Thank you, Chairman and Commissioners, for inviting me to participate in this hearing. My name is Katrin Kuhlmann, and I am the President and Founder of New Markets Lab (NML), a non-profit legal innovation lab that focuses on the design and implementation of economic law and regulation with the goal of advancing social and economic development. In addition to NML, I have also been teaching trade and development law since 2008 and am now a Visiting Professor at Georgetown University Law Center. My work focuses on international economic law, regulation of different sectors (including agriculture, digital economy, and services), law and economic development, and trade rules at the regional and international levels, all of which will be the focus of my testimony today.

As I am sure many will highlight, the landscape for trade and investment with and within sub-Saharan Africa is changing, making this a particularly timely discussion. New opportunities are arising across sectors, including agriculture, manufacturing, and services, to the benefit of African and international investors alike. As markets change, the system of rules, regulations, and policies that govern the market will also need to evolve, and it is particularly interesting to see how African nations are approaching these changing dynamics through international economic law.

Perhaps the most significant recent event is the entry into force of the African Continental Free Trade Area (the AfCFTA or CFTA), which now includes 54 African Member States and is an unparalleled development both in terms of market potential and international law. The AfCFTA’s implications for market development will be significant – it covers a region of over a billion individuals with a combined GDP of US$ 3.4 trillion. AfCFTA has the potential to boost intra-African trade by over 50 percent by eliminating import duties – with double the gains if non-
tariff barriers are also reduced—and has significant implications for investment. It also has the potential to rewrite international law. Since the AfCFTA will move forward in stages, it will be important to continue to focus on how the rules of the market will be designed and implemented.

I have previously testified before this committee about the importance of a tailored and incremental approach to trade agreements centered around the “building blocks” of trade and investment, and such an approach is inherent in the staged approach of the CFTA. The building blocks include traditional areas of trade law and regulation such as trade facilitation, sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT), and IPR, along with labor and environment, infrastructure, competition, and food security. Gender is also an important building block and should be more central to trade agreements moving forward, and the global trading community has already signaled a commitment in this regard. With the CFTA now in force, bilateral trade efforts will have to be aligned with Africa’s own approach to regional integration and rule of law, and systems within and outside of African borders will need to acknowledge different legal approaches while ensuring that legal systems are “interoperable” across borders.

What is needed to make a new approach operational? Since I founded NML in 2010, we have been amassing experience, case studies, and good practices that highlight four important trends:

1) **Economic and social development need to be part of the design of economic rules and trade agreements from the start.** While all countries cite economic and social development as goals of trade agreements, such an impact will not happen automatically. In addition, as global events have shown, although trade affects enterprises of all sizes and individuals in every country around the world, it is not always viewed as inclusive. Economic and social development can, however, be central to an agreement’s design. The Sustainable Development Goals (SDGs) are a good benchmark and could be more fully and systematically integrated into trade agreements and international economic law in order to ensure that these systems respond to diverse needs.

2) **Markets and the rules governing them are interconnected systems.** This means that any substantive issue—IPR, agricultural technology, and digital economy, for example—
needs to be approached in the context of the larger market and broader set of relevant rules and regulations.

3) **Legal changes on paper will not automatically translate into positive changes in practice.** While agreeing to legal text is important, it is only a first step. Implementation and enforcement tend to be particular challenges in nearly every market, and I encourage you to consider this dimension in this review and hope that its implications can be considered as any new trade agreement moves forward.

4) **New tools are needed for measuring the impact of changes to economic rules and regulations.** We still need to do a better job building the case for trade and the changes in market rules that result from trade agreements. Not only do we need better evidence on the impact of trade agreements (including distribution of benefits), but we also need tools to assess the impact of changes in the enabling environment. Understanding how changes to the rules will affect investment opportunity and economic and social development would help build support for trade agreements and the positive changes in rule of law they can generate.

I will highlight a few examples of these four trends as I speak about recent developments and emerging areas of focus in regulation of the digital economy, agricultural sector (including agricultural technology), and IPR and would be happy to expand upon these during the discussion.

**Regulating the Digital Economy**

The digital economy is of growing significance worldwide and across African economies. Digital transformation in Africa is creating jobs, encouraging entrepreneurship, increasing farmers’ productivity, integrating women into the workforce, and unleashing growth in different economic sectors.¹ Digital innovations have also had an impact in access to finance and agriculture (for example, NML is part of a consortium that is developing a digital platform to facilitate

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regulatory compliance in seed certification in sub-Saharan Africa). Achieving digital transformation has the potential to increase per capita growth by 1.5 percent per year and reduce poverty by 0.7 percent per year, with even more significant gains predicted for Africa. This transformation is underpinned by the regulatory and legal framework for the digital economy at the national and international levels. A well-functioning enabling environment in the digital economy could also have positive effects in achieving the SDGs, particularly Goal one (no poverty), Goal 5 (gender equality), Goal 9 (industry, innovation and infrastructure), and Goal 10 (reduced inequality), among others.

In 2018, NML partnered with the Center for International Private Enterprise (CIPE) on a guide to the enabling environment for the digital economy (Digital Economy Enabling Environment Guide: Key Areas of Dialogue for Business and Policymakers). The guide highlights regulatory trends and emerging good practices in four cross-cutting areas: (a) consumer protection, (b) data protection and privacy, (c) cybersecurity, and (d) electronic transactions. It also provides comparative examples of how different countries around the world have approached regulation of each of these four areas. In sub-Saharan Africa, and in particular in the seven focus countries of this investigation (South Africa, Nigeria, Kenya, Ghana, Rwanda, Ethiopia, and Cote d’Ivoire), different trends and practices are emerging.

One particularly positive development is that most of the seven focus countries now have regulatory systems in place (or under development) for the digital economy sector. However, approaches to regulating the digital economy vary, and countries have adopted good practices to different degrees. In addition, gaps in the rules themselves do remain. Some countries, such as South Africa and Ghana, have chosen to regulate different aspects of the digital economy through umbrella laws, and both have one act covering consumer protection, cybercrimes, and electronic transactions, while data protection and privacy are regulated separately. In a similar vein, Rwanda’s laws cover electronic transactions, data privacy, and cybercrimes under one

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umbrella law while regulating consumer protection separately. Kenya takes a somewhat different approach and has one act covering electronic transactions and cybercrimes, another covering consumer protection, and yet another (which has been in draft since 2012 and is not yet law) covering data protection and privacy. In contrast, Nigeria, Ethiopia, and Cote d’Ivoire have opted to regulate these four areas under completely separate legal instruments. In addition to Kenya’s Data Protection Bill and Cybercrime and Computer Related Crimes Bill, 2014, other draft legal measures in this area still need to enter into in force, including in Nigeria (the Data Protection Bill (2011) and the Electronic Commerce Bill (2011)) and Ethiopia (Ethiopia’s electronic transaction proclamation is still in draft form, and draft proclamations do not yet exist for data protection or consumer protection).

How countries structure laws and regulations in this area also has implications for institutional coordination, implementation, and any future changes to the system. Overall, regulating the digital economy under a single law or act could potentially facilitate implementation, given that institutions may be more streamlined, and different actors and stakeholders would need to reference only one law to understand their rights and obligations. It could also eliminate potential conflicts between different legal provisions. However, technology will change and systemic issues will still arise (for example data protection and data privacy are linked with e-government regulations), so separate laws could be more flexible and ultimately beneficial to coordinating rights and obligations across sectors and could also facilitate implementation in the event that specialized agencies (like a consumer protection bureau, or a data protection agency) are created.

Without question, the enabling environment in this area will be essential to further trade and investment, and some issues are worth highlighting for ongoing focus. One important factor to consider will be data localization requirements, which are usually included in data protection regulations. These requirements are two-fold: data storage requirements that mandate the local storage of certain types of data and data processing requirements that require that certain type of activities like processing, manipulation, and management of data take place locally.4 Both Rwanda and Nigeria have adopted data storage requirements for all subscriber and consumer data as well

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as government data. Nigeria, Ghana, and Cote d'Ivoire also follow the ECOWAS rules on data protection and thus limit cross-border data transfers to countries that provide “an adequate level of protection for privacy, freedoms and the fundamental rights of individuals”.\(^5\)

Regulation of the digital economy is intrinsically systemic, and successful implementation will be essential economy-wide. Since most countries’ legal instruments are relatively new, they have not been fully tested in practice, which could present a challenge for conducting business. For example, in South Africa, only certain provisions of the Protection of Personal Information Act of 2013 are in effect, while others are expected to become fully operational in 2019. Another challenge for the seven focus countries, and generally around the world, will be to ensure coordination between the different ministries and agencies in charge of enforcing digital economy regulations. In most jurisdictions the ministries of trade, finance, and information and communication technology (ICT), at the very least, will have overlapping responsibilities for enforcement of regulations dealing with electronic transactions, consumer protection, data protection and privacy, and cybersecurity.

**Regulating Agricultural Technology**

The World Bank predicts that agriculture will be a $1 trillion sector in Africa by 2030.\(^6\) Agriculture is a complex sector, with many different regulatory components, making the systemic nature of regulations particularly important. These include regulation of markets, finance, transport, ICT, customs, water, standards, contracts, and cross-border trade. The enabling environment for agriculture also includes land tenure, regulation of agricultural inputs (seed, fertilizer, and other inputs), rules related to labor and the environment (including, for example, environmental regulations, international standards, regulation of farmer producer organizations, and contractual arrangements), and regulation of infrastructure (irrigation, rural roads, storage, trucks, machinery, etc.). Overall, a comprehensive and systemic enabling environment in

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agriculture could help achieve SDG Goal 2 (zero hunger), Goal 9 (industry, innovation and infrastructure), and Goal 13 (climate action), among others.

Regulation of agricultural technology, including biotechnology, is one emerging and interconnected component of the enabling environment, but it should not be viewed in isolation from the enabling environment for agriculture more broadly, particularly since Africa’s approach to regulation of biotechnology is still relatively recent. South Africa was previously the exception rather than the rule (South Africa is currently the 9th largest producer of genetically engineered (GE) crops in the world, with an estimated production area of GE corn, soybean, and cotton of 2.7 million hectares in 2017), but new regulatory trends and approaches are emerging in biotechnology throughout sub-Saharan Africa.

- Nigeria approved its first biotechnology crop (Bt cotton) for commercialization in 2018, and in 2019 it approved the release of PBRCowpea. Nigeria’s enabling environment is shifting as well and now includes the National Biosafety Act 2015, National Biosafety Regulations 2017, and National Biosafety Guidelines 2018.
- In Ghana there is currently no restriction on the importation of GE products or products containing GE material; nevertheless, no biotechnology crop has been officially approved or registered for cultivation, import, or export. Ghana does have draft regulations on the management of biotechnology, which have been awaiting parliamentary approval since the end of 2017.
- Kenya’s approach has been a bit more mixed but appears to be shifting. In 2009, Kenya established the National Biosafety Authority through the Biosafety Act No.2 of 2009 responsible for regulating GE products; however, in 2012, Kenya banned all genetically engineered imports, including processed and unprocessed goods, seeds, and food

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- Cote d’Ivoire and Rwanda have not yet approved biotechnology regulations and have not begun trialing GE crops.

While these trends could play an important role in increasing availability and adoption of agricultural innovation and technology, it should be noted that seed in Africa is generally regulated through several interconnected regulatory processes at the country level and across borders, with biosafety regulation representing only a part of his broader set of rules. Through seed laws and regulations, most governments maintain formal rules on seed variety registration and release, certification for commercial sale, and trade.\footnote{See Katrin Kuhlmann, Yuan Zhou, Adron Nalinya Naggayi, and Heather Lui, “Seed Policy Harmonization in ECOWAS: The Case of Nigeria,” New Markets Lab and the Syngenta Foundation for Sustainable Agriculture, December 2018; Katrin Kuhlmann, Yuan Zhou, and Shannon Keating, “Seed Policy Harmonization in COMESA and SADC: The Case of Zambia,” New Markets Lab and the Syngenta Foundation for Sustainable Agriculture, September 2018; Katrin Kuhlmann and Yuan Zhou, “Seed Policy Harmonization in ECOWAS: The Case of Ghana,” New Markets Lab and the Syngenta Foundation for Sustainable Agriculture, January 2016; Katrin Kuhlmann and Yuan Zhou, “Seed Policy Harmonization in SADC and COMESA: The Case of Zimbabwe,” New Markets Lab and the Syngenta Foundation for Sustainable Agriculture, September 2015; and, Katrin Kuhlmann and Yuan Zhou, “Seed Policy Harmonization in EAC and COMESA: The Case of Kenya,” New Markets Lab and the Syngenta Foundation for Sustainable Agriculture, September 2015.} There are significant cross-border aspects of seed trade as well, and Africa’s major regional economic communities – including the Economic Community of West African States (ECOWAS), the Common Market for Eastern and Southern Africa (COMESA), and the Southern African Development Community (SADC) – have
developed rules that are being domesticated and implemented, to varying degrees. The East African Community (EAC) is putting in place a regional regulatory system for seed as well.

As Africa’s population grows, food security will become an even more pressing issue, which will necessitate greater focus on trade facilitation, SPS, TBT, and other areas of regulation. Building the infrastructure for cross-border trade (e.g. certified laboratories and authorized field inspectors) and enhancing mutual recognition will also be critical, as will systems to establish and enforce IPR, given both market needs and ongoing challenges with counterfeiting.

**Regulating Intellectual Property Rights**

IPR protection and enforcement are becoming increasingly important issues across the African continent as well. While Africa as a whole tends to lag behind other world regions in measures such as patent applications, some countries, like Kenya, for example, are recognizing the importance of IP and making corresponding changes to the enabling environment. Overall, IP can play a direct role in the achievement of SDG Goal 2 (zero hunger), Goal 3 (good health and well-being), Goal 6 (clean water and sanitation), Goal 7 (affordable and clean energy), and goal 11 (sustainable cities and communities), among others.

The enabling environment for IP in Africa differs somewhat from other sectors. Nationally, many countries are still building effective IPR systems, even though enterprises of all sizes tend to highlight IP protection as a priority, and enforcement and counterfeiting remain significant challenges as noted. Regionally, IPR has not yet received as much focus as other areas of law, although most African nations are members of various regional and international agreements on intellectual property. IP is recognized as an important issue for the negotiation of the AfCFTA; however, this text has not yet been drafted and is not expected to be finalized until the January 2021 Session of the African Union (AU) Assembly.

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Nearly all African nations are members of the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO), which makes them party to the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). Among the seven focus countries of this investigation, all are members of WIPO, and all except Ethiopia are members of the WTO. In addition, 18 countries are members of the African Regional Intellectual Property Organization (ARIPO), and 17 West African nations are members of OAPI (African Intellectual Property Organization). Among the focus countries, Ghana, Kenya, and Rwanda are members of ARIPO, while South Africa, Ethiopia, and Nigeria are observers. Cote d’Ivoire is a member of OAPI.

Even though international and regional agreements have similar obligations, regional approaches tend to reflect differences that can impact scope and implementation of IPR protection at the national level. For example, members of OAPI agree that regional rules will override national systems, consistent with civil law traditions. This means that a patent application in OAPI automatically extends to all of the other 16 member states. Members of ARIPO, on the other hand, most of which follow common law, have to domesticate regional rules through national law. Consequently, patent protections granted at the national level do not automatically extend to other countries. These differences also have repercussions in terms of infringement and enforcement; while OAPI has a process that becomes part of national law and can be initiated in the country in which an infringement occurs, in ARIPO addressing violations would depend upon national law. Nevertheless, both systems could present implementation challenges and are not fully operational.

In addition to what will be discussed this afternoon, several areas of IP law should be considered in addition to the standard IP rules on copyright, trademark, and patents. One is IPR for seeds, which, in Africa, is provided for by Plant Breeders’ Rights (PBR) laws and regulations. These rules are becoming increasingly important in the agricultural sector and are part of the “systemic” approach to trade and investment that I have mentioned. Here the focus should not only be on putting in place PBR regimes but in ensuring that these regimes facilitate farmers’ participation and rights and biodiversity alongside market growth. Most of the seven focus countries have PBR law and regulations in some stage of development (Nigeria, for example, is presently moving forward with a PBR law, and Kenya already has protections in place), and
ensuring that these laws and regulations are implemented in practice to the benefit of all stakeholders will be important for the development of the agricultural sector and market overall.

Finally, IPR for traditional knowledge will be another important area of focus within the AfCFTA. Traditional knowledge is a living body of knowledge that is passed from generation to generation within a community, becoming an essential part of its traditions and identity. Because of the nature of traditional knowledge and the stakeholders involved, approaches within the AfCFTA and bilaterally will need to balance innovation, IP protection, and investment potential with opportunities for local and indigenous populations and preservation of biodiversity. Understanding and being able to measure the effects that legal instruments might have on traditional knowledge and its preservation will be pivotal in Africa and other regions where traditional knowledge underpins local markets.

**Conclusion and Next Steps**

All of the issues covered in the investigation and my testimony are key priorities for the AfCFTA and U.S. engagement with the African continent. All will contribute to market development, investment growth and diversification, and rule of law. Going forward, U.S. trade policy should focus on an active partnership with sub-Saharan Africa designed to unlock this potential, build well-functioning and inclusive legal and regulatory systems, and support the historic harmonization efforts that are already underway.

I would like to conclude with a few brief final observations and suggestions for further dialogue:

1. Given the nature of U.S. and global discussions surrounding trade, I recommend that social and economic development considerations – and the SDGs – be part of the U.S. approach. This will help ensure that the benefits of any engagement flow

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to U.S. and African enterprises and citizens alike and will strengthen support for trade and investment agreements and their enforcement.

(2) Implementation should be a focus even before text is finalized and an agreement is reached. This is particularly true in areas like regulation of the digital economy, technology, and IP. I would recommend that good global practices and Africa’s unique circumstances guide tailored and proactive approaches to ensure effective and inclusive implementation.

(3) Due to the systemic nature of markets and economic laws and regulations, and issues should be linked rather than siloed. A systems approach not only underpins market development and investment (e.g. link between agriculture and IP, link between digital enabling environment and financial services), it should also be part of the approach to negotiating the rules and appears to be consistent with Africa’s approach to trade and rule of law under the AfCFTA.

(4) Finally, building a basis of evidence for changing trade rules is important and will rely upon different tools for assessment and measurement. In addition to understanding the economic benefits of trade agreements, an area in which the USITC has done leading work, as I mentioned, we also need ways to understand how the enabling environment can be designed and implemented to have an inclusive impact on the market. My organization, NML, has developed a tool for assessing regulatory options benchmarked against good practices and regional rules, and I hope that this and other tools can be useful as the discussion moves forward.

Thank you so much for your time and consideration, and I look forward to your questions.