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Ariel Gordon  
Director for Innovation and Intellectual Property  
Office of the United States Trade Representative  
600 17th Street, NW  
Washington, DC 20508  
Attn: Special301@ustr.eop.gov

Dear Ms. Gordon,

The Global Data Alliance (GDA)<sup>1</sup> provides the following information in response to the notice published by the Office of the US Trade Representative (USTR) seeking comments on the 2022-2023 Special 301 review under Section 182 of the Trade Act of 1974 (Special 301).<sup>2</sup>

GDA members rely on intellectual property (IP) – including copyrights and related rights, patents, trademarks, and trade secrets – and on the ability to transfer data across borders in many aspects of their international operations. However, GDA members increasingly face market access barriers in the form of unnecessary and discriminatory data localization mandates and data transfer restrictions that have a direct impact on their ability to acquire, protect, enforce, and enjoy the benefits of, IP rights. Between 1995 and 2015, such data-related trade barriers have increased by over 800%, and the rate of increase has further accelerated in recent years.<sup>3</sup>

Section 182 of the Trade Act of 1974, as amended by the Omnibus Trade and Competitiveness Act of 1988 and the Uruguay Round Agreements Act of 1994 (19 USC § 2242), requires USTR to identify countries based on *inter alia*, policies that deny “fair and equitable market access to United States persons that rely upon intellectual property protection.” In this submission, we focus on market access barriers that impact IP-intensive industries by mandating data localization or restricting legitimate data transfers.<sup>4</sup>

National policies on cross-border data transfers are – alongside standards of IP protection and enforcement – important determinants of the ability of economies to create, innovate, and generate new IP. They also are important measures of the openness and fairness of those markets to non-nationals who rely on IP in their commercial operations.

Innovation and market access-limiting data localization mandates and data transfer restrictions cite “indigenous innovation” or other priorities, yet they often undermine the very priorities that they purport to support. These restrictions take many forms: Sometimes the policies expressly require data to stay in-country. Sometimes, these policies impose unreasonable conditions on sending data abroad or prohibit such transfers outright. In other cases, the policies require the use of domestic data centers or other equipment, or the need for such data centers to be operated by local vendors. For example, these measures may:

- Reflect a choice of policy tools that are significantly more trade-restrictive than necessary to achieve the stated public policy goal;
- Constitute unnecessary, unjustified and/or disguised restrictions on data transfers across borders, or may be more restrictive of data transfers than necessary; or
- Treat cross-border data transfers less favorably than domestic data transfers.

Sustained attention to these issues is critical, because in today’s digitized economy, research and development (R&D), IP generation, and other creative and scientific endeavors are increasingly cross-border in nature.

For example, artificial intelligence (AI) involves the application of analytical techniques to data generated in various countries, transferred across borders, and consolidated into larger data sets. AI helped fast-track the COVID-19 vaccine, cutting timelines from years to months, as researchers analyzed data transferred from around the world to quickly identify potential vaccine treatments.<sup>5</sup> Trade barriers that impede data transfers undermine the potential of AI, as they prevent the consolidation of representative data sets necessary to conduct AI analysis. In this way, these trade barriers directly impede new innovations and creations that could advance human health and welfare.

Failing to attend to data-related trade barriers also threatens other IP priorities – from engaging in cross-border R&D, to protecting brands, to investigating IP infringement, to conducting comprehensive prior art searches. Likewise, with so many patented or copyrighted innovations functionally dependent upon satellite or other cross-border data communications (e.g., IoT software applications in the aerospace, automotive, and agricultural machinery sectors; music and video streaming services that disseminate licensed film or music content), cross-border data transfer restrictions make it difficult, if not impossible, for innovators and creators to sell or provide support to their IP-protected products abroad – interfering with their ability to enjoy the benefits of their IP rights abroad. In each of the foregoing examples (and many others), innovation and market access-limiting data localization mandates and data transfer restrictions impact IPR holders in respect of the availability, acquisition, scope, maintenance, enforcement, and enjoyment of IP rights.

The Global Data Alliance urges USTR to attend to the growing threat to global innovation and IP protection presented by unfair market access barriers in form of cross-border data transfer restrictions and data localization mandates. We look forward to your questions and comments.

**Submission of Global Data Alliance for  
Special 301 Annual Review**

This submission responds to USTR’s solicitation of information relevant to the Special 301 Annual Review, and contains the following major sections:

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## **A. Cross-Border Data Transfers, Innovation, and Intellectual Property — Overview**

Many international organizations recognize the close nexus between cross-border data transfers and innovation. The G20 has underscored that the “[c]ross-border flow of data, information, ideas and knowledge generates ... greater innovation,”<sup>6</sup> and the WTO has similarly emphasized that, “for data to flourish as an input to innovation, it benefits from flowing as freely as possible, given necessary privacy protection policies.”<sup>7</sup> Likewise, UNCTAD has warned that barriers driven by “data nationalism” reduce “opportunities for digital innovation, including various missed opportunities for inclusive development that can be facilitated by engaging in data-sharing through strong international cooperation.”<sup>8</sup>

By their nature, data localization mandates and data transfer restrictions tend to impede the cross-border exchange of knowledge, technical know-how, laboratory analysis, scientific research, and other information. 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 integral to innovation and the dissemination of technology. These include: (a) scientific, research, and other publications; (b) manufacturing data, blueprints, and other operational information; and (c) digital tools for remote work, laboratory research, and other innovation-related applications.<sup>9</sup> Faced with higher costs to access or exchange information and an unpredictable environment for R&D investments, local industries face increasing innovation challenges. 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 R&D.

## **B. Cross-Border Data Transfers and the Innovation Lifecycle**

Cross border data transfers are critical at every stage of the innovation life cycle, and in all facets of IP legal frameworks. This includes: (1) early stages of innovative and creative processes, including basic R&D, initial conception, and design; (2) the acquisition and maintenance of IP rights; (3) the enforcement of IP rights and brand protection activities; and (4) the ongoing enjoyment and commercialization of those IP rights.

The WIPO Global Innovation Index (GII), which ranks 132 countries against 81 innovation and IP-related indicators and which aims to help policymakers “discover what works best in producing an ecosystem where people can achieve their highest potential, innovating and creating to improve lives everywhere,” highlights these risks.<sup>10</sup> The GII does not directly account for countries’ cross-border data restrictions, despite the fact that several countries that impose such barriers have stated their belief that such barriers advance “indigenous innovation” goals and despite the close nexus between the cross-border exchange of knowledge, ideas, and information and cross-border access to technology (on the one hand) and R&D, scientific endeavor, innovation, creativity, and intellectual property generation (IP) (on the other). Many of the GII’s metrics would likely be directly impacted by new cross-border data restrictive measures in China, India, and Vietnam, etc., including strict data localization mandates and prohibitions on transfers of “important,” “sensitive,” or “critical” information (whether “personal” or “non-personal”). These measures – often implemented quickly and with minimal input from the public – directly impact GII metrics in the cross-border context, including: (1) legal and operational stability; (2) regulatory quality; (3) ICT access and use; (4) gross expenditures on R&D; (5) university-industry R&D collaboration; (6) cross-border knowledge absorption and output; (7) research talent; and (8) High-tech and ICT services imports.<sup>11</sup>

## 1. Data Transfers and Core Innovation

In every sector, cross border data transfers play an integral role in basic research and development (R&D), and other core innovative and creative functions. For example, in semiconductor design as well as biopharmaceutical research, basic R&D depends upon access to globally sourced research materials from laboratories and research institutions from across the world, as well as collaboration, joint research, and the exchange of ideas and knowledge among teams of inventors, designers, authors, and other creators and innovators in different countries.

*Trade barriers that impede data transfers undermine basic research and scientific activity, as well as the development of new treatments and inventions to protect human health and welfare.*

This collaborative, multinational approach to technological and creative endeavor integrates and binds together the international IP legal framework as well as scientific and artistic communities. R&D teams across universities, commercial labs, and enterprises in different countries collaborate across borders to develop new products, cures, and other advances protected by patents, trade secrets, copyrights and trademarks. Typically, such R&D also often requires the use of copyrighted software solutions and research data accessible across cloud-enabled and networked environments, as well as the application of artificial intelligence (AI)-based analytical techniques to data transferred across borders and consolidated into larger data sets.<sup>12</sup>

As explained by the World Intellectual Property Organization (WIPO),<sup>13</sup> the US Patent & Trademark Office (USPTO),<sup>14</sup> and other IP authorities,<sup>15</sup> such R&D depends upon the application of AI-related tools to globally sourced data sets. Data sets consolidated across IT networks and borders can be analyzed (e.g., through machine learning or data analytical techniques) to identify meaningful insights, patterns, and connections that can aid R&D teams in the discovery and development of novel solutions to scientific and technical challenges.

## 2. IP Acquisition, Registration, and Maintenance

The ability to transfer data across borders is also critical to the acquisition of IP rights. Applicants must be able to transfer information across borders in order to apply for patent, copyright, trademark or other rights in a coordinated manner with IP office authorities in different countries. Access to data from multiple countries – such as prior art references – is also an integral part of the patent application examination process. They must also be able to transfer data across borders in order to avail themselves of WIPO-administered international registration and examination frameworks for IP rights, such as the Patent Cooperation Treaty, the Madrid Registry for trademarks, or the Hague System for the International Registration of Industrial Designs.

Data localization mandates and data transfer restrictions that prohibit the transfer of “important,” “critical,” or “sensitive” data (e.g., under Chinese measures discussed below) create uncertainty regarding the future ability to transfer information and data necessary to these procedures for the acquisition, registration, and maintenance of IP rights.

## 3. IP Enforcement and Brand Protection

In today's global marketplace, IP infringement is increasingly complex and globalized, requiring sophisticated investigatory tools. No IP enforcement program can be effective without the ability to trace – on a cross-border basis – counterfeiting, commercial scale piracy, and other illicit activities with insights and information derived from foreign source countries, distribution hubs and networks, and end-user markets. Data localization measures and unnecessary data transfer restrictions directly interfere with the ability to investigate and counteract transnational IP infringing activities.

Cross-border data transfers are critical to many aspects of IP enforcement - from monitoring marketplaces, to gathering evidence of infringement in multiple locations, to researching details of illicit networks, to using administrative or judicial tools in multiple jurisdictions to preserve evidence and secure recourse. The ability to track and trace infringing activities across IT networks and borders is particularly important as many infringing acts involve an online element, whether via the offer and sale of infringing articles online; the cross-border

exfiltration of source code, trade secrets or other proprietary data; the circumvention of technological protection measures; or the unauthorized and unlicensed use of copyrighted software or trademarks in an online environment.

*Cross border access to information is frequently necessary for IP infringement investigations (e.g., obscuring patterns and trends in counterfeiting and piracy and making it more difficult for investigators to obtain forensic data to identify criminal enterprises engaged in counterfeiting, piracy, and other IP infringement)*

#### 4. IP Commercialization

Cross-border data transfers are also critical to the ability of enterprises to commercialize and enjoy the benefits of their IP rights. When a country mandates data localization or restricts data transfers, it can easily frustrate the ability to enjoy the benefits of any IP right granted. With so many patented or copyrighted innovations functionally dependent upon satellite or other cross-border data communications (e.g., IoT software applications in the aerospace, automotive, and agricultural machinery sectors; music and video streaming services that disseminate licensed film or music content), cross-border data transfer restrictions make it difficult, if not impossible, for innovators and creators to sell or provide support to their IP-protected products or in foreign markets – interfering with their ability to secure a commercial return on, or otherwise enjoy the benefits of, their IP rights abroad.

##### C. Data-Related Market Access Barriers that Impact Innovation and IP

As further detailed in the GDA's [2022 National Trade Estimate submission](#) (See Attachment) some trading partners are increasingly erecting **unfair market access barriers** that affect GDA members who rely on IP in their commercial operations.<sup>16</sup> For additional details, please see the Appendix to this submission, which contains GDA's NTE discussions of innovation and IP-related concerns in Brazil, China, India, Indonesia, South Korea, Thailand, Vietnam, and the European Union (EU). The GDA does not provide specific country listing recommendations (as between Priority Watch List or Watch List) for these countries, but requests that the US government include the information submitted in its qualitative overall review of the referenced countries. Below is a brief preview of several measures described in greater detail in the Appendix.

**China** has published numerous measures that require data localization or restrict data transfers including the Data Security Law, the Personal Information Protection Law, and the Cybersecurity Law, as well as numerous subsidiary measures. **India** too has imposed data localization requirements, including through India's Directive on Storage of Payment System Data issued by the Reserve Bank of India in 2018, which imposes data and infrastructure localization requirements.<sup>17</sup> India has also proposed to limit the number of countries to which data can be transferred under a so-called "White List" approach in its Digital Personal Data Protection Bill.<sup>18</sup> Other regulators and government bodies continue to voice affirmation for data localization across different policy documents.<sup>19</sup>

**South Korea's** Cloud Security Assurance Program (CSAP) requires use of local data centers for a broad range of cloud services.<sup>20</sup> The proposed implementation regulation for **Indonesia's** Government Regulation 71/2019 and OJK Regulation 13/2020 also contain data localization requirements. The proposed implementation regulations for Indonesia's Government Regulation 71/2019 and OJK Regulation 13/2020 also contain data localization requirements. Likewise, **Vietnam's** 2018 Cybersecurity Law,<sup>21</sup> Decree 72 on Management, Provision and Use of Internet services and Online Information, and the draft Personal Data Protection Decree impose improper data localization requirements. These guidelines raise significant market access concerns for companies offering software, IT, and data services overseas.

**Bangladesh,**<sup>22</sup> **Egypt,**<sup>23</sup> **Nigeria,**<sup>24</sup> **Pakistan**<sup>25</sup> **Saudi Arabia,**<sup>26</sup> and the **United Arab Emirates**<sup>27</sup> have also issued measures or proposals in that raise questions and potential concerns from a cross-border data policy perspective. Finally, BSA continues to monitor the application of measures in the **EU** that govern cross-border

data flows, as well as the EU's bilateral and plurilateral trade negotiations and developing policies and legal jurisprudence, which could dramatically restrict cross-border data flows with third countries.

## D. Conclusion

The Global Data Alliance welcomes the opportunity to provide this submission and looks forward to working with USTR to achieve meaningful progress in addressing the cross-border data policy concerns identified in this submission.

<sup>1</sup> The Global Data Alliance ([globaldataalliance.org](https://globaldataalliance.org)) 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 are headquartered across the globe and are active in the advanced manufacturing, aerospace, automotive, consumer goods, electronics, energy, financial services, health, supply chain, and telecommunications sectors, among others. BSA | The Software Alliance administers the Global Data Alliance. See Global Data Alliance, *About the Global Data Alliance* (2020), at: <https://www.globaldataalliance.org/downloads/aboutgda.pdf>

<sup>2</sup> <https://www.govinfo.gov/content/pkg/FR-2022-12-15/pdf/2022-27195.pdf>

<sup>3</sup> <https://ecipe.org/wp-content/uploads/2017/11/Restrictions-on-cross-border-data-flows-a-taxonomy-final1.pdf>

<sup>4</sup> We do not address the first statutory element under section 182 of the Trade Act of 1974 relating to the adequacy and effectiveness of IP protections because the GDA is organizationally focused on issues relating directly to cross-border data policies. However, GDA members own extensive portfolios of trademarks, copyrights, patents, trade secrets, and other IP rights, and rely on other trade associations to represent their specific perspectives on substantive matters of IP protection and enforcement.

<sup>5</sup> See e.g., Ganes Kesari, *Why Covid Will Make AI Go Mainstream In 2021*, Forbes (Dec. 2020), <https://www.forbes.com/sites/ganeskesari/2020/12/21/why-covid-will-make-ai-go-mainstream-in-2021-top-3-trends-for-enterprises/?sh=1d83a3f6797a>; Arshadi et al., *Artificial Intelligence for COVID-19 Drug Discovery and Vaccine Development*, Front. Artif. Intell. (Aug. 2020), <https://www.frontiersin.org/articles/10.3389/frai.2020.00065/full>; Ungaro, et al., *Accelerating vaccine research for COVID-19 with high-performance computing and artificial intelligence*, HP Enterprise (2020), <https://www.hpe.com/us/en/newsroom/blog-post/2020/04/accelerating-vaccine-research-for-covid-19-with-high-performance-computing-and-artificial-intelligence.html>; IEEE, *Can AI and Automation Deliver a COVID-19 Antiviral While It Still Matters?* IEEE Spectrum (2020), <https://spectrum.ieee.org/artificial-intelligence/medical-ai/can-ai-and-automation-deliver-a-covid-19-antiviral-while-it-still-matters>

<sup>6</sup> G20, *Ministerial Statement on Trade and Digital Economy* (2019), <http://www.g20.utoronto.ca/2019/2019-g20-trade.html>

<sup>7</sup> See *Trade Policy Review of India*, Secretariat Report, *supra* note 5.

<sup>8</sup> UNCTAD Digital Economy Report 2021, *supra* note 2.

<sup>9</sup> See Global Data Alliance, *Cross-Border Data Transfers and Remote Work* (Oct. 2020), <https://globaldataalliance.org/downloads/10052020cbdtremotework.pdf>; See Global Data Alliance, *Cross-Border Data Transfers and Remote Health Services* (Sept. 2020) <https://globaldataalliance.org/downloads/09152020cbdtremotehealth.pdf>

<sup>10</sup> World Intellectual Property Organization, WIPO Global Innovation Index (Sept. 2021), at: [https://www.wipo.int/global\\_innovation\\_index/en/2021/index.html](https://www.wipo.int/global_innovation_index/en/2021/index.html)

<sup>11</sup> Global Data Alliance, *Cross-Border Data Transfers & Innovation* (2021), at: <https://globaldataalliance.org/wp-content/uploads/2021/07/04012021cbdtinnovation.pdf>; Global Data Alliance, *Cross-Border Data Transfers & Biopharmaceutical R&D* (2021), at: <https://globaldataalliance.org/wp-content/uploads/2021/09/09092021cbdtbiopharma.pdf>; Global Data Alliance, *Cross-Border Data Transfers & Economic Development* (2021), at: <https://globaldataalliance.org/wp-content/uploads/2021/07/05062021econdesvelopments1.pdf>

<sup>12</sup> See Joshua Meltzer, *The impact of artificial intelligence on international trade*, Brookings Institution (2018), at: <https://www.brookings.edu/research/the-impact-of-artificial-intelligence-on-international-trade/>

<sup>13</sup> See e.g., WIPO, *WIPO Technology Trends 2019, Artificial Intelligence* (2019), [https://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_1055.pdf](https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1055.pdf); WIPO, *Frequently Asked Questions: AI and IP Policy* (2021), [https://www.wipo.int/about-ip/en/artificial\\_intelligence/faq.html](https://www.wipo.int/about-ip/en/artificial_intelligence/faq.html); WIPO, *Artificial Intelligence and Intellectual Property Policy* (2020), [https://www.wipo.int/about-ip/en/artificial\\_intelligence/policy.html](https://www.wipo.int/about-ip/en/artificial_intelligence/policy.html)

<sup>14</sup> USPTO, *Artificial Intelligence Webpage* (2021), <https://www.uspto.gov/initiatives/artificial-intelligence>; USPTO, *Public Views on Artificial Intelligence and Intellectual Property Policy* (2020), [https://www.uspto.gov/sites/default/files/documents/USPTO\\_AI-Report\\_2020-10-07.pdf](https://www.uspto.gov/sites/default/files/documents/USPTO_AI-Report_2020-10-07.pdf); USPTO, *Inventing AI - Tracing the Diffusion of Artificial Intelligence with US Patents* (Oct. 2020), <https://www.uspto.gov/sites/default/files/documents/OCE-DH-AI.pdf>.

<sup>15</sup> See e.g., Canadian Intellectual Property Office, *Processing Artificial Intelligence: Highlighting the Canadian Patent Landscape* (2020), [https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/vwapi/AI\\_Report\\_ENG.pdf/\\$FILE/AI\\_Report\\_ENG.pdf](https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/vwapi/AI_Report_ENG.pdf/$FILE/AI_Report_ENG.pdf); Japan Patent Office, *Recent Trends in AI-Related Inventions* (2019), [https://www.jpo.go.jp/e/system/patent/gaiyo/ai/document/ai\\_shutsugan\\_chosa/report-2019.pdf](https://www.jpo.go.jp/e/system/patent/gaiyo/ai/document/ai_shutsugan_chosa/report-2019.pdf); IP Australia, *Machine Learning Innovation – A Patent Analytics Report* (2019), [https://www.ipaustralia.gov.au/sites/default/files/reports\\_publications/patent\\_analytics\\_report\\_on\\_machine\\_learning\\_innovation.pdf](https://www.ipaustralia.gov.au/sites/default/files/reports_publications/patent_analytics_report_on_machine_learning_innovation.pdf); UKIPO, *Artificial Intelligence - A worldwide overview of AI patents and patenting by the UK AI sector* (2019), at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/817610/Artificial\\_Intelligence\\_-\\_A\\_worldwide\\_overview\\_of\\_AI\\_patents.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817610/Artificial_Intelligence_-_A_worldwide_overview_of_AI_patents.pdf); European Patent Office, *Patents and the Fourth Industrial Revolution* (2017), [documents.epo.org/projects/babylon/eponet.nsf/0/17FDB5538E87B4B9C12581EF0045762F/%24File/fourth\\_industrial\\_revolution\\_2017\\_en.pdf](https://documents.epo.org/projects/babylon/eponet.nsf/0/17FDB5538E87B4B9C12581EF0045762F/%24File/fourth_industrial_revolution_2017_en.pdf).

<sup>16</sup> We do not address the first element relating to the adequacy and effectiveness of IP protections because the GDA is organizationally focused on issues relating directly to cross-border data policies. GDA members own extensive portfolios of trademarks, copyrights, patents, trade secrets, and other IP rights, and rely on other trade associations to represent their specific perspectives on substantive matters of IP protection and enforcement.

<sup>17</sup> *Reserve Bank of India Storage of Payment System Data Directive* (2018) at: <https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=11244&Mode=0> and *Ministry of Electronics and Information Technology Guidelines for Government Departments on Contractual Terms Related to Cloud Services* at: [https://www.meity.gov.in/writereaddata/files/Guidelines-Contractual\\_Terms.pdf](https://www.meity.gov.in/writereaddata/files/Guidelines-Contractual_Terms.pdf).

<sup>18</sup> See Global Data Alliance, *Comments on India Digital Personal Data Protection Bill Proposal* (Dec. 2022), at: <https://globaldataalliance.org/wp-content/uploads/2022/12/12162022gdacmtsdpd.pdf>

Growing data localization requirements and data transfer restrictions in India will impair India's ability to meet its innovation goals. For example, data transfers are critical to India's national IPR policy objectives to: (1) incentivize Indian inventors, MSMEs and start-ups to acquire and commercialize IPRs in other countries (objective 5.4); (2) identify opportunities for marketing Indian IPR-based products, especially GIs, and services to a global audience (objective 5.6); (3) encourage creation and protection of IPRs by Indian individuals and entities in global markets (objective 2.23); (4) facilitate access to databases on Indian IP and global databases of creators/innovators, market analysts, funding agencies, IP intermediaries (objective 5.1.4); (5) tak[e]...up the issue of Indian works and products being pirated and counterfeited abroad with countries concerned (objective 6.8.7), and (6) promote cooperation with IP offices in other countries in areas of Capacity Building, Human Resource Development, Training, Access to Databases, Best Practices in search and examinations, use of ICT and user-oriented services (objective 4.11). See Department for Promotion of Industry and International Trade, *National Intellectual Property Rights Policy*, p. 1 (2016), at: <https://dpiit.gov.in/sites/default/files/national-IPR-Policy2016-14October2020.pdf>

Likewise, data transfers are critical to the recent Indian parliamentary recommendations to: (1) foster “collaborative efforts with other countries and international organisations”; (2) engage in the “exchange of crucial information”; (3) encourage Indian enterprises to “register... for IPRs in foreign countries”; and (4) improve cross-border access to information. See Parliament of India, *Review of the Intellectual Property Rights Regime in India*, Report No. 161 (July 2021), [https://rajyasabha.nic.in/rsnew/Committee\\_site/Committee\\_File/ReportFile/13/141/161\\_2021\\_7\\_15.pdf](https://rajyasabha.nic.in/rsnew/Committee_site/Committee_File/ReportFile/13/141/161_2021_7_15.pdf)

Such restrictions could also: (5) impede Indian researchers’ access to global scientific and technical research databases; (6) effectively disqualify Indian enterprises from engaging in international research consortia or from cross-border research and development (R&D); or (7) undermine cooperative scientific and R&D activity under international frameworks like the India-US Science & Technology Agreement or the Indo-US Science and Technology Forum (which supports some 15,000 scientific project beneficiaries). See Global Data Alliance, *Cross-Border Data Transfers and Innovation* (2021), at <https://globaldataalliance.org/downloads/04012021cbdtinnovation.pdf>; Global Data Alliance, *Cross-Border Data Transfers & Biopharmaceutical R&D* (2021), at [globaldataalliance.org/wp-content/uploads/2021/09/09092021cbdtbiopharma.pdf](https://globaldataalliance.org/wp-content/uploads/2021/09/09092021cbdtbiopharma.pdf)

<sup>19</sup> See TRAI Consultation Paper on Regulatory Framework for Promoting Data Economy Through Establishment of Data Centres, Content Delivery Networks, and Interconnect Exchanges in India (December 2021), Para 2.9, 2.28, available at: [https://www.trai.gov.in/sites/default/files/CP\\_16122021.pdf](https://www.trai.gov.in/sites/default/files/CP_16122021.pdf) ; Report of the Committee of Experts on Non-Personal Data Governance Framework (Dec 2020), available at: [https://static.mygov.in/rest/s3fs-public/mygov\\_160922880751553221.pdf](https://static.mygov.in/rest/s3fs-public/mygov_160922880751553221.pdf) ; Draft National E-Commerce Policy, 2019, available at: [https://dpiit.gov.in/sites/default/files/DraftNational\\_e-commerce\\_Policy\\_23February2019.pdf](https://dpiit.gov.in/sites/default/files/DraftNational_e-commerce_Policy_23February2019.pdf)

<sup>20</sup> *Act on the Development of Cloud Computing and Protection of its Users (Cloud Computing Promotion Act)* (2015). English translation at: <http://www.law.go.kr/eng/engLsSc.do?menuId=2&section=lawNm&query=cloud+computing&x=0&y=0#iBgcolor1>.

<sup>21</sup> *Vietnam's 2018 Cybersecurity Law* at: <https://luatvietnam.vn/an-ninh-quoc-gia/luat-an-ninh-mang-2018-luat-an-ninh-mang-so-24-2018-gh14-164904-d1.html#noidung>.

<sup>22</sup> See Global Data Alliance, *GDA Comments on Bangladesh Draft Cloud Computing Policy*, May 12, 2021, at: <https://www.globaldataalliance.org/downloads/05122021gdabdcloudpol.pdf>

<sup>23</sup> In July 2020, Egypt enacted its first general privacy legislation, the Data Protection Law. The Law, which limits the grounds for data transfers, is due to take full effect following the passing of Executive Regulations.

<sup>24</sup> In November 2022, Nigeria proposed a new Personal Data Protection bill with cross-border data restrictive elements. See generally Global Data Alliance, *Comments on Nigeria Personal Data Protection Bill*, at: <https://globaldataalliance.org/wp-content/uploads/2022/12/12012022gdangpdp.pdf>

<sup>25</sup> In February 2020, Pakistan published a draft Data Protection Bill which includes two potential data localization requirements and which leaves key terms (e.g., scope of “critical data”) undefined. The bill requires data mirroring for all personal data and local processing of all critical personal data, and prohibits the transfer of that data abroad. See Global Data Alliance, *Comments to the Ministry of Information Technology and Telecommunication of the Islamic Republic of Pakistan on The Personal Data Protection Bill 2020* (May 15, 2020), at [www.globaldataalliance.org/downloads/051420pakistanpdpbill.pdf](http://www.globaldataalliance.org/downloads/051420pakistanpdpbill.pdf)

<sup>26</sup> The Kingdom of Saudi Arabia has steadily introduced a number of regulatory frameworks which contain data localization requirements.

- **Cloud Computing Regulatory Framework.** In March 2018, the Communications and Information Technology Commission (CITC) published the Cloud Computing Regulatory Framework. While the original Framework did not contain a localization requirement, the Framework was updated in March 2019 and now requires cloud customers to ensure that no customer data that is generated or collected by private sector regulated industries is transferred outside the Kingdom. The prohibition extends to any permanent or temporary transfer or storage (e.g. for caching, or redundancy/backup) unless it is expressly allowed under law. See [https://www.citc.gov.sa/en/RulesandSystems/RegulatoryDocuments/Documents/CCRF\\_En.pdf](https://www.citc.gov.sa/en/RulesandSystems/RegulatoryDocuments/Documents/CCRF_En.pdf)
- **IoT Regulatory Framework.** In September 2019, and following on from the Cloud Computing Regulatory Framework, the Communications and Information Technology Commission (CITC) published the IoT Regulatory Framework which regulates the use of IoT services in the Kingdom. This Framework requires all IoT service providers to host all servers used in providing IoT services, and all data inside the Kingdom. See [https://www.citc.gov.sa/en/RulesandSystems/RegulatoryDocuments/Documents/IoT\\_REGULATORY\\_FRAMEWORK.pdf](https://www.citc.gov.sa/en/RulesandSystems/RegulatoryDocuments/Documents/IoT_REGULATORY_FRAMEWORK.pdf)
- **National Data Governance Interim Regulations.** On October 20, 2020, the Saudi Data and Artificial Intelligence Authority published the National Data Governance Interim Regulations. The Regulations require the storage and processing of personal data “in order to ensure preservation of the digital national sovereignty over such data”. Personal data can only be transferred or processed outside of the Kingdom if organizations obtain the approval of the relevant regulatory authority and the National Data Management Office. These Regulations are concerning given its broad application to all companies which handle personal data and represents a step towards horizontal imposition of data localization requirements in the Kingdom.
- **Personal Data Protection Law.** In November 2022, Saudi Arabia published a new draft Personal Data Privacy Law (PDPL) containing a variety of data transfer restrictions. See generally, Global Data Alliance, *Comments on Saudi Arabia Personal Data Protection Law* (Dec. 2022), at: <https://globaldataalliance.org/wp-content/uploads/2022/12/12152022gdakdapdp.pdf>

<sup>27</sup> In October 2020, the Central Bank of the United Arab Emirates published its Draft Retail Payment Services Regulations which requires all personal and payment data to be stored and maintained within the UAE.