Uganda's Fintech Eco-System: How Collaboration, Interoperability and Regulation can Facilitate an Inclusive and Robust Digital Economy

"Tempered by physical law, which adds a dash of necessity, chance becomes the creative force, the mover and shaker of our universe. All the beauty we see around us, from galaxies to sunflowers is as a result of this collaboration between chaos and necessity" - Peter M. Hoffmann, Life's Ratchet: How Molecular Machines Extract Order from Chaos (New York: Basic Books, 2012*)*

Uganda is a landlocked country in east-central Africa, situated north and northwest of Lake Victoria and has a total area of 236,040 sq. km (91,136 sq. mi). Uganda was conferred the title, Pearl of Africa as if to conversely ratify a collaboration between chaos and necessity present in 36,330 sq. km (14,027 mi) of inland fresh water and the 19,000 sq. km of picturesque national parks and wildlife reserves. Her population of 46.3 million people, as at January 2021, boasts of an adult literacy rate of 76.53% and internet penetration as at January 202, of 26.2% (12.16 million users).

Uganda has over 28.01million mobile connections that increased by 1.1 million between January 2020 and January 2021; this number correlates to 60.3% of the total population. The devil is in the detail, or in this case the numbers as it is no surprise that Uganda's Financial Technology (FinTech) sector as at 2016, had a transaction volume of USD 4.7 billion (17.6 trillion).

The role of FinTech in facilitating Uganda's transformation cannot be over emphasized. Without point of sale machines and online/mobile banking expediting entry into our national parks, tourism would most likely contribute less than the 3% it currently contributes to Uganda's GDP. Without mobile money, global remittance and payment platforms *(that are also key enablers for e-commerce and ride hailing),* Uganda's GDP would be less than its current USD 41.27 billion. Without blockchain *(and other distributed ledger technologies)* big data, cloud computing and Artificial intelligence that are at the core of FinTech, developments such as credit scoring and analytics would remain a preserve for the western world. Without virtual private networks and two factor authentication to secure online payments, Uganda's digital economy would practically be obsolete.

The co-dependence that has caused Uganda's FinTech ecosystem to thrive within the fourth industrial revolution is so, first and foremost because of regulation. Uganda enjoys an evidence-based approach to regulation and this has allowed investment in FinTech to permeate and integrate with all of

Uganda's key income sectors. The regulation of innovation sandboxes for example, under the National Payment Systems Act, 2020 (NPS) has allowed investors in FinTech to live-test novel innovations that are interoperable within the traditional banking industry.

The NPS Act regulates payment system operators, payment service providers (who among others include electronic money issuers), and issuers of payment instruments. Section 5 of the Act gives powers to Bank of Uganda to regulate, supervise and oversee operations of payment systems and this has by advertence, opened up previously over regulated sectors such as banking.

Other laws like the Electronic Transactions Act, 2011 (ETA) have directly enabled the shift from traditional banking by authorizing the use, security, facilitation and regulation of P2P transfers, electronic communications and other online transactions. The ETA (together with the Electronic Signatures Act, 2011) also significantly provides for the legal recognition of electronic transactions, records & signatures; which guarantees effective enforcement of the rights of consumers, if infringed.

The Data Protection and Privacy Act, 2019 (DPPA) has also increased consumer confidence and participation in FinTech by regulating the use and transfer of personal data. Data protection and Fintech inter-are. Personal data is defined as any information relating to an identified or identifiable person *(a data subject),* and is at the core of FinTech. Without personal data, FinTech algorithms would not be able to perform or conclude payment instructions as it would be impossible to distinguish one data subject from another without the use of personal identifiers.

Data protection revolves around several principles encapsulated by notions that a data controller/processor should be accountable to the data subject for data collected, processed, held or used; data should be collected in a lawful and fair manner; it should be adequate, minimal and not excessive, accurate, not misleading & up to-date, collected transparently, should not be kept longer than necessary, should be secure and overall should only be used for the purpose for which It is collected.

The Data Protection regime also allows FinTech domiciled outside Uganda to utilize standard contractual clauses (SCCs) that allow the lawful cross-border transfer of data into and out of Uganda. SCCs are standard form clauses pre-approved by an oversight data protection agency that govern the relationship between a data subject and collector/processor in relation to the use and transfer of personal data. SCC's may enable a payment platform to exploit advanced cloud computing infrastructure outside of its jurisdiction without fear of reprisal from oversight Data Protection Agencies. Without SCC's it would be difficult for many of the world's leading FinTech-payment platforms that leverage personal data as a tool of trade, to operate in multiple markets whilst following best practice in regards to privacy and data protection.

The DPPA does not specifically provide for SCCs but under Section 7 (2)(C), personal data may be collected and/or processed in furtherance of a contract to which the data subject is party and under 17 (2)(e) of the DPPA 2019, a person who processes personal data shall take into account the contractual rights and obligations between the data subject and processor.

In sum, FinTech is and will continue to remain a staple for Uganda's digital economy. With mobile money penetration beyond 40% of the adult population in Uganda, traditional banking must continue its collaboration with FinTech. October 4, 1957, saw The Soviet Union achieve the first successful ever launch of a satellite into orbit with Sputnik 1. The launch precipitated the start of a long and expensive space race/war with the United States of America that yielded little for the collective good of the Planet save for furthering an obtrusive political and ideological agenda. Contrariwise, It was their mutual collaboration decades later that supported altruistic space exploration which has invaluably added to the fields of astronomy, physics, biology and even philosophy.

Collaboration has and will remain at the heart of transformation; whether this is in nature as with chaos and necessity, banking as with Fintech and traditional banking or in space exploration as with two superpowers. Without collaboration, necessity and innovation would remain mutually exclusive.

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