

# CAN GOVERNMENT STIMULATE INNOVATION THROUGH PUBLIC FUNDING AND PROCUREMENT? WHAT SOUTH AFRICAN MANUFACTURING FIRMS SAY

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Government invests a significant amount of effort into supporting innovation in the South African business sector. This support can either be financial in nature or through support programmes that make access to other resources easier. Given the right support from government, we should expect business to be better positioned to take their innovations further.

This Research Brief uses data from the Business Innovation Survey 2010-2012 to provide evidence of manufacturing firms' awareness\* of the array of public funding on offer for innovation. We report on the extent to which firms access this funding, if they benefit in other ways, and detail the reasons why they do not access public funding.

**\*Note:** Readers are cautioned that the survey's data does not represent the population of all firms in the South African manufacturing sector, but reflects the realised sample of 328 enterprises (Moses et al, 2017). While this data is purely descriptive, it can provide important insights on the trends in public sector funding of innovation, from which we can draw policy implications to improve practice.

## To what extent are manufacturing firms aware of government financial support for innovation?

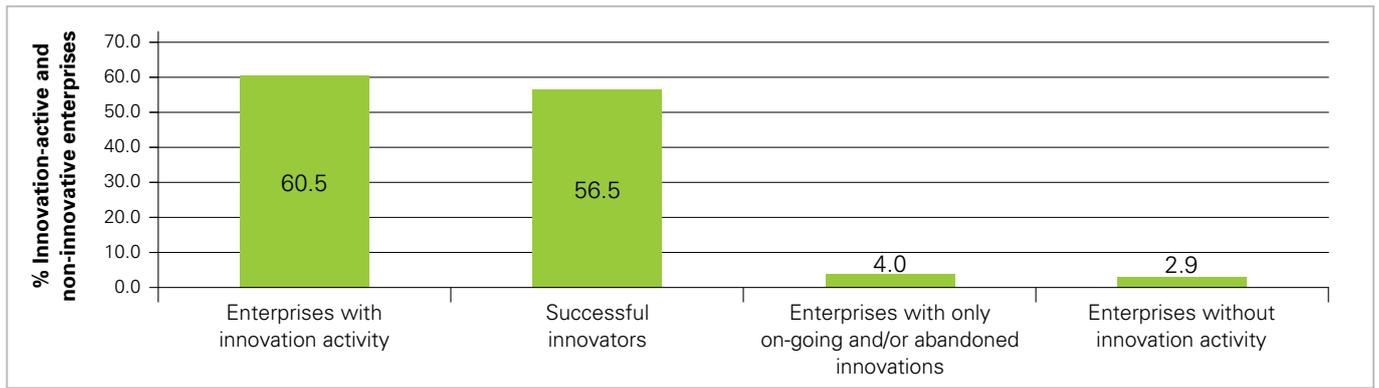
Firms were asked if they were aware that government offers financial support for innovation. We analysed the data separately for four groups, distinguished by the success of their innovation (Figure 1 overleaf).

More than half of the manufacturing firms with innovation activity, and the successful innovators, were aware of government support.

Less than 5% of the non-innovators were aware of government support for innovation.

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Figure 1. **Manufacturers' awareness of government funding**



Source: Moses et al, 2017 (Appendix 4 Table A10.1)



**Policy Implication:** There is much that government can do to increase awareness of its funding mechanisms, particularly for firms who are currently not innovative, who may not be seeking information on funding for innovation, and those firms with fledgling innovation activity, who really need to be nurtured.

## To what extent do manufacturing firms access government financial support?

Adequate funding is a pre-requisite for innovation activities, and firms report that funding factors are a significant barrier to innovation (Moses et al, 2017). Next to private sources of funding, innovation in South Africa is funded through different public sources: national government departments, national funding agencies, as well as foreign government sources.

Table 1 draws attention to the very small number of firms that access public sources of funding. Manufacturing firms are more likely to access innovation funding from the Department of Trade and Industry and the Industrial Development Corporation, than from the Department of Science and Technology itself (a total of only 11 firms). Two firms reported funding from the Technology Innovation Agency and from foreign governments, whilst only one firm reported receiving funding from the National Research Foundation. None of the manufacturing enterprises received funding from the Medical Research Council or other national funding agencies.

Table 1. **Number and percentage of innovation-active enterprises in the manufacturing sector that received financial support for innovation activities from government sources**

Source of financial support	Number of enterprises	Percentage of enterprises (%)
<b>National government:</b>	<b>59</b>	<b>26.4</b>
Department of Science and Technology (DST)	11	4.9
Department of Trade and Industry (the dti)	43	19.3
Other	5	2.2
<b>National funding agencies:</b>	<b>19</b>	<b>8.5</b>
National Research Foundation (NRF)	1	0.4
Medical Research Council (MRC)	0	0
Industrial Development Corporation (IDC)	16	7.2
Technology Innovation Agency (TIA)	2	0.9
Other	0	0
<b>Foreign government/public sources</b>	<b>2</b>	<b>0.9</b>

Source: Moses et al, 2017 (Appendix 4 Table A18)



**Policy Implication:** DST needs to explore the reasons why firms report such a low take-up of its funding mechanisms.

# To what extent are innovative firms able to secure public sector contracts?

## Box 1. How public procurement can help to drive innovation

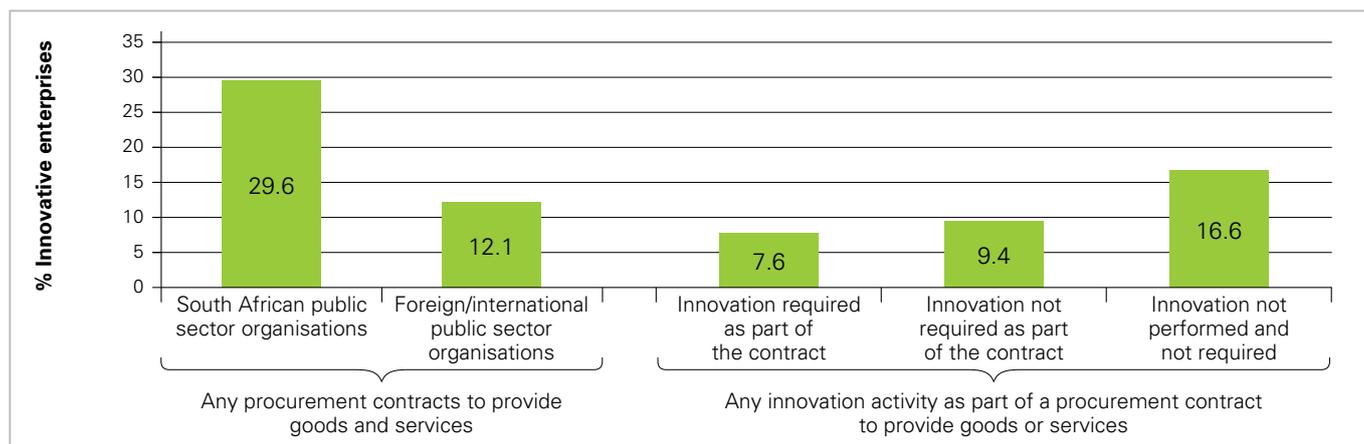
Public sector procurement may be used as a leverage mechanism for innovation. Government is responsible for providing goods and services such as infrastructure, public information and defense. Government can ensure the provision of better or at least more efficient public services by making use of innovative technologies. It is generally accepted that innovative products and services are of a higher quality and more competitively priced. This in turn means that it will optimize public service operation by integrating new processes, technologies or materials. Therefore government should encourage suppliers to develop their innovative capacity (Bolton, 2016).

Firms were asked if they had any public procurement contracts to provide goods and services (Figure 2).

Almost 30% of manufacturers reported that they had procurement contracts from national government, whilst 12% had contracts from foreign governments.

The contracts in themselves did not require the firm to perform innovation. Only about 7% of firms were required through contracts to perform innovation, whilst 9,4% said innovation was not required. The other 16,6% reported that no innovation was required and none was performed.

Figure 2. Innovation-active manufacturing enterprises with public sector procurement contracts to provide goods and services



Source: Moses et al, 2017 (Appendix 4 Table A10.4)



**Policy Implication:** There is considerable scope to introduce new and improve existing interventions that stimulate innovation as part of public procurement contracts.

## Why don't firms access government funding?

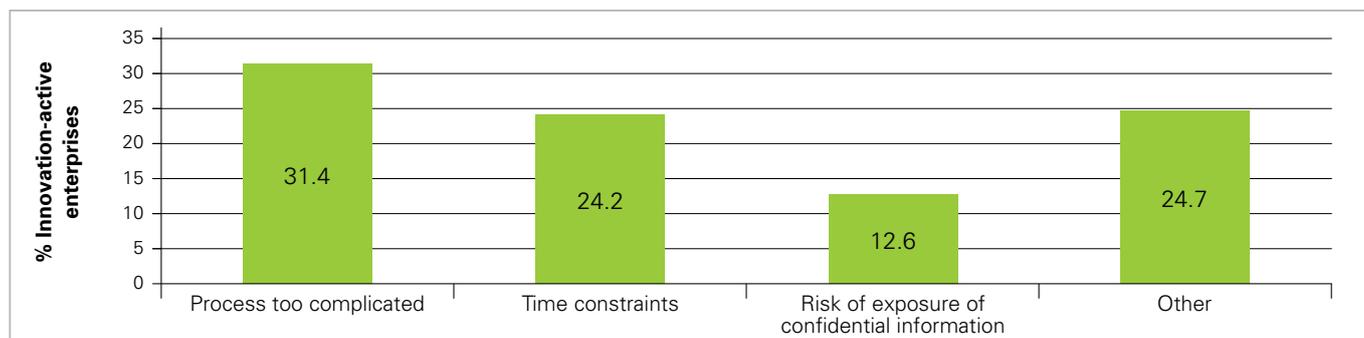
The big question, of course, is why firms tend not to access government funding for their innovation activities (Figure 3).

The most significant constraint, reported by almost 32% of manufacturers, is that the process of application is too complicated.

Second, at least 24% of manufacturers claim that they face time constraints.

Business confidentiality—the risk of exposure of proprietary information – was less of a concern, with only around 13% of firms reporting this.

Figure 3. Reasons why innovation-active manufacturing enterprises did not access government funds



Source: Moses et al, 2017 (Appendix 4 Table A10.1)



**Policy Implication:** Administrative application processes need to be more streamlined, simple, accessible and quick.

## Ideas for policy

<p><b>1</b> There is a greater need for advocacy and communication that is tailored to firms’ interests and specifically to sectoral needs.</p>	<p><b>2</b> Firms do not access government funding mechanisms and the reasons for this need to be explored in more detail. This is the only way to ensure that more effective interventions that target specific sectoral needs are implemented.</p>
<p><b>3</b> Public procurement processes should be interrogated to explore possibilities to introduce new mechanisms, and to improve existing interventions that can stimulate innovation as a contractual requirement. Such processes need to bear in mind sectoral differences, and that an innovation requirement may not be appropriate for all sectors and all contracts.</p>	<p><b>4</b> Ease and speed of administrative application processes need to be improved. This could be done through effective and simple online processes.</p>

## References

- Bolton, P. 2016. Public Procurement as a Tool to Drive Innovation in South Africa. *PER / PELJ* 2016(19) Available from: <https://goo.gl/CGTZpt>
- Moses, C., Sithole, M., Makelane, H., Mudavanhu, P. & Kupamupindi, T. 2017. Innovation in the South African Manufacturing Sector, 2010-2012: A micro-data report based on the 2010-2012 South African Business Innovation Survey undertaken by the Centre for Science, Technology and Innovation Indicator for the Department of Science and Technology. Available from: <https://goo.gl/2D1qzc>

## About the Series

The Centre for Science, Technology and Innovation Indicators (CeSTII) is a statistical and policy research institute based at South Africa’s Human Sciences Research Council (HSRC). CeSTII performs national surveys that underpin benchmarking, planning and reporting on R&D, innovation and technology transfer in South Africa. Our Research Briefs are concise papers based on our ongoing work. Their goal? To provide empirical evidence and informed opinion that decision-makers in the national system of innovation can use to strengthen the quality of their thinking and action.

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