



Comments to the Republic of South Africa on The Proposed Data and Cloud Policy

April 2021

The Global Data Alliance¹ (“Alliance” or “GDA”) welcomes the opportunity to share its views on the Draft National Policy on Data and Cloud (“draft Cloud Computing Policy”) of the Republic of South Africa. GDA member companies are active in South Africa in the advanced manufacturing, aerospace, automotive, consumer goods, electronics, financial services, health, media, natural resources, supply chain, and telecommunications sectors. The GDA supports policies that help instill trust in the digital economy while safeguarding the ability to transfer data across borders and refraining from imposing data localization requirements that restrict trade. The GDA supports aspects of South Africa’s draft Cloud Computing Policy, but recommends that South Africa explore alternative approaches to the cross-border data restrictions and data localization mandates found therein.²

I. Introduction

The GDA commends South Africa on aspects of its draft Cloud Computing Policy. The Alliance supports South Africa’s goal of increasing broadband connectivity and of “sharpen[ing] its innovative edge and contribut[ing] to global scientific and technological advancement.” The Alliance also supports South Africa’s goal of “unlocking investment opportunities, ensuring inclusive economic growth, and job creation,” and its desire “to intensify South Africa’s global presence and competitive advantage; increase investment and grow the economy to create jobs that are sourced in domestic orientated businesses; and grow small-and medium-sized firms.”

Alliance member companies are “domestic orientated businesses” in South Africa, collectively investing hundreds of millions of dollars in the South African economy, employing many thousands of South African citizens, and supporting numerous activities that advance inclusive growth, innovation, and economic development in South Africa. Among other things, Alliance members help provide to South Africa financial services, enterprise software technologies, and health, scientific and educational resources. Alliance members also help make local enterprises, including micro-, small-, and medium-sized enterprises (MSMEs), more competitive globally. Alliance members also help deliver telecommunications and cloud-based technology solutions across South Africa, supporting broadband connectivity within South Africa and across neighboring markets.

The Alliance is concerned that the draft Policy’s data localization mandates and data transfer restrictions, and related provisions outlined in Article 10.4, will impede the ability of South Africa to achieve its stated goals.³ The [Cloud Computing Scorecard](#) (a global report that ranks countries’ preparedness for the adoption and growth of cloud computing services) explains that:

Cloud services operate across national boundaries, and their success depends on access to regional and global markets. Restrictive policies that create actual or potential trade barriers will inhibit or slow the evolution of cloud computing.⁴

We respectfully suggest that the final Policy be revised to embrace the full potential of cloud computing through an approach that is flexible, promotes privacy and security, and allows enterprises in South Africa to benefit from cross-border access to best-in-class cloud-delivered infrastructure and technology. In particular, we recommend that South Africa explore alternative approaches to the cross-border data restrictions and data localization mandates found in the draft Policy.

II. Cross-Border Data Restrictions in the Draft Cloud Computing Policy

Under the heading, “Policy Issues on Localisation and Cross Border Data Transfers,” the draft Cloud Computing Policy states as follows:

Policy Interventions:

10.4.1 All data classified/identified as critical Information Infrastructure shall be processed and stored within the borders of South Africa.

10.4.2 Cross-border transfer of citizen data shall only be carried out in adherence with South African privacy protection policies and legislation (POPIA), the provisions of the Constitution, and in compliance with international best practise.

10.4.3 Notwithstanding the policy intervention above, a copy of such data must be stored in South Africa for the purposes of law enforcement.

10.4.4 To ensure ownership and control:

- Data generated in South Africa shall be the property of South Africa, regardless of where the technology company is domiciled.
- Government shall act as a trustee for all government data generated within the borders of South Africa.
- All research data shall be governed by the Research Big Data Strategy of the Department of Science and Innovation (DSI).
- All data generated from South African natural resources shall be co[1]owned by government and the private sector participant/s whose private funds were used to generate such, and a copy of such data shall be stored in the HPCDPC.
- Ownership and control of personal information and data shall be in line with the POPIA.
- The Department of Trade, Industry and Competition through the Companies and Intellectual Property Commission (CIPC) and the National Intellectual Property Management Office (NIPMO) shall develop a policy framework on data generated from intellectual activities including sharing and use of such data.⁵

Below, we elaborate on the economic and policy risks associated with such data localization mandates and data transfer restrictions (collectively “cross-border data transfer restrictions”), particularly relative to cloud computing infrastructure and the enabling technologies they support.

III. Economic Impacts of Draft Policy’s Cross-Border Data Restrictions

The draft Policy’s cross-border data restrictions increase economic risks, as outlined below.

- **Impact on South Africa’s Position as Regional Center of Cloud Computing Services:** South Africa is currently a regional leader in offering cloud computing services to neighboring economies. South Africa’s policy positions also have broad regional influence. South Africa risks losing its position as a regional provider of cloud services, if its neighboring economies emulate the cross-border data restrictions found in the draft Policy, by requiring localization of data storage and processing, and restricting cross-border data transfers to or from South Africa.
- **Impact on South Africa’s Broader Economic Goals:** The World Bank’s 2020 *World Development Report* found that, “restrictions on data flows have large negative consequences on the productivity of local companies using digital technologies... Countries would gain on average about 4.5 percent in productivity if they removed their restrictive data policies, whereas the benefits of reducing data restrictions on trade in services would on average be about 5 percent.”⁶

Cross-border data restrictions are sometimes justified as benefiting economic development. In fact, development benefits from an increase — not a decrease — in connectivity.⁷ Self-isolating cross-border data restrictions hinder economic development, reduce productivity, deprive local enterprises of commercial opportunities, and depress export competitiveness. It is estimated that such measures reduce GDP by up to 1.7 percent in implementing countries.⁸

- **Impact on South African Manufacturing:** Cross-border data restrictions are particularly damaging to industries upon which South Africa depends, including manufacturing and agriculture. It has been estimated that 75% of the value of data transfers accrues to such industries.⁹ South Africa exported nearly \$1 billion in manufactured vehicles and machinery, as well as nearly \$600 million in iron and steel, to the United States in 2019, and exports to the EU, Asia, and other regions were even larger.¹⁰
- **Impact on South African Services:** The World Bank 2021 *World Development Report* has noted that measures that “restrict cross-border data flows ... [may] materially affect a country’s competitive edge in the burgeoning trade of data-enabled services.”¹¹ A 2020 World Economic Forum study found that, “approximately half of cross-border [services] trade is enabled by digital connectivity[, which] ... has allowed developing countries and micro, small and medium-sized enterprises (MSMEs) to export through greater visibility, easier market access and less costly distribution. ... Developing countries ... accounted for 29.7% of services exports in 2019.”¹² In 2019, South Africa exported \$2 billion in services to the United States, in travel, professional and management services, and the transportation sector, including express carriers and cargo delivery – all areas that are heavily dependent on cross-border access to technology and data transfers.¹³
- **Impact on South Africa’s Global Market Access:** Data transfers are also critical to reducing the costs of reaching markets outside of South Africa. Data transfers not only enable local firms to find prospective customers in export markets; they also [reduce supply chain-related transaction costs](#).¹⁴ One recent study estimates that digital tools helped MSMEs across Asia reduce export costs by 82% and transaction times by 29%.¹⁵
- **Impact on South Africa’s IoT Deployment:** A 2021 GSMA study conducted in three developing regions (in South America, South-East Asia and Africa) indicates that data localization measures on IoT applications and M2M data could result in:
 - Loss of 59-68% of their productivity and revenue gains;
 - Investment losses ranging from \$4-5 billion;
 - Job losses ranging from 182,000-372,000 jobs.¹⁶
- **Impact on South African Enterprise Productivity:** Local enterprises rely on data flows to increase productivity, drive quality, and improve output in other ways.¹⁷ Among other things, cross-border data restrictions impede access to tailored data-enhanced analytics and insights that help these firms compete.¹⁸

IV. Policy Impacts of Draft Policy’s Cross-Border Data Restrictions

The cross-border data restrictions in the draft Policy may also undermine public policy goals relating to the health, privacy, and security of persons in South Africa. We address these topics below.¹⁹

- **Impact on ICT Policies:** From artificial intelligence to 5G to the cloud, governmental ICT policies can help coordinate public-private dialogue, support investment, and maximize the benefits of ICT technologies across the economy. Cross-border data restrictions often undermine these policies. For example, the benefits of cloud computing policies are most likely to arise in a cross-

border context that allows for elastic and scalable delivery of computing resources, rapid load balancing, and ready access to best-in-class technology from all over the world. Using data localization mandates and transfer restrictions to ban cross-border access to cloud computing infrastructure and technology would deprive local enterprises (including MSMEs) and users of:

- Cross-border access to IT resources hosted abroad;
- Cross-border collaboration and communication with foreign business partners;
- Foreign transactions and business opportunities; and
- Improved resiliency resulting from data storage across multiple geographical locations.²⁰

Additionally, to the extent that other countries emulate South Africa’s cross-border data restrictions, they will reduce their usage of South African data centers, thus undermining a core objective of the draft Cloud Computing Policy and isolating South Africa from other economies.

- **Impact on Cybersecurity:** Some argue that cross-border data restrictions are necessary to ensure cybersecurity. However, *how* data is protected is more important to security than *where* it is stored, and transfer restrictions often result in *weaker*, not *stronger*, cybersecurity. Cross-border data transfers help improve cybersecurity because these transfers allow for cybersecurity tools to monitor traffic patterns, identify anomalies, and divert potential threats in ways that depend on global access to real-time data. Stronger cybersecurity is enabled by cross-border data analytics an assertive cyber-defense posture coordinated across IT networks and national boundaries.²¹ When governments mandate localization or restrict the ability to transfer and analyze data in real-time, they create unintended vulnerabilities.²²
- **Impact on Privacy:** Some argue that cross-border data restrictions are necessary for privacy reasons – i.e., to ensure that companies process and use data consistent with a country’s data protection laws. In fact, organizations that transfer data globally typically implement procedures to ensure that the data is protected even when transferred outside of the country. To that end, organizations often rely on various approved data transfer mechanisms.²³
- **Impact on Regulatory Compliance:** Some claim that cross-border data restrictions ensure governmental access to data for regulatory or investigatory purposes. The location of the data, however, is not the determining factor. On the contrary, “data localization requirements can increase ... operational risks, hinder risk management and compliance, and inhibit financial regulatory and supervisory access to information.”²⁴ Accordingly, regulatory authorities in many countries actually encourage the responsible transfer of data across borders.²⁵ Likewise, data transfers are critical to other public policy priorities, including financial fraud monitoring and prevention; anti-money laundering; anti-corruption; and other legal compliance objectives.
- **Impact on Innovation:** Some claim that cross-border data restrictions promote innovation. On the contrary, [data localization mandates and data transfer restrictions undermine beneficial innovation processes](#)—from accessing global scientific and technical research databases, to engaging in cross-border research and development (R&D), to securing intellectual property rights for new inventions, and regulatory product approvals for new products and services.²⁶
- **Impact on COVID-19 Recovery:** As governments seek to limit the spread of COVID-19, cross-border access to technology and data transfers have become essential for countries seeking to sustain jobs, health, and education. This is particularly true for the [remote work](#), [remote health](#), [supply chain management](#), and [innovation](#)-related technologies that depend on cross-border access to cloud computing resources.²⁷

V. Conclusion

In conclusion, we respectfully recommend that South Africa remove the draft Policy’s data localization mandates and cross-border data transfer restrictions. We appreciate the opportunity to share these

views and hope that they will be helpful as South Africa considers its next steps on the draft Policy. Please do not hesitate to contact us with any questions regarding this submission.

¹ The Global Data Alliance is a cross-industry coalition of companies that are committed to high standards of data responsibility and that rely on the ability to transfer data around the world to innovate and create jobs. The Alliance supports policies that help instill trust in the digital economy while safeguarding the ability to transfer data across borders and refraining from imposing data localization requirements that restrict trade. Alliance members include BSA members and Abbott, American Express, Amgen, AT&T, Citi, ExxonMobil, FedEx, ITB360, LEGO, Lumen, Mastercard, Medtronic, Panasonic, Pfizer, RELX, Roche, UDS Technology, United Airlines, Verizon, and Visa. These companies are headquartered across the globe and are active in the advanced manufacturing, aerospace, automotive, consumer goods, electronics, financial services, health, media and entertainment, natural resources, supply chain, and telecommunications sectors, among others. BSA | The Software Alliance administers the Global Data Alliance. For more information on the Global Data Alliance, please see: <https://www.globaldataalliance.org/downloads/aboutgda.pdf>

² GDA members hold a variety of views on other aspects of the draft Cloud Computing Policy, which they may address through submissions via other organizations. Consistent with the GDA's cross-border data policy focus, the GDA's submission focuses on the data localization and data transfer aspects of the Policy alone.

³ See e.g., BSA, *Cloud Computing Scorecard* (2018), at https://cloudscorecard.bsa.org/2018/pdf/BSA_2018_Global_Cloud_Scorecard.pdf; BSA, *Moving to the Cloud – A Primer on Cloud Computing* (2018), at https://www.bsa.org/files/reports/2018BSA_MovingtotheCloud.pdf

⁴ BSA, *Cloud Computing Scorecard*, p. 1 (2018), at https://cloudscorecard.bsa.org/2018/pdf/BSA_2018_Global_Cloud_Scorecard.pdf

⁵ *South Africa Draft Cloud Computing Policy*, at p. 6.

⁶ World Bank, *World Development Report* (2020), at: <https://www.worldbank.org/en/publication/wdr2020>

⁷ See e.g., Ferracane et al., *The Costs of Data Protectionism*, VOX (2018); Ferracane et al., *Do Data Policy Restrictions Impact the Productivity Performance of Firms and Industries?* ECIPE Digital Trade Estimates Working Paper No. 1 (2019); Lund et al., *Defending Digital Globalization*, McKinsey Global Institute (2017). Access to foreign markets, innovation, education, and economic growth are all jeopardized by governmental measures that: (1) block cross-border access to information; (2) interfere with the circulation of technology, knowledge, and commercial data; (3) restrict connectivity to the Internet; (4) deny MSMEs and other local enterprises or citizens opportunities to engage with the technologies they need to engage with the economy. See <https://hbr.org/2017/07/60-countries-digital-competitiveness-indexed>

⁸ See Lee-Makiyama et al., *The Costs of Data Localization*, ECIPE Occasional Paper (2014), at: https://ecipe.org/wp-content/uploads/2014/12/OCC32014_1.pdf

⁹ See Global Data Alliance, *The Cross-Border Movement of Data: Creating Jobs and Trust Across Borders in Every Sector* (2020), at <https://www.globaldataalliance.org/downloads/GDAeverysector.pdf>; See Global Data Alliance, *Jobs in All Sectors Depend Upon Data Flows* (2020), at <https://www.globaldataalliance.org/downloads/infographicgda.pdf>; Global Data Alliance, *Cross-Border Data Transfers Facts and Figures* (2020), at <https://www.globaldataalliance.org/downloads/qdafactsandfigures.pdf>

¹⁰ See e.g., Office of the US Trade Representative, *US-South Africa Trade Relationship* (2019), at: <https://ustr.gov/countries-regions/africa/southern-africa/south-africa>

¹¹ World Bank, *World Development Report – Data For Better Lives* (2021), at: <https://openknowledge.worldbank.org/bitstream/handle/10986/35218/9781464816000.pdf>

¹² World Economic Forum, *Paths Towards Free and Trusted Data Flows* (2020).

¹³ See e.g., Office of the US Trade Representative, *US-South Africa Trade Relationship* (2019), at: <https://ustr.gov/countries-regions/africa/southern-africa/south-africa>

¹⁴ Global Data Alliance, *Cross-Border Data Transfers and Supply Chain Management* (2021), at <https://globaldataalliance.org/downloads/03182021gdaprimersupplychain.pdf>

¹⁵ *Micro-Revolution: The New Stakeholders of Trade in APAC*, Alphabet, 2019. Likewise, the Asia Development Bank Institute estimates that electronic commerce platforms, which operate on the basis of cross-border data transfers, have helped some local firms reduce the cost of distance in trade by 60%. Asia Development Bank Institute, *The Development Dimension of E-Commerce in Asia: Opportunities and Challenges* (2016), at: <https://www.adb.org/sites/default/files/publication/185050/adbi-pb2016-2.pdf>

¹⁶ GSMA, *Cross-border Data Flows – The Impact of Localization on IOT* (2021).

¹⁷ Data localization mandates and unnecessary data transfer restrictions hurt local innovation because a country that limits cross-border data transfers limits its own industries' access to technologies and data sources that are critical to growth and innovation, business operations, and the transfer of technology. These include: (a) productivity-enhancing software solutions; (b) scientific, research, and other publications; and (c) manufacturing data, blueprints, and other operational information. Faced with higher software costs and an unpredictable environment for R&D investments, local industries face challenges keeping technological pace with foreign competitors — threatening both domestic and export market sales. Furthermore, as data restrictions place an undue burden on industries operating in countries imposing them, they also undermine those countries' attractiveness as a destination for investment and R&D.

¹⁸ Local enterprises face competitive harm if they are deprived of the insights that come from consolidating local data sets within larger regional or global data sets for purposes of data analysis. See generally, BSA, *Understanding Artificial Intelligence* (2017), at: https://www.bsa.org/sites/default/files/2019-03/BSA_2017UnderstandingAI.pdf; BSA, *What's the Big Deal with Data* (2017), at: <https://data.bsa.org/>; BSA, *Artificial Intelligence in Every Sector* (2019), at: https://www.bsa.org/sites/default/files/2019-03/BSA_2018_AI_Examples.pdf

¹⁹ For additional information, see <https://www.globaldataalliance.org/downloads/02112020GDACrossborderdata.pdf>

²⁰ See generally, BSA, *Moving to the Cloud – A Primer on Cloud Computing* (2018), at https://www.bsa.org/files/reports/2018BSA_MovingtotheCloud.pdf.

²¹ See *id.* Cloud services delivered across-borders provide security advantages over alternative IT delivery approaches (on-premises or local cloud services):

- Physical Security: Certified personnel can carefully monitor servers 24/7 to prevent physical breaches, and can apply consistent protocols over a small number of locations.
- Data Security: CSPs can ensure data integrity through use of state-of-the-art encryption protocols for data at-rest and in-transit. CSPs can establish redundant backups of data in geographically dispersed data centers, mitigating risk of loss in the event of power outages or natural or manmade disasters.
- Advanced Threat Detection: CSPs leverage state-of-the-art enhanced security intelligence. They use regular penetration testing to simulate real-world attacks and evaluate security protocols against emerging threats.
- Automated Patch Deployment: Automated and centralized patch deployment and realtime updates to network security protocols work to protect systems from newly identified vulnerabilities.
- Incident Management and Response: CSPs maintain global teams of incident response professionals to respond and mitigate the effects of attacks and malicious activity.
- Certification: CSPs are typically certified to international security standards, and go through regular audits to maintain their certifications.

²² See *id.*, p. 1.

²³ See generally footnote 8, *infra*. These data transfer mechanisms may include adequacy decisions, certifications, codes of conduct, Binding Corporate Rules (BCRs), and Standard Contractual Clauses (SCCs) that contain built-in data protection safeguards.

²⁴ See e.g., United States-Singapore Joint Statement on Financial Services Data Connectivity, at: <https://www.mas.gov.sg/news/media-releases/2020/united-states-singapore-joint-statement-on-financial-services-data-connectivity>;

²⁵ See *id.*, USMCA Art. 17.2.1; US-Japan FTA Art. (PPC).

²⁶ See Global Data Alliance, *Cross-Border Data Transfers and Innovation* (2021), at <https://globaldataalliance.org/downloads/04012021cbdtinnovation.pdf>

²⁷ See *id.*, Global Data Alliance, *Cross-Border Data Transfers and Remote Work* (2020), at <https://globaldataalliance.org/downloads/10052020cbdtremotework.pdf>; See Global Data Alliance, *Cross-Border Data Transfers and Remote Health Services* (2020), at <https://globaldataalliance.org/downloads/09152020cbdtremotehealth.pdf>; Global Data Alliance, *Cross-Border Data Transfers and Supply Chain Management* (2021), at <https://globaldataalliance.org/downloads/03182021gdaprimersupplychain.pdf>