Enhancing education, training and skills outcomes in the manufacturing sector

Presentation to TIPS Dialogue

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National Business Initiative

Singizi CONSULTING AFRICA

Overview of demand

- DPME commissioned this study (funded by EPP) to explore ways in which the country can develop a steady supply of relevant skills for the manufacturing sector.
- As the South African economy has shifted to a more services-led economy, the manufacturing sector contribution to GDP decreased from 21% in 1994 to 13% in 2017. Manufacturing made the greatest sectoral contribution to GDP in 1994 but by 2017, manufacturing was the fourth largest contributor.
- Still important: Manufacturing is the fourth largest employer employing over 1 803 000 employees in 2017. Within manufacturing, the largest number of workers are employed as crafts /trades workers, followed by operators/assemblers then domestic/elementary occupations.

Overview of supply

- For reasons well known, particularly the influence of funding on programme provision, compared to Nated and NC(V) enrolment, occupational enrolment has constituted a very small fraction of enrolments in the TVET system over the years Of a cumulative total headcount enrolment of 3 208 803 over the six years, enrolment in occupational qualifications constituted only 4%.
- A high number of colleges offered programmes in this field, with 29 colleges offering programmes for a minimum of just one year and a maximum of six years. Majuba and Northlink colleges had the highest enrolment in this field and enrolled students for five of the six years under analysis.

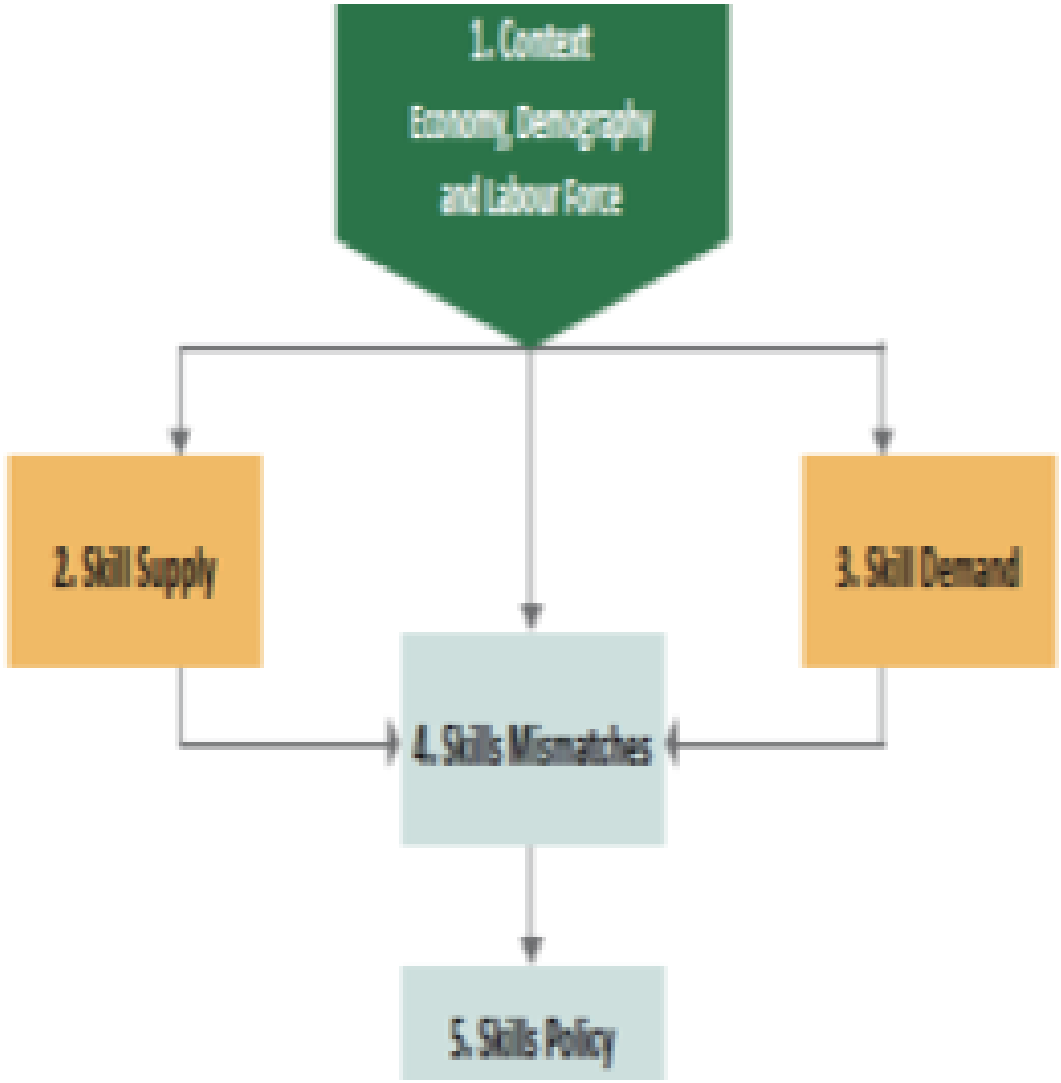
Key areas where mismatch is emerging

- Quality assurance, manufacturing engineering, metallurgist;
- Millwright, fitting and turning, electricians, boilermakers, instrumentation;
- Machine operator training and process trainees

Relationship between supply & demand is complex – many skills gaps can be caused by labour market, lack of information. poor signals and different forms of descrimination

Further even then skills, it could relate to selection criteria (issue of maths and science), lack of experience or a need for further specialisation.

There will always be skills gaps with changes in technology and innovation



Looking at the findings from the research in more detail

Key trends: Companies are doing it for themselves

- In most cases, companies have upgraded their own in-house training facilities to provide programmes (in one case a company built two training centres at a cost of R20m) as well as their internal capacity.
- Companies also introducing their own trade test centres.
- Companies explain that they trust their trainers to train their artisans in line with the required curriculum and to ensure they can be immediately productive within their own environments.
- Some of the companies are using their training centres to train community members in a range of skills to support entrepreneurship development.

Relationship with other providers

- The companies also work with private providers and some companies have assisted them in buying machinery for private training centres or have provided lecturers.

- This training was viewed positively by companies who were very happy with the quality of the training. There is a high level of interaction with private providers and constant feedback and changes (responsiveness) in event of technology changes.

- Overall, companies expressed their frustration with trying to build relations with colleges. They all indicated that they had sought to engage, offered to train the lecturers; offered them workplace exposure as well as for the learners to be exposed to both the workplace and training facilities and "we are still waiting".

TVET Colleges comment

- TVET colleges feel they are caught between government requirements, industry expectations and learner expectations – leading to a misalignment of expectations between all three.
- Colleges acknowledge that the curriculum is out of date and the speed to which technology is changing is putting them under increased pressure.
- Colleges point to the capacity of lecturers as being an issue.
- Colleges state that it is easy to set up partnerships but to maintain and keep all parties satisfied is a challenge.

Having an impact

- On individuals (unemployed prior to the programme and employed) – in terms of skills, work readiness, employment and promotions.

- On companies (building a pipeline in ways that increase skills of employees, focuses on building talent from within, allowed companies to grow through their engagement with young people and meet BBBEE score card).

Innovations: bringing in key cohorts

- Creating space for young people, ""the training is still new for them and they have just left school and they don't have the experience of being in a workplace or working shifts and there is a difference in lifestyle – we encourage them in slow steps." Another trainer adds, "I train them on how to behave in the workplace… we tell them what to expect and that there are policies and there are rules and regulations to follow…."
- There is also an increasing focus on existing employeees (as compared to initial focus on only pre-employed) and enabling progression: MerSETA focuses on "pairing"
- Large number of companies indicated that within this they are specifically trying to target women to enter manufacturing
- Two cited challenges and most confirm that there is a need to focus on addressing gender in the selection process (to avoid descrimination)

A focus on gender

Experiences of a young black woman in a manufacturing environment

- Thato (not her real name) had completed her N4 in electrical engineering from a TVET college in Gauteng and had been applying for apprenticeships but was told "In our industry we need men's power" and she was told "I would not make it."
- She heard about a learnership in window installation at a company in Springs through friends at the college and applied even though she had no idea what installation was. but "things changed when I did the learnership and I found a connection to aluminium installation."
- In the company she faced harassment from the men that she worked with while her immediate supervisor was not supportive. She recounts how the men would say she was doing men's work; the men tried to push her to date some guy while her coach spanked her on her behind while she was installing a shower door. "They started to report me and complained that I was not doing my job and was being too busy with boys on site."
- However, her mentor at the holding company was supportive and encouraged her to continue. This enabled her to complete her learnership and a year later she is now working in the training centre as an administrator but is also training and helping with practicals in the workshop. Since her learnership, she has gained a range of skills; has increased her salary and is about to go on a facilitator training course.

A focus on gender

First black woman production manager at a paper and pulp mill

- Bongi (not her real name) started at a paper and pulp mill as a process trainee in 1995 – the lowest entry level job at the mill and today she is responsible for supervising 52 employees - includes overseeing their training and on-going development.
- Started as a trainee. Then became an operator and later a process controller. She studies part time - doing a pulp and paper qualification up to N6 and studied a course in operations management through UNISA. Her career progressed to becoming a shift superintendent and then team leader plus additional management courses to the point of being promoted to a production manager position Climbing the ranks as a woman was challenging especially as the majority of her team members are men.
- As a production manager, she oversees four teams each of which has its own supervisor.. She explains that, "what we do is we roll out the objectives to the different teams". She comments that she works with a strong support system, which is a multidisciplinary team.
- In addition to her work - to ensure more women move into manufacturing she started a NGO - Sisters in Science for teenagers. She is trying to create awareness in her surrounding communities about getting young women to consider maths and science at school and to increase the visibility of women in engineering.

What it takes to succeed

- Sourcing, Selection process and criteria
- Building strategies for successfully targeting particular groups
- Putting in place strategies to absorb new entrants
- Planning the implementation of these programmes
- Creating space for Continuous Assessment
- Placing learners

Important take-aways

- CEOs (in the interviews undertaken by TIPS) suggested that there are a number of challenges with respect to the availability of certain skills (such as artisanal skills and specifically industry-specific and firm-specific skills), the quality of provision and specifically the absence of sufficient practical experience
- Companies are engaged in training – and very focused training – as they have realised that "buying" skills externally has become expensive and in the medium to long term it is more cost effective to develop internally so as to ensure the skills meet the firm- specific needs as well as ensuring that employees fit in with the company culture and values.
- Real skills challenge relates to inadequate levels of specialisation plus the lack of, or absence of, foundational skills (maths and science), a lack of work- readiness and the quality of learners emerging from schools and colleges. Hence the mismatch is more about the quality of provision than the lack of qualified individuals.

Important take-aways

- Most companies will still recruit from TVET colleges (whether it is for learnerships or other programmes) and one company commented that they were getting good support from the college and were happy with the learners they were getting through the college.
- Further this research also found evidence that TVET colleges recognise the complexities associated with their partnerships with companies and are willing to work with companies and the Department of Higher Education and Training to seek ways to resolve these issues.
- That companies have built their own capacity and also rely on some private providers and they are still willing to enter into partnerships with colleges on the proviso that the TVET colleges demonstrate a commitment to these partnerships
- That some TVET colleges already have state- of- the- art equipment that could support practical training and that others will be acquiring additional equipment as part of the Centres of Specialisation initiative for 13 trades; and,

In thinking through what is needed -

- The PSET Plan highlights that TVET colleges can offer more occupational programmes (funded by the fiscus and levy) and the National Skills Development Plan also states a commitment to enabling this through the NSF and SETA funding.
- Not just about training: other factors that need to be considered include: current and future growth of the manufacturing sector, changing technology and workplace reorganisation, the imperative for transformation, the demand for higher level skills in the sector as well as the expectations of graduates, conditions of service as well as their levels of work- readiness.
- REAL research focusing on impact of TVET on prodictivity, transformation of firms and inclusive growth will assist to inform the different interventions

Some recommendations being explored : within the context of different models of skills formation

Companies should be encouraged to work with colleges that are in their geographic area/s and are able to offer the programmes that are in demand in their companies.

- - The TVET colleges should offer the theoretical component of the occupational programmes.
- Where TVET colleges already have the capacity (equipment/technolog/expertise) to provide the practical training then they should be supported to also play this role in the partnership.

Companies should be encouraged to contribute to lecturer development.

- The company contribution could take the form of companies offering to provide their retiring lecturers/trainers to the TVET colleges (rather than only private providers)
- Companies should offer workplace experience for lecturers

This will require:

To support this recommendation, in the medium to long term requires a commitmnt from government:

- *DHET should examine the college calendar* to ensure that learner selection can be effectively managed and that lecturers can attend WIL and other training interventions offered through partnerships
- There is a need to review the enrolment criteria and selection process for entrants to TVET colleges (DHET and Colleges)
- Companies should inform these criteria and support the selection process
- Colleges should also work with companies at the point of placement
- Access to foundational skills and work- readiness skills (not about accreditation)
- *In the medium term, colleges should be encouraged to take up the issue of discipline on campuses*
- Clarity on funding mechanisms and policy certainty