

MAPPING PARTNERSHIPS AND INTERACTIVE CAPABILITIES IN SKILLS DEVELOPMENT SYSTEMS

A guide to conducting a sectoral overview

RESEARCH INSTRUMENT 2: *This research guide provides a set of templates for conducting a sectoral overview or background paper. The guide should be used to inform fieldwork investigating interaction in skills development systems, and the capabilities of education and training organisations to form effective partnerships and learn through interaction – i.e. interactive capabilities. It should be read in conjunction with a set of templates guiding research in universities, TVET colleges, firms and intermediaries such as the Sector Education and Training Authorities (SETAs).*

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LABOUR MARKET
INTELLIGENCE PARTNERSHIP

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LMIP PROJECT: A STUDY OF LABOUR MARKET INTERACTIVE CAPABILITIES,
STRUCTURES AND MECHANISMS IN DIVERSE POST-SCHOOL EDUCATION AND
TRAINING INSTITUTIONAL SETTINGS



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ACRONYMS

DHET	Department of Higher Education and Training
HSRC	Human Sciences Research Council
LMIP	Labour Market Intelligence Partnership
PSET	Post-school Education and Training
SETA	Sector Education and Training Authority
SKA	Square Kilometre Array
SMME	Small, Medium and Micro Enterprise
SSI	Sectoral System of Innovation
TVET	Technical and Vocational Education and Training

Introduction

In 2012, the Department of Higher Education and Training (DHET) commissioned the Human Sciences Research Council (HSRC) to lead a national research consortium, *the Labour Market Intelligence Partnership (LMIP)*, to support it in creating a strategic labour market intelligence system.

This set of research guides is based on an LMIP project: *A study of labour market interactive capabilities, structures and mechanisms in diverse post-school education and training institutional settings*. The study investigated ways in which alignment between public and private education and training providers, and firms and labour markets, can be improved. The researchers designed a framework and a set of instruments for collecting and analysing data on organisational capabilities and interaction in skills development networks. It used these to analyse practices within three sectoral systems: sugarcane growing and milling in Kwa-Zulu Natal, automotive components manufacturing in the Eastern Cape, and astronomy, specifically the Square Kilometre Array big-science project.

In a changing policy landscape, universities and TVET colleges are challenged to improve their responsiveness to skills needs, and Sector Education and Training Authorities (SETAs) are expected to improve their performance as intermediaries (see DHET 2013). New regulatory instruments require that these post-school education and training organisations work more closely with key stakeholders in their local settings, such as firms and local government. To improve responsiveness, universities, TVET colleges and SETAs are required to improve their understanding of skills needs in their local settings, and gather information on their partnerships and interaction with other education and training organisations, employers, and so on.

The LMIP research team thus offer a set of research guides, as one set of tools skills and strategic planners and researchers in the DHET, universities, TVET colleges and SETAs can use to inform their skills planning processes. We offer a conceptual framework, practical guidelines and instruments for research on skills development partnerships and networks, and the capabilities of universities, TVET colleges and SETAs to form effective partnerships towards improving alignment between skills demand and supply.

Purpose of this research guide

This research guide (**Research Instrument 2**) provides a set of templates for conducting a sectoral overview or background paper that should be used to inform the fieldwork investigating interactive capabilities of post-school education and training organisations (PSET). The sectoral background paper should describe the economic and employment profile of the sector, national and local policy impacting on sector activities, key role-players or actors involved in skills development, and the knowledge and skills base. Conducting a sectoral overview is an initial step, before going out to do the fieldwork. It should be used to develop an outline or map of key actors involved in skills development to inform the selection of actors to be interviewed. Besides being a resource for the fieldwork, the sectoral overview would provide useful contextual information to inform the analysis.

This document should be read in conjunction with the set of research guides and templates, as listed in Table 1 below. **Research Instrument 1** describes the framework and methodology underpinning

the research. **Research Instruments 3 to 6** provide detailed practical guidelines and templates for gathering information on partnerships and interactive capabilities. Each focuses on a key type of organisation in skills development systems: universities, TVET colleges, firms, and intermediaries. We also include a separate document, **Research Instrument 7**, which provides a guide to analysing the information gathered.

Table 1 Description of the research guides

Document number	Description of document
1	A framework and methodology to guide research
2	A guide to conducting a sectoral overview
3	Fieldwork guide and template for research in universities
4	Fieldwork guide and template for research in TVET colleges
5	Fieldwork guide and template for research in firms
6	Fieldwork guide and template for research in SETAs and other intermediaries
7	Data management and analysis strategy and instruments

Key terms and concepts

Table 2 provides a summary of the key terms and concepts used in this document. It is a useful glossary that can be referred to repeatedly, in each section of the guide.

Table 2 A summary of key terms and concepts

Sectoral system of innovation	“(S)ets of actors organised around specific types of productive activities and technologies” (e.g. sugarcane milling), within distinct geographical (e.g. in KwaZulu-Natal) and institutional settings (e.g. policy) ¹ .
Competencies	The pre-set attributes of firms (and individuals), including expertise, human resources, organisational routines and structures, technologies, formal policies or other physical resources ² .
Interactive capabilities	The capacity to form effective linkages with other organisations and use existing competencies to learn through interaction ³ .
Dynamic interactive capabilities	The capacity to sense changes in the environment relevant to the organisation, and take an effective and timeous response through strategic management.
Institutions	Rules or guides for behaviour, distinguished between: formal (e.g. national policy) and informal (e.g. organisational culture), binding (specific regulations) and created by interaction (e.g. contracts), national (e.g. patent system) and sectoral (e.g. sectoral labour markets) institutions.
Social skill	The ability to form linkages, work in a team and “induce cooperation among actors in an organisation or any other field” ⁴ .
Post-school education and training (PSET) organisations	Diverse set of private and public education and training organisations – that is, universities, universities of technology, vocational education and training organisations (TVET), private colleges, private higher education institutions, and other training providers (e.g. AET public and private institutions, training centres operated by industry associations, etc.).
Sectoral intermediaries	Organisations in sectoral systems of innovation that facilitate interaction, and translate and facilitate information flows ⁵ as well as offer services (e.g. training) that are not easily available in the system but are essential.
Private intermediaries	Sectoral intermediaries such as industry associations and research institutes that tend to focus more on industry or firm-specific issues.
Public intermediaries	Sectoral intermediaries such as SETAs that tend to focus on public good objectives, especially those related to policy.
Actors	Participants or stakeholders in skills development systems, which could include individuals, organisations or units within organisations.

¹ Malerba (2005)

² von Tunzelmann and Wang (2003)

³ von Tunzelmann and Wang (2003, 2007 in Iammarino, 2009)

⁴ Fligstein and McAdam (2012: 46)

⁵ van Lente et al (2003: 248)

Sectoral background paper template

A sectoral background paper, which provides a detailed sectoral overview, is a good starting point for the research. A sectoral overview provides useful contextual information to inform the focus of the research and the analysis.

The template provided here includes an outline of the main types of information as well as pointers for focussing the research, to define the boundaries of the sectoral system of innovation. It comprises two sections:

Section 1:

- an overview of the economic and employment profile of the sector
- an overview of national and local policy impacting on sector activities

Section 2:

- an outline or map of key role-players or actors involved in skills development
- an overview of the knowledge and skills base

Section 1. Sectoral background

Purpose: to introduce the contours of the sector in terms of its size and shape.

Notes:

- *It is important for this section to remain short and focussed*
- *Look at data points over time in a manner informed by the historical overview and sector characteristics*
- *Use the overview of the economic and employment profile and policy environment to identify a segment(s) of the value chain or sub-sector(s) to focus on in Section 2 of the sectoral background paper.*

Economic profile:

- Historical overview of the sector
- Industries comprising the sector (including its upstream and downstream value chains)
- Ownership (of firms) in the sector
- Its relative GDP contribution
- Relative export and import components and characteristics

Employment profile:

- Contributions to employment (sub-sector/province)
- Breakdown of key occupational and skills levels in the sector
- Demographics of employment, particularly spatial concentrations

Policy environment:

- Related government departments and regulatory environment
- Incentive schemes, strategies, funding interventions, etc.

Section 2. Sectoral system of innovation in relation to skills development

In this section, you should begin to focus the research on a sectoral system of innovation, based on the overview in the first part of the background paper. We suggest that you select a segment(s) of the value chain or a sub-sector(s) that is of interest. This should involve sets of firms organised around specific types of productive activities and technologies (e.g. sugarcane milling), within distinct geographical (e.g. in KwaZulu-Natal) and institutional settings (e.g. policy) – in line with the definition of a sectoral system of innovation (see **Table 2** above).

This section includes two sub-sections: a template on how to create an outline or map of key actors involved in skills development, and a description of the knowledge and skills base in the sectoral system.

1.1. Map key actors

Purpose: to map the sectoral system of innovation and identify possible interviewees

Notes:

- *Please prepare an initial outline or map of the main actors involved in skills development in the sectoral system of innovation, using **the generic diagram provided below (Figure 1)**. An example of a completed map is included in the appendix.*
- *As a systemic mapping exercise, the focus should be on defining and describing actors and their relationships.*
- *This must also be quantified where possible (e.g. six large firms, 400 SMEs).*
- *It would be useful to list specific firm/education and training/intermediary actors (and their contact details where possible) in order to identify participants and plan interviews*

- Firms:
 - Domestic firms
 - Parastatals
 - Multinational firms
 - Customers and suppliers of major firms
 - NGOs
- Post-school education and training (PSET) organisations:
 - Universities (public and private)
 - TVET colleges (public and private)
 - Internal firm-level training (including international links with firms, e.g. parent companies)
 - SETAs
 - Any other types of PSET organisations (e.g. Adult Education and Training Centres)
- Government departments
- Intermediary organisations, e.g.:
 - Employer/industry associations
 - Employee associations
 - Research institutes
 - Government agencies
- Science Councils
- Any other actors that play a significant role in the sectoral system of innovation

MAP OF ACTORS IN THE SECTORAL SYSTEM OF INNOVATION

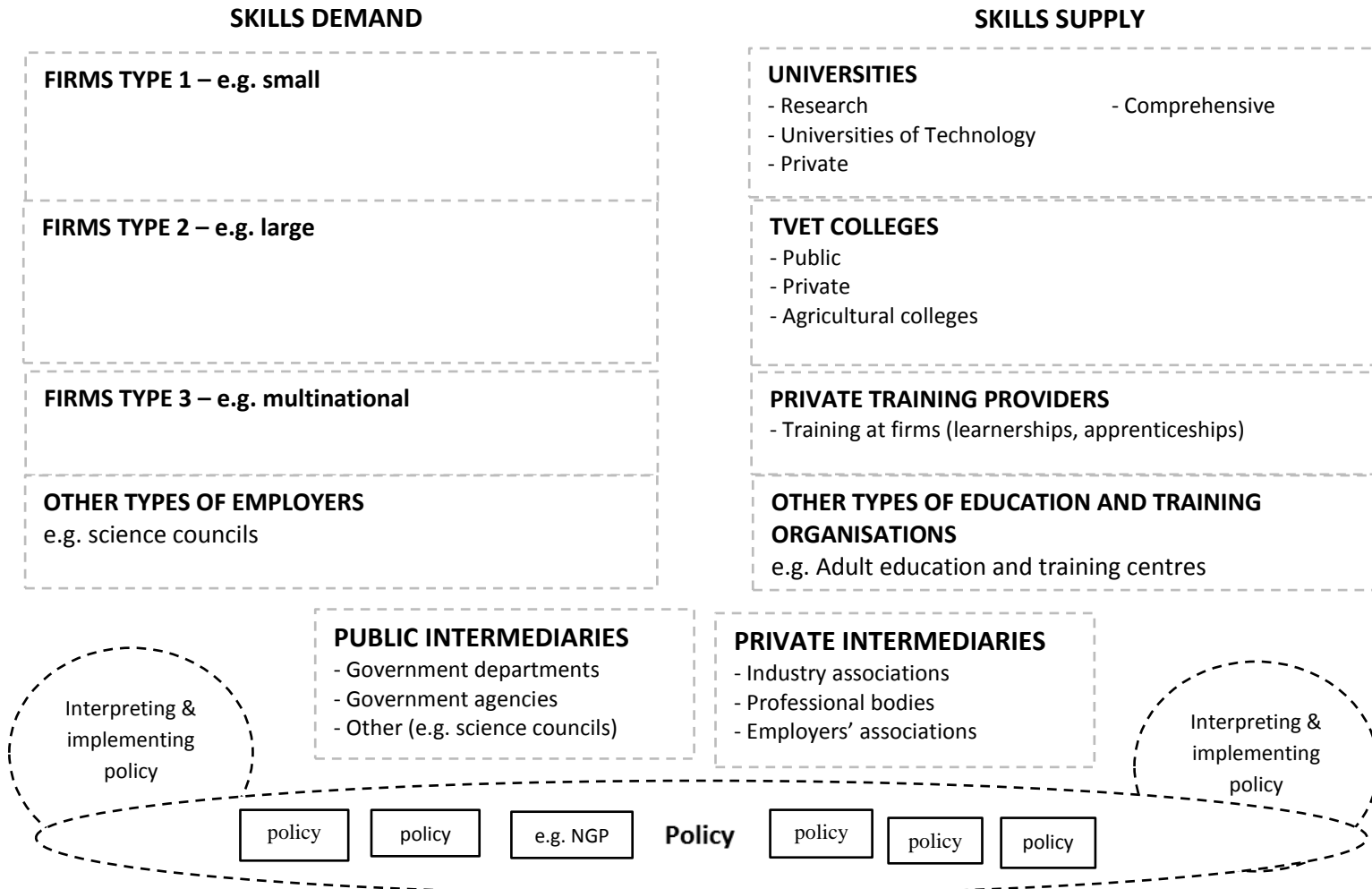


Figure 1 Template for creating a map of actors involved in skills development in a sectoral system of innovation

1.2. Knowledge and skills base of the sector

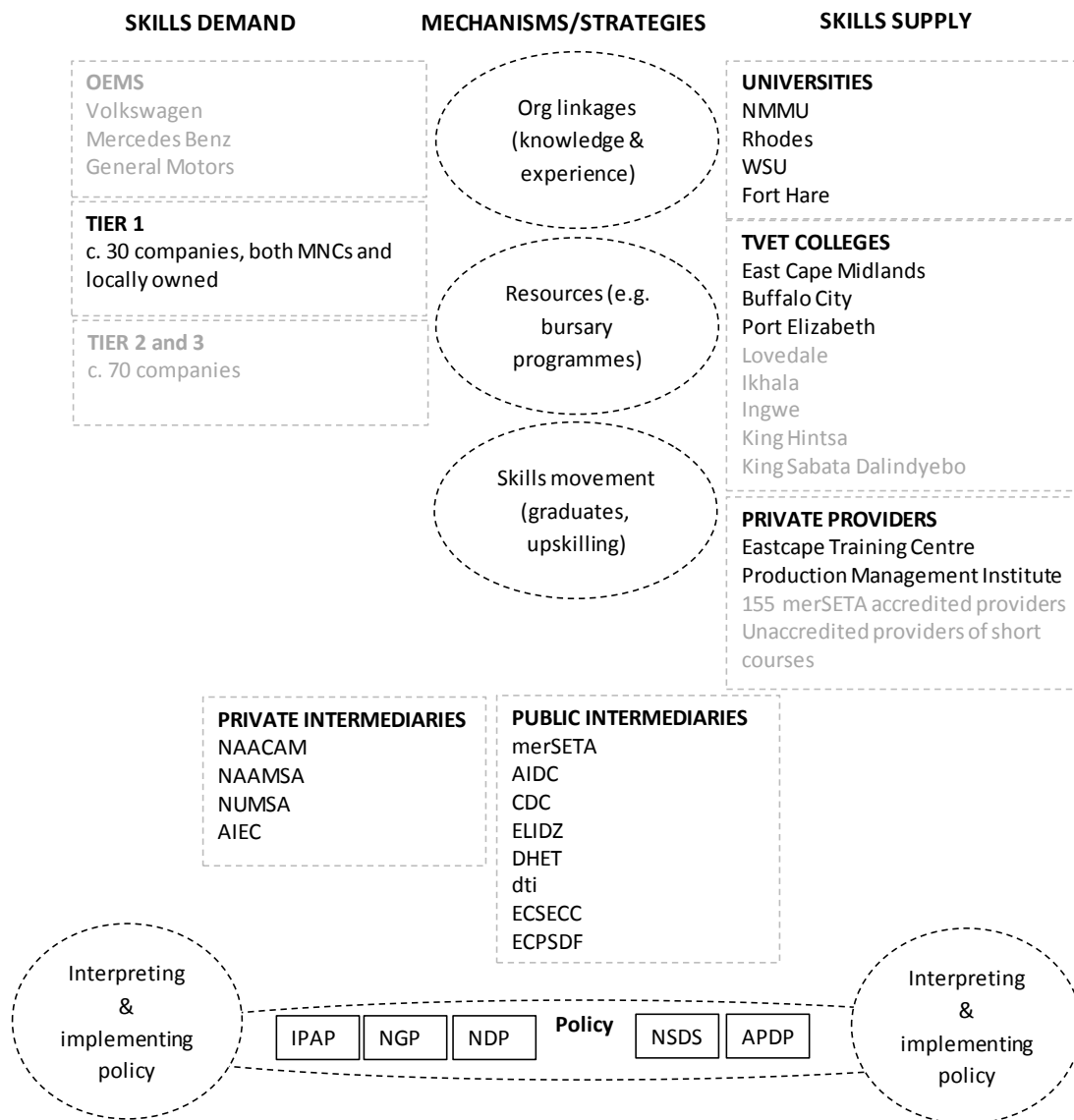
Purpose: to provide a dynamic assessment of the skills base of the sector

This section should include an overview of:

- The specific knowledge base and technologies that characterise production in the sectoral system, in terms of their skills demands **at the full range of occupational levels.** This is crucial for developing a macroscopic view of the skills demands/needs in the sectoral system.
- National drivers of technological change in the sectoral system, and their skills demands at diverse occupational levels
- Global drivers of technological change in the sectoral system, and their skills demands at diverse occupational levels
- Challenges/threats/constraints to growth and their skills implications

Appendix

Appendix 1 Sample map of a sectoral system of innovation: the automotive components manufacturing sectoral system of innovation in the Eastern Cape



Note: The organisations in grey are not a core part of this study but are actors in the SSI.