manage and stimulate domestic demand

b) Assist companies in moving towards innovation in products and services

c) Strengthen collaboration and partnerships

d) Grow exports

8.2 Supply side factors

8.2.1 Address the potentially worsening skills shortage

This study indicated that skills are increasingly in short supply, especially for engineering and design skills. Although companies have managed to accommodate the skills shortage to date, they have experienced increasing difficulties locating skilled staff over the last two years. This trend is expected to worsen, since the labour pool that became available after years of retrenchment has now largely been re-absorbed in either this sector and other sectors This means that further economic growth will expose the availability of skills as a significant problem in this sector.

A number of interventions aimed at pro-actively managing the situation before it becomes a crisis are recommended:

Facilitate a needs analysis in various sectors and increased uptake of skills development levy and learnerships

This will require close co-operation between industry and the Merseta and the possibility of conducting a skills audit to combine a synthesis of workplace skill plans with sector skill plans should be considered. Along these lines, the SDL and workplace skills plans administration should be simplified.

Renewed efforts need to be made to market the SDL to firms in order to increase the uptake of SDL usage and learnerships. Large firms need to be researched in order to establish exactly what their needs are and small firms need to be informed of the processes and advantages of using the SDL. The range of activities covered by the SDL should perhaps be broadened. Associations should be utilised to raise further awareness of the multiplier effects of increased skills in the workplace.

Responsibility: the Merseta, dti

Fast-track immigration procedures to allow for an interim supply of specialised skilled labour

Although there is general agreement that the Merseta will address the backlog of skills development, it may be up to a decade before this is fully addressed. In the interim, the skills gap can be bridged through temporary importation of skills, which will also have the secondary benefit of skills transfer to local industry. Immigration procedures should therefore be fast-tracked to allow foreign skills to fill the gap in the interim. Increased training of local employees would be run in parallel, in order to limit the length of this measure and take advantage of skills transfer. The industry associations and unions should liaise with the Department of Labour on the need and specific requirements for revised immigration policy and procedures.

Responsibility: the Merseta, industry associations, trade unions, Department of Labour

Improve the Merseta's processes

Although it is acknowledged that the Merseta required time to become functionally operational, there is consensus that there is now an immediate requirement for the Merseta to build on existing performance and improve operational processes and timelines. The Merseta support initiatives should be urgently speeded up and expanded in scope and depth.

It is important that the Merseta identify the problems experienced by the various types of companies. Large companies indicated that their needs in terms of types of skills not being met whereas SMMEs indicated that the SDL is cumbersome and not worth administratively not worth it.

Responsibility: the Merseta

Establish training and skills accord/s

These would bring together all stakeholders within either society or industry or at a sectoral level. These accords would result in agreements from all parties on the need for training and concrete measures to roll out increased training within sectors/industries/society. Examples of such measures could be a commitment by parastatals to run training schools/colleges as was the case in the 1970's.

Responsibility: social partners

8.2.2 Resolve the contribution of import parity pricing as a driver / impeder of competitiveness

The case of import parity pricing needs to be effectively dealt with because the current price of steel, and increasingly stainless steel as well, is seen by many firms as a serious negative trend driver. The negative trend in this case is a decrease in competitiveness due to rising input costs. Large and small firms across all sectors are complaining about this trend. Although efforts have been made to incorporate a rebate for exporters, what is of concern is that these measures are not extensive and do not apply to manufacturers for the domestic market. A starting point would be for such measures to be maximised and extended to domestic market manufacturers.

The sector summit must urgently address this as a priority concern and support South African downstream industry while it continues to upgrade its competitiveness.

Responsibility: dti/TISA, Nedlac

8.3 Manufacturing processes

8.3.1 Develop transition strategies for companies and sectors at risk

Integrate and enhance current government SMME support programmes

Although the general opinion is that government support programmes for SMMEs are comprehensive, the uptake thereof - with the exception of the Small and Medium Enterprise Development Programme (SMEDP) as discussed - is extremely low. Although awareness is a large problem, it has also become clear that these programmes may be too fragmented and cumbersome to access. These issues are addressed in more detail elsewhere and it is concluded that the dti, in collaboration with other government departments such as DST should consolidate and rationalise these programmes, as well as look into the administrative procedures and requirements for SMMEs to access them.

Responsibility: dti, Department of Science and Technology

Establish an "early warning" system which monitors imports and identifies categories in which import penetration is growing rapidly

Companies in low technology sectors, especially in metal products have experienced and will continue to experience the threat of imports, especially from India and China. Such companies will have to either re-orientate themselves towards value-added products or be prepared to face continued price-pressure, which can probably only be achieved if significant economies of scale are achieved on the back of global exports.

The objective of this intervention is to provide South African manufacturers with information around imported products that are rapidly gaining market share. Sufficient information about these products (volumes being imported, targeted markets, value per tonne etc) must be collected and disseminated into the industry to ensure that manufacturers can make informed decisions around their ability to compete against such products over the long-term.

This could be done by the Industrial Development Corporation, as in the case of its analysis of the stainless steel sub-sector which led to successful intervention in the sub-sector Industry associations, such as SEIFSA and other stakeholder groups should provide support to such an initiative and be the vehicle to disseminate information into industry. Research such as this can contribute to informed discussion which seeks to retain employment and stabilise the sector, rather than allow it to decline.

Responsibility: IDC, industry associations

Increase duties to WTO agreed thresholds on products that are directly threatening the survival of various sub-sectors, e.g. the hand tools manufacturing sub-sector.

This would entail utilisation of a ‘safeguard’ measure, and so government should increase its efforts in the upcoming round of global trade talks to secure this as a right for developing countries. These are not anti-dumping measures but precise interventions which allow for the raising of tariffs to *WTO binding rates* in the first instance, in order to temporarily protect a specific sub-sector or product category that is in transition, and is under severe threat of collapse from import pressure.

Responsibility: dti

8.3.2 Assist companies moving towards innovation in products and services

Create awareness within industry regarding incentive programmes related to innovation

The first action required is to initiate an extensive awareness campaign on relevant programmes such as THRIPP, The Innovation Fund and SPII. The dti and SEIFSA should drive this. Awareness is currently terribly low.

Responsibility: dti, industry associations

Increase incentives for activity downstream from the research activity

This relates to additional incentives and support to facilitate the translation (commercialisation) of new ideas and research into technologies and products and cover activities such as prototyping, tooling, testing, etc. Most incentives currently focus strongly on the research component of the innovation cycle and evidence was found that many innovations do not reach market stage due to cost barriers during the commercialisation phase.

The possible introduction of a system of progressive tax relief as new ideas are commercialised was also raised in this and other studies as a possible option and should be further investigated.

Responsibility: dti

Strengthen THRIP, SPII and the Innovation Fund through increased funding and streamlining

Although uptake of THRIPP, SPII and the Innovation Fund are low, various other studies have found that in general they are working well in stimulating industry demand for research. Some criticism is levied at the fact that approval mechanisms are slow and unwieldy. The model of these funds does however appear to be sound and suggestions are that a process of streamlining with an increase of funding would have a direct impact on stimulating industry demand for research.

Responsibility: dti

Investigate the link between capital intensity and tax measures

South Africa appears to have a disproportionately high capital to labour ratio. This is as a result of the specific form of industrialisation assumed under Apartheid's import substituting industrial strategies. Research should be conducted into the balance between capital and labour incentives, e.g. tax measures that allow for rapid depreciation of capital equipment but end up creating a 'pro-capital intensive production' bias. The playing fields should be level between the two, or even slightly biased toward labour intensive production technologies and processes. With few exceptions, most sectors do not have to follow a highly capital intensive route and once this path is followed, it places firms under financial pressure to cut other costs, such as labour.

Responsibility: FRIDGE

Develop the Merseta courses in value chain linkages and competitiveness

Most firms are unaware of the potential competitiveness enhancements which can be unlocked by closer integration, co-operation and co-ordination within their specific value chain. Competitiveness improvements are largely ad hoc and are not sequenced within value chains. Poor linkages in the value chain causes wastage, inefficiencies and higher final prices. Global and domestic competitiveness can easily be enhanced by training firms in these matters. Dti has already run pilots within the metals sector, including the production of training materials. The Merseta and industry associations are ideally placed to implement such programmes, which could be SAQA or SDL accredited.

Responsibility: the Merseta, industry associations

8.4 Demand conditions

8.4.1 Domestic demand: autos - deepen domestic sourcing and diversify component exports

As mentioned previously, the result of the MIDP is that although significant (R 19 billion) worth of automotive products are exported, the corresponding imports reduce opportunities for domestic component manufacturers. The result is lower local content in vehicles being manufactured and more domestic demand taken up for fully built-up imports. In addition, export sales are not neutral in composition, with three products (catalytic converters, leather seats and wheels) accounting for more than 60% of exports. The study also indicated that employment creation is not primarily driven by large exporters, implying that broadening the export base should have a positive impact on employment creation.

The following interventions aimed at deepening the domestic source base and diversifying exports are recommended:

Lower unit costs for mainstream local component manufacturers by increasing mainstream economies of scale

Local component and original equipment manufacturers as well as assemblers should aim to increase the volumes produced of both exported built up vehicles and exported components, in order to achieve rationalised economies of scale, which will improve competitiveness, thus enabling the industry to handle the phase-down of the MIDP. Although one of the key goals of the MIDP, this has not yet been achieved. Revitalisation of the Motor Industry Development Council could facilitate closer co-operation between all stakeholders.

Responsibility: Motor Industry Development Council, dti

Re-attempt the implementation of the cap on catalytic converter export value and the sliding scale on the value of exports

This would allow the dti to influence the composition of component exports and move the industry away from a focus only on a few high-value items, towards a broader component export base, thus generating sector-wide benefits. Essentially this also means introducing a qualitative element to import credit usage in order to diffuse the concentration of benefits under the MIDP.

Responsibility: dti

8.4.2 Domestic demand: autos - Proactively manage and stimulate domestic demand

Although it was determined that domestic demand over the long term is essentially a function of the overall state of the economy and specifically GDP growth, there are a number of actions that can be taken to stimulate domestic demand even further. Some of them, such as the requirement to reduce vehicle models and increase volumes, as well as the implementation of programmes to assist companies at risk, have been discussed, the following could also be considered:

Work with the local industry to reduce overall new car prices

This could take the form of innovative pricing arrangements or the production of a low technology, low frills, lower cost entry-level version of certain popular models combined with a marketing campaign aimed at lower middle income and working class families. Tax measures could be introduced to support increased depreciation for equipment used in the production of these model/s.

Responsibility: dti, Nedlac, MIDC

Increase local content in vehicles manufactured

Although a move away from fixed quotas for local content was made as part of the MIDP, a 'watered down' version of this could be reintroduced in order to reduce the increasing imports of built-up-kits within the MIDP import credits scheme.

Responsibility: dti

Maintain import duties at MIDP review levels

Because initial MIDP assumptions of domestic GDP have not materialised, the MIDP needs to be further fine-tuned to incorporate these limitations in the 2007 adjustments. The import duties which have been lowered by 5% under the MIDP review should be maintained at this level until 2012, due to the continued sluggishness of the domestic economy, which has left some manufacturers unable to cope with the higher levels of imports under the import credit scheme. Coping strategies should be implemented by these firms in this time period.

Responsibility: dti

8.4.3 Domestic demand: metal products and fabrication - Pro-actively manage and stimulate domestic demand

A key factor for the future success of the metal products and fabrication sub-sector in the short to medium term will be how successfully it can not only protect domestic market share, but specifically capitalise on the large public and private sector capital investment programmes planned.

Although the key consideration here is the attainment of global competitiveness, there are also a number of specific interventions that should be pursued, as follows:

Actively lobby for Government to change the Preferential Procurement Policy Framework (PPPF) to include support for domestic manufacture

This is dealt with extensively in the over-arching section of this report. Essentially domestic manufacturers have the skills and capacity but are often overlooked in procurement in favour of foreign firms. Recent examples include planned IT purchases by government parastatals. A success story in this regard is the Fabrication Industry Development Centre and Sasol.

Responsibility: Treasury, Proudly South Africa (PSA)

Strengthen and support the implementation of the Proudly South African campaign

This is dealt with extensively in the over-arching section of this report. It is worth noting that this would have to specify local manufacture and assembly (local value add), in order to exclude 'short-cuts' by importers and distributors of foreign goods.

Responsibility: PSA

Develop a projects register

This would apply to all new public and private sector projects and would allow for greater certainty in the metal products and fabrication sectors around work volumes. This would go some way to reducing the cyclical nature of demand, and would therefore reduce the move toward atypical labour, as with certainty firms can retain more permanent employees. It would also increase the incentive for firms to train employees, as there would be certain of sufficient work to justify the time and expense. It would also allow for finance and logistical arrangements to be set up in advance, thereby increasing the capacity of South African firms to absorb increased project tenders, thereby keeping the work in South Africa.

Responsibility: PSA

Increase the capacity in South Africa to deal with dumping

With regard to illegal imports and dumping, these potential threats to local manufacturers do not seem to be very significant in the light and heavy engineering sector although there are some notable exceptions such as wire and wire products. However, where it has been encountered, respondents stated that customs and excise capacity is too low and corruption amongst these staff is seen as high. Anti-dumping capacity nationally is seen as woefully low. Anti-dumping processes are perceived to be too slow, with actual levels of protection undermined by the very slow process of approving such actions.

Responsibility: ITAC, industry association

8.4.4 Export demand: autos - rationalise production of models

Government to fast-track MIDP review recommendations regarding rationalising the number of models and achieving minimum volumes

The need for further rationalisation of models, probably to below 27 has been identified. It is recommended that government make a strong case for such reduction even before the next MIDP review and could even consider imposing penalties in the form of a reduced duty-free allowance for vehicle models, which did not achieve specified volumes. To encourage employment growth, large volumes, and continued investment from the OEM's are the key drivers of growth.

The impact of such rationalisation would be increased volumes and the achievement of economies of scale by a broader spectrum of automotive component suppliers.

Responsibility: dti

8.4.5 Export demand: metal products and fabrication – export assistance

A key future of the metal products and fabrication sub-sector was that many companies/ sub-sectors that are successfully exporting showed similar traits as follows:

- They have been able to utilise advantages of being able to do shorter production runs, frequent product changes, etc. associated with smaller and more labour intensive production facilities.
- They have been able to seek out niche markets, often within Africa
- Where collaborative initiatives were formed, there have been some spectacular successes (e.g. stainless steel's SSCDI)
- They have benefited from a weaker Rand
- They have a continuous need for information about international markets

In light of the above, the following interventions are recommended in order to disseminate some of these best practice activities broadly within this sector:

Assist companies to build export relationships in key territories through a network of TISA agents or representatives

dti has recently downgraded many foreign offices and recalled staff, as well as shutting others without apparent reference to industry needs. Foreign officers could play a pivotal role in matching exporters to customers and assisting SMMEs especially, to mange the transition to being an exporter for the first time.

Responsibility: dti

Increase the amount of relevant, topical information on export opportunities and markets available to firms (e.g. dti's Global Economic Strategy System)

An exporters' stakeholder forum should be set up which would be fed with information and analysis from this trade data system, which could pinpoint potential markets and reinforce efforts to penetrate existing markets. This would require dti to maintain and update the system on an ongoing basis, but could prove vital in focusing export forays and decreasing costly exporting failure rates.

Responsibility: dti

Strengthen export council capacity

Currently only a few Export Councils operate to their maximum potential. They should form a vital link in providing information, services and support to exporters, as well as linking them to other support initiatives and institutions.

Responsibility: dti, industry associations

Assist companies in becoming ISO 9000 and ISO 14 000 compliant

This is increasingly a pre-requisite for sales in developed country markets. Firms who do not have the internal capacity to become compliant should be assisted to do so. Increased export (and even domestic) orders and skills development will result.

Responsibility: dti

8.5 Operating environment

8.5.1 Strengthen collaboration and partnerships

Assist industry associations in redefining their role

It has been established that the industry associations do not appear in the main to play a role in marketing, analysis or policy support. They largely confine their activities to industrial relations and human resources. Exceptions are the automotive and stainless steel sub-sectors, where the associations play an active role in analysing the industry, assessing drivers and attempting to build consensus around industry interventions among their membership. These interventions have been highly successful in these sub-sectors, for example outstanding growth in the stainless steel industry has been achieved just two years after the establishment of the Stainless Steel Co-operative Development Initiative (SSCDI) in 1999. The Stainless Steel Tank Container Association is another part of this success. Another success story in this regard is the Fabrication Industry Development Centre (FIDC) and Sasol's Project Turbo requisitions.

The results achieved show the value of proactively driving industry development through targeted initiatives, with the involvement of all major stakeholders in the industry. Specific interventions aimed at facilitating collaborations and partnerships are recommended across the entire Metals and Engineering industry. These collaborations around specific issues are cost effective and can produce increased quality, competitiveness, demand and production. It is worth noting that in the stainless steel tanks case study, many analysts had written the sub-sector off and expected it to collapse.

It is recommended that dti or TISA fund sub-sector facilitators or champions, who could play a full time role in the establishment of such a structure. This person should be well respected and from within the industry. A good example is the role played by the FIDC facilitator in the progress made in the Sasol case. Such activities should be backed up by effective research into the sub-sector, which could be funded by government but sub-contracted to the private sector.

Responsibility: dti/ TISA

Assist enhancement of industry policy forum

Critics have noted that the Industrial Policy Forum is not delivering effective consensus or practical interventions. It is recommended that it be restructured along the lines of the successful Motor Industry Development Council. The forum has an important role to play and should be more active in assisting industry to grapple with the changes inherent in dti's new manufacturing strategy.

Responsibility: industry associations, trade unions

8.6 Transformation

8.6.1 Strengthen initiatives to transform the labour market

Two fundamental issues need to addressed:

- The need to speed up the transformation in terms of BEE and workforce composition to become representative of the demographics of South Africa
- The need to address issues around the increase of atypical employment and certain aspects of labour legislation which could be impeding growth

Initiate specific actions to speed up transformation

A number of actions need to be taken, as follows:

- Strengthen the Merseta's ability to fund and deliver management and strategic training to the previously disadvantaged. It is especially at managerial and leadership level where an urgent need exists to introduce and develop previously disadvantaged individuals
- Introduce specific interventions aimed at building engineering and management skills amongst women.
- Strengthen existing programmes to enhance the mobility of historically disadvantaged individuals in this sector, for example ABET programmes in SMMEs.

Responsibility: the Merseta

Investigate the link between growth in atypical labour and LRA requirements

It has been mentioned that labour brokering is highly evident in the metal construction, fabrication and products industry, whereas it is not a significant trend in the automotive components sector. The various concerns associated with labour brokering were highlighted throughout the study and it is sufficient to conclude that if retrenchment legislation amendments would be too detrimental to workers, then effective and prompt regulation of the labour brokering industry must occur – and be strictly enforced.

Responsibility: DoL