

## Mapping innovation activities for local development: Mopani District Municipality

Preliminary findings using the Rural Innovation Assessment Toolbox to map innovation activities among a purpose-built sample of 122 enterprises in Mopani District Municipality (Mopani) provide some high-level insights regarding district innovation patterns, innovating enterprises' awareness of STI support and their networks. The highlights provide helpful steps towards thinking about appropriate policy recommendations utilising innovation to enhance local development.

Approximately 20 per cent of the Limpopo provincial population lives in Mopani, with more than 80 per cent of these residents located in rural areas across this district. Human wellbeing indicators for Mopani generally fall below the Limpopo provincial averages, suggesting relatively lower quality of life and living standards.

### Innovation patterns and trends

A novel framework to comprehensively document the nature and extent of innovation activities (invention, adoption, adaption and diffusion) underpinned the pilot study in Mopani. With the aid of this innovation value chain approach and its related purposively built sampling methodology, we were able to uncover patterns of innovation that can potentially alleviate underdevelopment and raise the living standards of rural communities. To increase the likelihood of this, however, these patterns need further investigation before the implementation of innovative development interventions.

### Invention

Very few enterprises in this district are pioneering creators of new products, processes, organisational or marketing arrangements, coupled with intensive research and development of new knowledge. This traditional notion of innovation, or simply invention, took place within a marginal share (approximately 8%) of all sampled enterprises for the years 2011 and 2012. This evidence

is unsurprising because the critical drivers of original knowledge and artefact creation are generally missing, as is access to the means for further development and refinement.

### Adoption

Adoption was most prevalent among the sampled enterprises (at around 50%) and this stands in sharp contrast to invention. The evidence points towards more vigorous uptake of new ideas, practices and artefacts originally developed by other enterprises outside Mopani. Moreover, enterprises that adopt innovative ideas, arrangements and products from outsiders confirmed that they are given various options, enjoy the freedom to choose and tend to introduce the 'new knowledge' into their enterprises.

### Adaption

Improvements and incremental changes to innovations sourced from outside enterprises rank a distant second after adoption in terms of the proportion of enterprises involved in this activity. On average, less than one out of four enterprises – predominately private - actively adapted innovations. The private sector enterprises that actively adopt and adapt rarely applied for government support for their dominant innovation activities, in contrast to many non-profits (62%) that do apply.

### Diffusion

The proportion of enterprises that transfer, share and distribute new ideas, products and practices in Mopani more than doubled

from 7 per cent to 18 per cent from 2011 to 2012. Diffusion of innovations among sampled enterprises clearly surpassed invention in these two years, making it the third most prevalent innovation activity in Mopani.

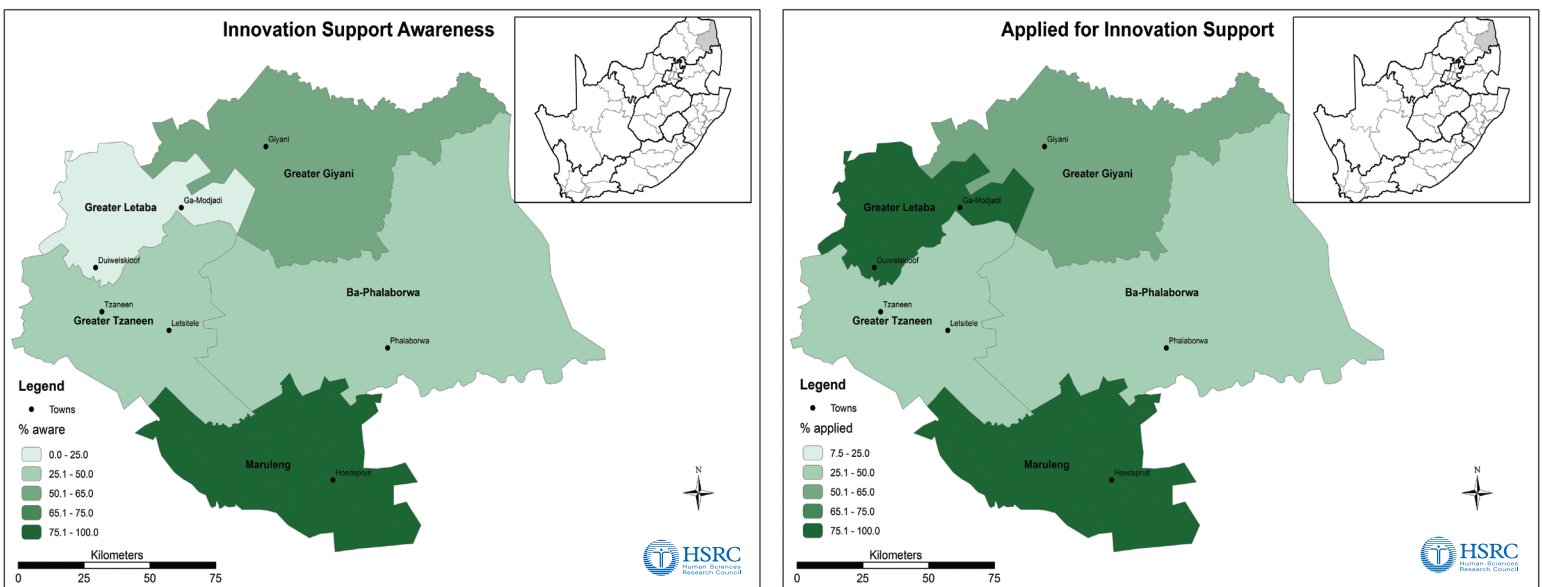
### Awareness of innovation policies and support

Unfortunately, locally there is generally poor awareness of national innovation policies and government assistance to promote innovation. Only 18 per cent of enterprises self-reported an awareness of national Science, Technology and Innovation (STI) policies - heavily skewed in favour of public enterprises.

A significant share of the enterprises considered institutional support (policies, laws and agencies regulating and supporting innovations) an important contributor to innovation activities. There is, however, a disproportionately negative perception of government institutional support among private enterprises, which reduces an appreciation of this need. Figure 1 shows that awareness of state support for innovation across local municipalities closely matches whether enterprises actually apply for it, with a concentration among enterprises in Maruleng.

The reasons for this and its effect on innovation in Maruleng deserve further investigation; as does the puzzling finding that awareness of state support for innovation activities and applications for it among enterprises ranks lower in Greater Tzaneen, the

**Figure 1:** Share (%) of enterprises aware of state support for innovation activities and share (%) of enterprises applying for this support



economic hub of the district, than in Greater Giyani, which is more remote and economically less diversified.

### Innovation networks

More than 60 per cent of sampled enterprises are actively involved in knowledge sharing networks, interactions which adopters and diffusers are most likely to benefit from. Among the enterprises participating in networking for innovation, interactions with partners were predominantly formal rather than informal, although there were differences across economic sectors. Both formal and informal enterprises engaged in formal and informal networks.

Innovation networking was relatively more prevalent among enterprises in Maruleng and Greater Tzaneen than other municipalities in Mopani (Figure 2). Innovation activities depend upon the factors that drive both the intensity and degree of formality of innovation networking, but the differences between these two dimensions of innovations showed no clear pattern across local municipalities. Formal networks were concentrated in Greater Tzaneen because it is the economic powerhouse of the district, but variations in Maruleng merit deeper exploration to understand why enterprises in the municipality with the highest concentration of innovation networks were more likely to be involved in informal networks.

### Innovation opportunities and challenges

Almost two-thirds of respondents equated innovation with hard technologies, creativity, and bringing something new into the enterprise – a traditional notion of innovation.

Around 86 per cent of private enterprises engaged in innovation activities for direct economic benefit. Roughly 84 per cent of responding enterprises indicated no awareness of the social innovative use of goods and services to improve social wellbeing. Despite this, a substantial share of sampled public and non-profit enterprises innovated with the explicit or implicit goal of improving social wellbeing and welfare.

The fact that a fair proportion of enterprises engaged in 'social innovation' oriented activities, provides an opportunity for increased social development; especially if coupled with increased and coordinated government support for social innovation.

Although there is evidence of innovation activity in Mopani, improved government support could largely improve the environment for innovation – especially for adoption, adaptation and diffusion. The sampled enterprises identified government's lack of coherent support in rural districts as one reason for low innovation activity. Also, the highly bureaucratic funding process discourages most enterprises.

At enterprise level, lack of capacity is another reason for the low level of innovation. This factor could be improved through government support in creating necessary innovation awareness and skills transfer.

### Conclusion

The findings in Mopani support a basic proposition: for innovation to be a catalyst for rural development, with an emphasis on enhancing human wellbeing, the costs hindering innovative performance must be cut.

- This means increasing the ability of enterprises based in Mopani to adopt, adapt and diffuse innovative products, processes, organisational and marketing arrangements by improving access to support mechanisms.
- Strengthening learning opportunities of actors in the local innovation space, especially their knowledge of STI policies and the national system of innovation, combined with effective institutional coordination, are urgent interventions to successfully harness innovation for broad-based quality of life improvement in Mopani.

### Authors:

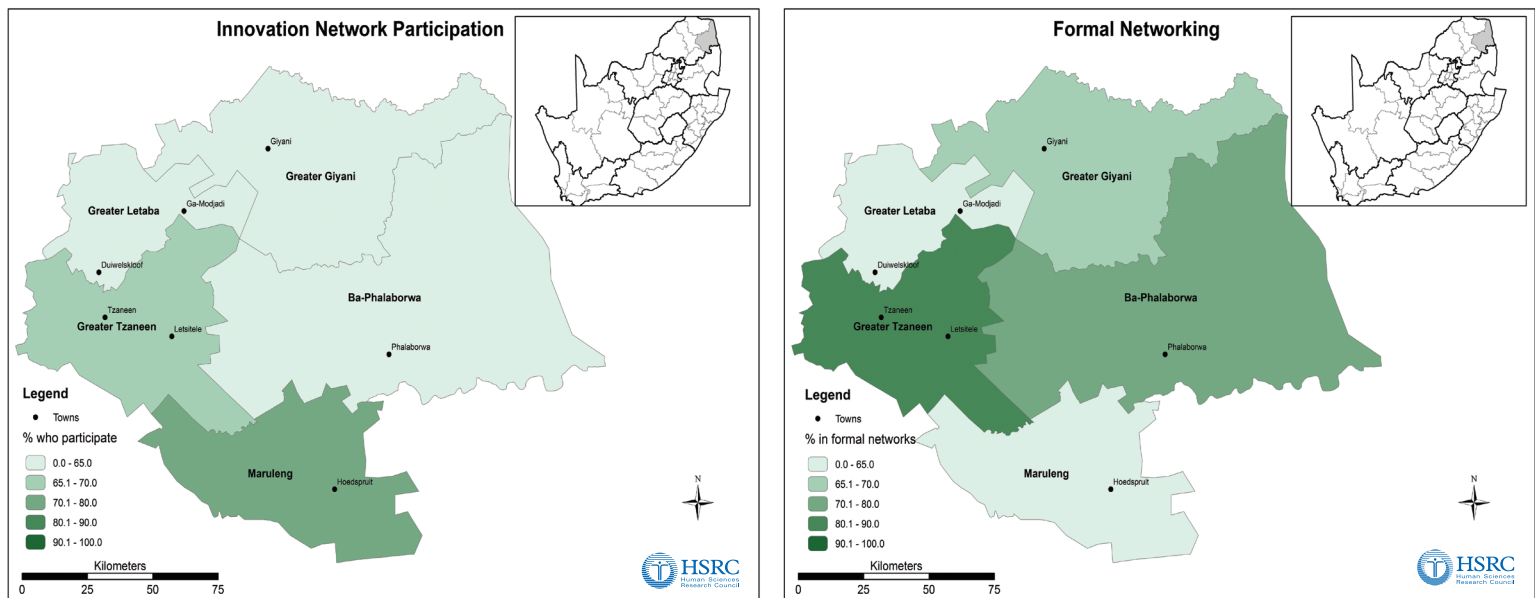
Peter Jacobs, Alexandra Mhula-Links, Kgabo Ramoroka, Siyanda Jonas and Tim Hart

Economic Performance and Development research programme, HSRC.

The full version of the report from which this briefing note is drawn can be found at <http://www.hsrc.ac.za/en/departments/economic-performance-and-development/innovation-patterns-in-districts>.

This project was funded by the Department of Science and Technology to develop and pilot-test a Rural Innovation Assessment Toolbox (RIAT).

**Figure 2:** Share (%) of enterprises involved in networks and share (%) of enterprises involved in formal networks



Source: Authors own calculations