

Mapping innovation activities for local development: uMzinyathi District

Preliminary findings on using the Rural Innovation Assessment Toolbox to map innovation activities among a purpose-built sample of 115 enterprises in uMzinyathi District Municipality (uMzinyathi) 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.

This is one of the poorest and most underdeveloped districts in KwaZulu-Natal. With most of the population living under the auspices of Traditional Authorities, only 16.6 per cent live in urban areas. With an unemployment rate of almost 30 per cent, infrastructure backlogs, lack of education and functional illiteracy impact negatively on socioeconomic development in uMzinyathi.

Innovation patterns and trends

A novel framework to comprehensively document the nature and extent of innovation activities (invention, adoption, adaption and diffusion) in uMzinyathi underpinned the pilot study. With the aid of this innovation value chain approach and its related purposively built sampling methodology, we were able to uncover patterns of rural innovation that can potentially alleviate rural underdevelopment and raise the living standards of rural communities. To increase the likelihood of success 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. The traditional notion of innovation, expressed as invention, occurred in 5 per cent of all sampled enterprises for the years 2011 and 2012. This was

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

Adoption

In sharp contrast to invention, adoption is the most prevalent innovation activity among enterprises (73% in 2011 dropping to 32% in 2012), predominantly by non-profit organisations. The evidence points towards more vigorous uptake of new ideas, practices and artefacts originally developed by other enterprises outside uMzinyathi.

Moreover, enterprises that adopt innovative ideas, arrangements and products from outsiders confirmed that they are offered various options, enjoy the freedom to choose and tend to introduce the 'new knowledge'.

Adaption

Improvements and incremental changes to innovations sourced from outside enterprises rank a distant third after adoption in terms of the proportion of enterprises involved in this activity. On average, less than one out of three enterprises actively adapts innovations, with private enterprises and non-profits on a par in this regard.

While slightly more than a third of public sector enterprises and a fifth of private sector enterprises applied for government support for the dominant innovation activities, less than half of the non-profits (45%) applied.

Diffusion

The proportion of enterprises that transfer, share and distribute new ideas, products and practices in uMzinyathi decreased from 38 per cent to 27 per cent between 2011 and 2012. In most instances, diffusion of innovations among sampled enterprises in uMzinyathi clearly surpassed invention and adaptation in both years, making it the second most prevalent innovation activity after adoption.

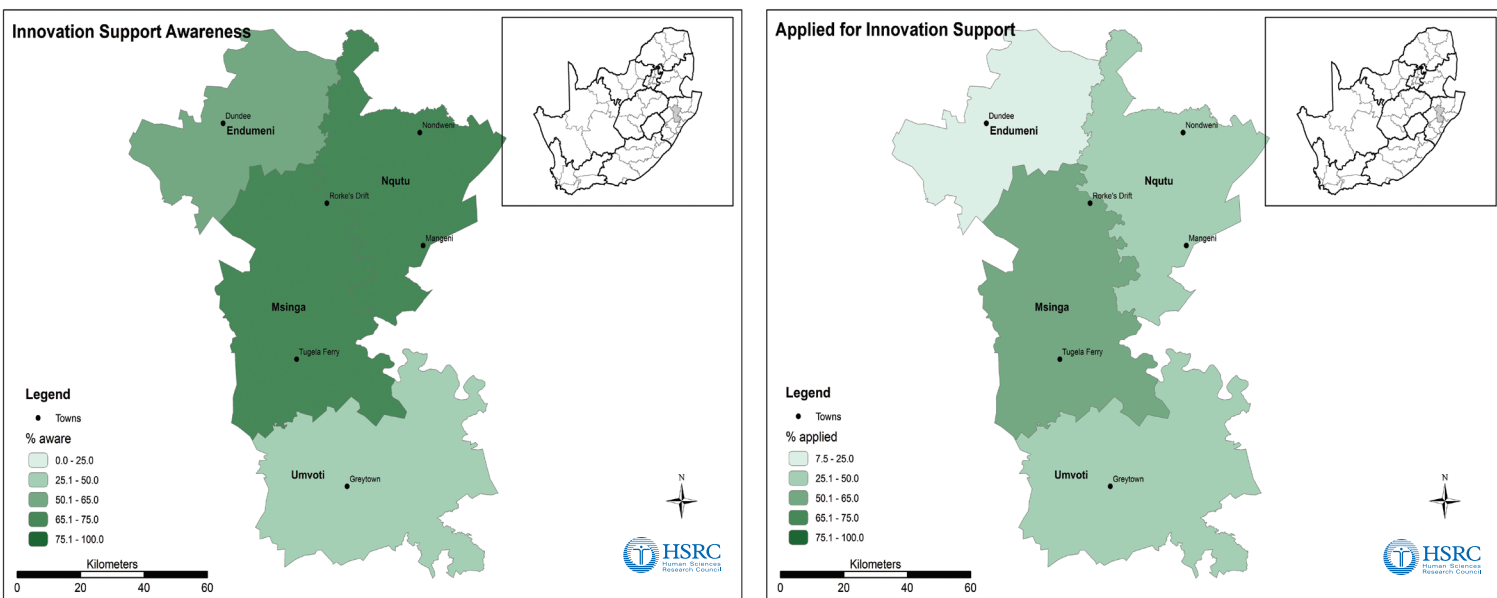
Awareness of innovation policies and support

Regrettably, at grassroots level local awareness of national innovation policies and government assistance to promote innovation is low. Approximately 38 per cent of enterprises self-reported an awareness of national Science, Technology and Innovation (STI) policies - heavily skewed in favour of public sector enterprises.

Many of the enterprises considered institutional support (policies, laws and agencies regulating and supporting innovations) as an important contributor to innovation activities. There is, however, a disproportionately negative perception of government institutional support among private enterprises in our sample, which reduces an appreciation of this need.

Figure 1 shows that, across municipalities, awareness of state support for innovation matches whether enterprises actually apply for such support. Awareness of state support for innovation and application for such

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



support is concentrated among enterprises in Msinga. The reasons for this and the effect on innovation in Msinga deserve further exploration. Endumeni, the economic and administrative hub of the district, ranks relatively low in terms of awareness of state support for innovation activities and applications for support.

Innovation networks

Almost 81 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 self-reported networking for innovation, interactions with partners are predominantly formal rather than informal, although there are differences across the different economic sectors. Both formal and informal enterprises engage in formal and informal networks.

Figure 2 highlights the differences in the intensity and degree of formality of innovation networking across municipalities. Enterprises in this district are mainly involved in formal innovation networks with Msinga municipality hosting the highest concentration of these. Further research is required to find reasons for the observed patterns of innovation networking, to explore how these intersect with various types of innovation, and to identify key spatial and institutional factors.

Innovation opportunities and challenges

Most respondents equated innovation with hard technologies, creativity and bringing something new into the enterprise – a traditional notion of innovation. Around 76 per

cent of private enterprises engaged in innovation activities for direct economic benefit. Approximately 71 per cent of responding enterprises indicated no awareness of the narrow understanding of social innovation as innovative activities, such as the use of goods and services to improve social wellbeing.

Despite this, 69 per cent of the sampled public enterprises and 37 per cent of the non-profit enterprises pursued innovation activities with the goal (explicitly or implicitly) of improving human and social wellbeing. About 36 per cent of all sampled enterprises engaged in 'social innovation' oriented activities. This 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 the district, improved government support could largely improve the environment for innovation – especially for adoption and diffusion. The lack of coherent support for innovation in the rural district by the government, coupled with the highly bureaucratic funding process, is discouraging for most enterprises.

At enterprise level, lack of capacity is another reason for the low level of innovation. This factor could also be improved through government support in creating necessary innovation awareness and skills transfer. Low levels of education and poor infrastructure remain concerns.

Conclusion

Findings of this pilot study in uMzinyathi support a basic proposition: in order for innovation to be a catalyst for rural development, with an emphasis on enhancing human wellbeing, the costs hampering innovative performance must be cut.

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

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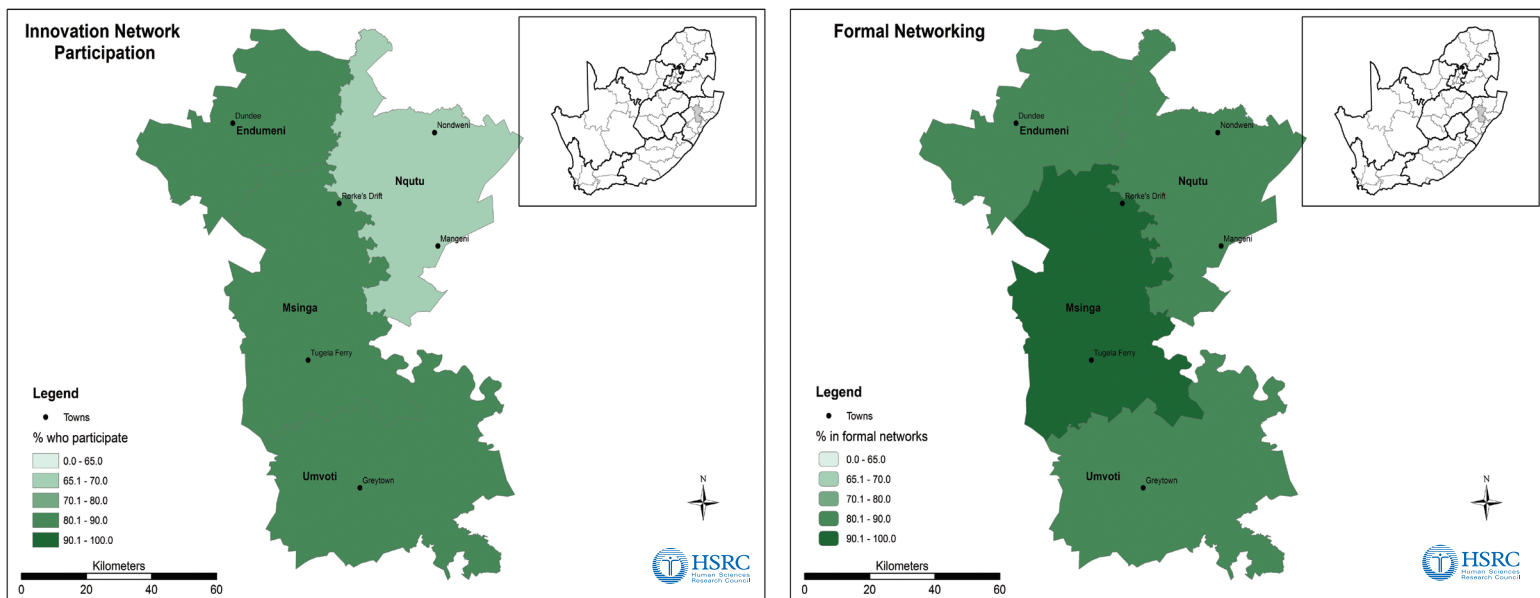
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The full version of the report from which this briefing note is drawn can found at <http://www.hsrc.ac.za/en/departments/economic-performance-and-development/innovation-patterns-in-districts>.

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



Source: Authors own calculations