

## Industrial policy and competition in the digital economy: Government legitimacy and capabilities

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### Background

This contribution responds to a recommendation in the Competition Commission's 2021 report on Competition in the Digital Economy which suggests that, as part of a national digital strategy, industrial policy instruments have an important role to play in enabling a more competitive and inclusive digital economy. Specifically, the report noted the possibility of direct government action around "data policies, fiscal incentives including tax breaks, investment and incentive schemes, supporting strategic sectors, public procurement, trade instruments (tariffs and duties), education and skills development as well as research and development".<sup>1</sup>

Amongst these, the report argues that targeted interventions related to innovation and investment (financial and non-financial) seem to be the most necessary (and possibly viable) options for the South African government to pursue, with the primary goal of increasing the number of small and medium-sized enterprises (SMEs) that can participate in domestic and international digital markets. In part, this is based on the experience of other developing countries where industrial policy investments for the sector are "substantial and are not incidental".<sup>2</sup>

Inevitably many questions are raised about direct government involvement in a fast-advancing sector, such as whether the development of 'national champions' will undermine local competition and innovation, and if digital protectionism is even possible in the face of globally interconnected data flows.<sup>3</sup> Whilst the general feasibility of digital industrial policy - and where it should be targeted - are key issues for investigation and discussion, an important caveat highlighted in policy reviews is that the implementation of recommendations ultimately depends on enhanced government capacity.<sup>4</sup> Given this dependency, the following section explores the distinctive capabilities and legitimacy<sup>5</sup> of the South African government as it seeks to shape a more inclusive digital economy, including the implications of a proposed 'entrepreneurial state'<sup>6 7</sup> and possible links to competition policy.

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<sup>1</sup> p.58 in Competition Commission (South Africa), "Competition in the Digital Economy – Version 2", 2021, <http://www.compcom.co.za/wp-content/uploads/2021/03/Digital-Markets-Paper-2021-002-1.pdf>

<sup>2</sup> p.59 in Competition Commission (South Africa)

<sup>3</sup> United Nations Conference on Trade and Development (UNCTAD), "Adapting industrial policies to a digital world for economic diversification and structural transformation. Note by the UNCTAD secretariat", 2018, TD/B/C.I/MEM.8/5, [https://unctad.org/system/files/official-document/cimem8d5\\_en.pdf](https://unctad.org/system/files/official-document/cimem8d5_en.pdf)

<sup>4</sup> For example, see p.26 in Justin Barnes, Anthony Black and Simon Roberts, "Towards a digital industrial policy for South Africa: a review of the issues", Industrial Development Think Tank, University of Johannesburg, 2019.

<sup>5</sup> Paul Plantinga, "Innovation and the Public Service: Facilitating Inclusive Industrial and Social Development", Working Paper, SocArXiv, 2021, <https://osf.io/preprints/socarxiv/qcdjg/>

<sup>6</sup> The Presidency (South Africa), "Address by President Cyril Ramaphosa to the 1st South African Digital Economy Summit, Gallagher Convention Centre, Johannesburg", 05 July 2019, <https://www.thepresidency.gov.za/speeches/address-president-cyril-ramaphosa-1st-south-african-digital-economy-summit%2C-gallagher>

<sup>7</sup> pp.26-27 in Antonio Andreoni and Simon Roberts, "Governing data and digital platforms in middle income countries: regulations, competition and industrial policies, with sectoral case studies from South Africa", Digital Pathways at Oxford Paper Series, no. 5, 2020, <https://www.bsg.ox.ac.uk/research/publications/governing-data-and-digital-platforms-middle-income-countries>

## **Legitimacy and capabilities with respect to policy interventions**

Using a sample of digital and innovation policy documents as reference points, along with recent policy analysis, we are able to get a sense of what interventions are being considered by local policy actors. We can then start to ask what government capabilities (e.g. through experience, skills, enabling institutions/ processes) and legitimacy (e.g. through law, control over resources, money, knowledge, experience) may be important, can be leveraged, and are available or lacking.

### *Data as a strategically managed resource*

The intervention pipeline on data spans a broad range of topics, mostly related to (1) consolidation of (largely public) data at government data centre sites and local data banks, with enhanced connectivity to these data nodes; (3) open data strategy to provide guidance on data sharing; (4) security/ protection of personal and confidential information; (5) restrictions on cross-border transfers of certain data (e.g. related to health sector), (6) targeted support for innovation around these data assets.<sup>8 9</sup>

The South African state is able to leverage quite extensive resources in this area, starting with its control over national identity and biometric databases. However, its legitimacy as a custodian of sensitive information has been undermined by (sometimes uncontrolled) commercialisation of this personal data by the private sector. At the same time, there has been growth in public and international-funded research data infrastructures on a continental scale, including the new programmes around data science ethics and law.<sup>10</sup>

Possible actions for enhancing the state capacity in these areas include policy capacity building around ethical data and algorithm governance in target sub-sectors; enhancing legitimacy through (multi-stakeholder) institutional arrangements that support transparency around data collection and processing; and improving public official data protection, sharing and contracting skills. Building on an existing research track record, there may be an opportunity to expand collaboration on and development of research data infrastructures through new Africa-wide partnerships.

Competition policy and institutions could have a supportive role to play in defining or clarifying rules related to cross-border public, personal and strategic data transfers and processing (with the Information Regulator); and supporting the availability and growth of international (and local) cloud infrastructure and services to enable innovation at higher levels (e.g. business-to-business customisation in the industrial sector, and research data management as noted).<sup>11</sup>

### *Demand-side linkages and incentives*

A second package of policy proposals focuses on growing the number of users of locally-developed digital services by, (1) providing technology absorption extension services and R&D incentives to encourage the use of available technologies; (2) pre-commercial procurement by government,

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<sup>8</sup> Department of Communications and Digital Technologies (South Africa), "Draft National Policy on Data and Cloud", [https://www.gov.za/sites/default/files/gcis\\_document/202104/44389gon206.pdf](https://www.gov.za/sites/default/files/gcis_document/202104/44389gon206.pdf)

<sup>9</sup> Antonio Andreoni and Simon Roberts

<sup>10</sup> National Institutes of Health. Harnessing Data Science for Health Discovery and Innovation in Africa Funded Research <https://commonfund.nih.gov/AfricaData/fundedresearch>

<sup>11</sup> Antonio Andreoni and Simon Roberts

brokered via technology hubs/ incubators/ innovation agencies;<sup>12 13 14</sup> (3) preferential procurement, localisation and interconnection requirements to open access to corporate digital supply chains; and (4) a digital marketplace to link SMEs with locally-developed digital services<sup>15 16</sup>

It is argued that the current R&D tax incentive is too narrowly defined to stimulate the use of existing technologies<sup>17</sup> and so there may be a benefit in reviewing the role and scope of the incentive.<sup>18</sup> Enforcement of localisation and interconnect requirements between SMEs and larger corporates has also been ineffective.<sup>19 20</sup> With regard to pre-commercial procurement and digital marketplace facilitation, government departments and agencies tend to have low legitimacy and capacity for these relatively complex activities. So, aside from a more general need to clarify government procurement roles, as well as confidentiality and transparency rules,<sup>21</sup> there is probably a general need for technology-focused capacity building with supply-chain officials. This could be targeted at early-adopter entities in the digital space (e.g. certain SOEs). In addition, the state may look to empower procurement, funding and extension intermediaries in 'meso-level' organisations - from innovation agencies to industry associations - ideally at the intersection of emerging industrial (or services) ecosystems.<sup>22 23</sup>

Competition institutions or researchers could have a role to play in sharing knowledge or advising government on procurement, intellectual property and transparency questions. Competition policy may even require incubation or procurement from local digital SMEs as part of foreign acquisition/ merger approvals, or support the enforcement of platform/ infrastructure open access and localisation.

#### *System-view on governance*

As a higher-level policy proposal, a prominent (and recurring) suggestion is that there is a need to establish technology and innovation governance structures that span departmental silos, with

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<sup>12</sup> Department of Communications and Digital Technologies (South Africa)

<sup>13</sup> Department of Science and Innovation (South Africa), "White Paper on Science, Technology and Innovation", March 2019, <https://www.gov.za/documents/white-paper-science-technology-and-innovation-1-mar-2019-0000>

<sup>14</sup> p.25 in Justin Barnes, Anthony Black and Simon Roberts

<sup>15</sup> Sibahle Malinga, "Comms minister reflects on first 100 days in office", ITWeb, 07 January 2022, <https://www.itweb.co.za/content/RgeVDMPYjDXqKJN3>

<sup>16</sup> p.25 in Justin Barnes, Anthony Black and Simon Roberts

<sup>17</sup> In contrast with a suggestion that the Section 12J venture capital incentive needed to have been narrowed. South Africa Startup Act, Position Paper – Update September 2021 <https://www.startupact.co.za/progress>

<sup>18</sup> p.25 in Justin Barnes, Anthony Black and Simon Roberts

<sup>19</sup> Alison Gillwald, "A closing window of opportunity: Under-serviced area licensing in South Africa", Information Technologies & International Development 2, no. 4 (2005): pp-1.

<sup>20</sup> Antonio Andreoni, Lauralyn Kaziboni, and Simon Roberts, "Metals, Machinery, and Mining Equipment Industries in South Africa: The Relationship between Power, Governance, and Technological Capabilities", In: "Structural Transformation in South Africa: The Challenges of Inclusive Industrial Development in a Middle-Income Country". Edited by: Andreoni, A., Mondliwa, P., Roberts, S. and Tregenna, F. Oxford University Press, 2021.

<sup>21</sup> Public Affairs Research Institute, "Draft Public Procurement Bill [B-2020] Submission of Public Comments", 2020, <https://pari.org.za/submission-to-the-draft-public-procurement-bill/>

<sup>22</sup> Trade & Industrial Policy Strategies, "Mapping the meso space that enables technological change, productivity improvement and innovation in the manufacturing sector", 2018 <https://www.tips.org.za/research-archive/trade-and-industry/item/3637-mapping-the-meso-space-that-enables-technological-change-productivity-improvement-and-innovation-in-the-manufacturing-sector>

<sup>23</sup> Antonio Andreoni and Guendalina Anzolin

funding being directed towards policy or challenge/ mission-oriented programmes.<sup>24 25</sup> There is broad recognition that inter-departmental coordination on digital and innovation initiatives is weak, and that the envisaged engagement and partnering with the private sector has not materialised (or is opaque and abused). As a result, there is low visibility of needs and trends across fields and into the private sector.

By enrolling National Treasury, there is some hope that alternative budgetary models are possible, with allocations made to policy priorities or missions instead of individual government entities. Echoing an earlier proposal, an argument is made for supporting meso-level and subnational agencies which are able to network across fields and are closer to sector needs.<sup>26</sup> These actions could be supported by shared information resources on technology availability, market trends and skills demand; and by institutionalising private sector inputs in a more consistent and transparent way.<sup>27</sup>

Competition institutions could assist with (or even lead) the development of market and technology intelligence/ information resources. More broadly, they may contribute to guidelines and codes of good conduct around industrial policy and private sector practice.<sup>28</sup>

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<sup>24</sup> Department of Science and Innovation (South Africa)

<sup>25</sup> p.26 in Justin Barnes, Anthony Black and Simon Roberts

<sup>26</sup> Trade & Industrial Policy Strategies

<sup>27</sup> p.26 in Justin Barnes, Anthony Black and Simon Roberts

<sup>28</sup> Jean Tirole, "Competition and the industrial challenge for the digital age", paper for IFS Deaton Review on Inequalities in the Twenty-First Century, 2020.