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T7 Task Force Climate and Environment

POLICY BRIEF

GLOBAL PUBLIC-PRIVATE DIGITAL UTILITIES FOR MSME RECOVERY AND TRANSITION

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Tamara Singh, People Centred Internet

Fung Mei Lin, IEEE Society and Technology, Sustainability Technical Committee

Eileen Murray, People Centered Internet

Anthony Lacavaro, People Centered Internet

Matthew Gamser, SME Finance Forum, World Bank/IFC

Brian Omwenga, Tech Innovators Network – ThiNK, University of Nairobi, Kenya

Ndemo Bitange, University of Nairobi, Kenya

Homi Kharas, The Brookings Institution, US



Abstract

A robust and equitable digital economy needs to promote the inclusive and sustainable recovery and growth of MSMEs (Micro, Small and Medium Sized Enterprises). Globally, these offer most of the formal employment, ranging from 53% to 86% (*Kamal-Chaoui, L. 2017*), providing the local infrastructure for capital circulation that most directly benefits communities. Today, the funding shortfall for formal MSMEs is approximately 55% of demand or an estimated \$5.2 trillion dollars (International Finance Corporation, 2017). Drivers of global job creation, they suffer lower rates of digital adoption which constrains their growth. The opportunity exists for global leaders to nudge industry towards a profitable, inclusive, and self-sustaining future. A country-specific pilot defining global protocols, with configuration capability for national needs, is estimated to cost \$2M and could be completed by 2023. Attractive markets for piloting a data utility have been identified, such as Indonesia, Puerto Rico, and Kenya. The pilot is intended to yield a self-sustaining model, and success metrics should include financial sustainability, adoption of the solution and impact on G7 priorities such as Net Zero transition. The initial use case proposed for pilot is in supporting access to finance and literacy programmes for communities that offer carbon sequestration potential, facilitating those communities in developing sustainable practices whilst supporting preservation and conservation activities. Success in these pilots could be readily transferred to other countries and expanded into other communities. By engaging local governments, traditional lenders, fintech firms, and larger pools of global capital, financial services firms will obtain the data transparency they need to facilitate funding for MSMEs and, through secondary markets, keep that capital in circulation, where it can have the greatest economic impact.

This policy brief proposes a better way for MSMEs to leverage their digital data for increased and cheaper access to finance and other value-added services via a public-private partnership establishing “Data Utilities” to provide real-time and affordable access to trusted data on MSMEs for better access to financial services, helping lenders better assess MSME credit risk and support faster onboarding.

Challenges

This policy recommendation has the potential to mitigate or address the following challenges:

1. **Access to Finance for MSMEs:** Today, the funding shortfall for formal MSMEs is roughly 55% of demand or an estimated \$5.2 trillion dollars. By providing MSMEs with access to digital and business literacy tools, the Data Utility enables MSMEs to create and manage the use of the data that would allow them to access financial products. Drivers of the financing gap have been identified as (G20 GPFI, 2018), (Owens, J. Wilhelm, L. 2017):
 - a. Demand-led, where MSMEs struggle with difficult requirements, cumbersome applications, high costs and low literacy; and
 - b. Supply-led, where finance providers grapple with higher perceived risk, cost-to-serve, informality and physical dispersion.
2. **Supporting the Just, Green Transition of MSMEs (Sobir, R.,2020):** Sustainable business models offer economic opportunities worth \$12 trillion and 380 million jobs by 2030, with more than 50 per cent being in developing countries (Oppenheim, J., et al 2017). These opportunities need to be stewarded and financed.
3. **“Walled gardens” of data create barriers to inclusion and increase the costs and risks in serving the MSME population:** By reducing the cost to access trusted, verified data in a secure fashion, this proposal offers a mechanism to focus competition on value created, rather than data acquisition superiority fuelled by corporate power. Crucially, the proposal recognises both the costs of acquiring and maintaining data and offers the opportunity for holders of data to be fairly compensated for the data they provide. This creates a level playing field on which data is contributed and accessed.
4. **Capacity for financing of MSMEs at scale:** Providers of finance to the MSME population, if enabled to assess and finance larger numbers of MSMEs, will face capacity constraints over time. Global finance organisations are well positioned to support the balance sheets of these local and regional MSME financiers, subject to access. As financing of MSMEs grows, so too will the ability of global private finance to invest in products collateralised through these lending assets, attracting financing into these recovering economies.

Proposals

This policy brief proposes a better way for MSMEs to leverage their digital data for increased and cheaper access to finance and other value-added services. This supports three overarching objectives: (i) creating an even playing field for lenders and solution providers through real-time and affordable access to verified (financial) data on MSMEs; (ii) enabling MSMEs to find new paths to growth, sustainability, and resilience, and (iii) increasing access and control for MSMEs of data they generate, making it easier to leverage this data to access financing and services.

A public-private partnership should establish “Data Utilities” to provide real-time and affordable access to trusted financial and other relevant data on MSMEs for better access to financial services, helping lenders better assess MSME credit risk and support faster onboarding. This can build on principles of Open Banking to promote data ownership, inclusion, and competition in MSME lending, but it needs to go beyond banking data to serve unbanked or informal micro enterprises.

A Data Utility would not compete with lenders or service providers but enable more lending and services for MSMEs. This proposal is technology agnostic, and design will draw on experts from leading economies, as well as the emerging economies with the most to gain from the success of this proposal. Pilots should be designed around the data requirements and existing digital infrastructure in participating jurisdictions, though to become interoperable across borders, they should be built on common standards and principles. Data Utilities would be not-for-profit, but with a commercially sustainable business model.

This could be through architecture like Open Banking (data in motion) or via a data aggregator (data at rest). The objective is that it ultimately enables MSMEs to share their data, through common protocols, with common data quality standards, with trusted data provenance, and MSME control over with whom this data is shared, under what conditions, and for what uses. Sympathetic to the extent to which the jurisdiction has developed its digital economy, interim steps such as initially obtaining this data from current finance providers may be required as MSMEs progress on their digital literacy journeys.

Such data utilities will:

- Reduce data duplication and need for expensive data acquisition and handling by lenders and solution providers.
- Avoid the need for MSMEs to manually consolidate and provide the same (often out of date and unverified) data, reducing long application processes and operational burdens.
- Support ecosystem growth and enable efficient MSMEs access to finance and services.
- Allow service providers and lenders to invest in and compete on innovation and value-generative processes (for example, proprietary credit decision algorithms) instead of foundational data collection.

This enables:

- Increased, safer lending through better credit risk assessments, faster onboarding, and use of alternative data sources.

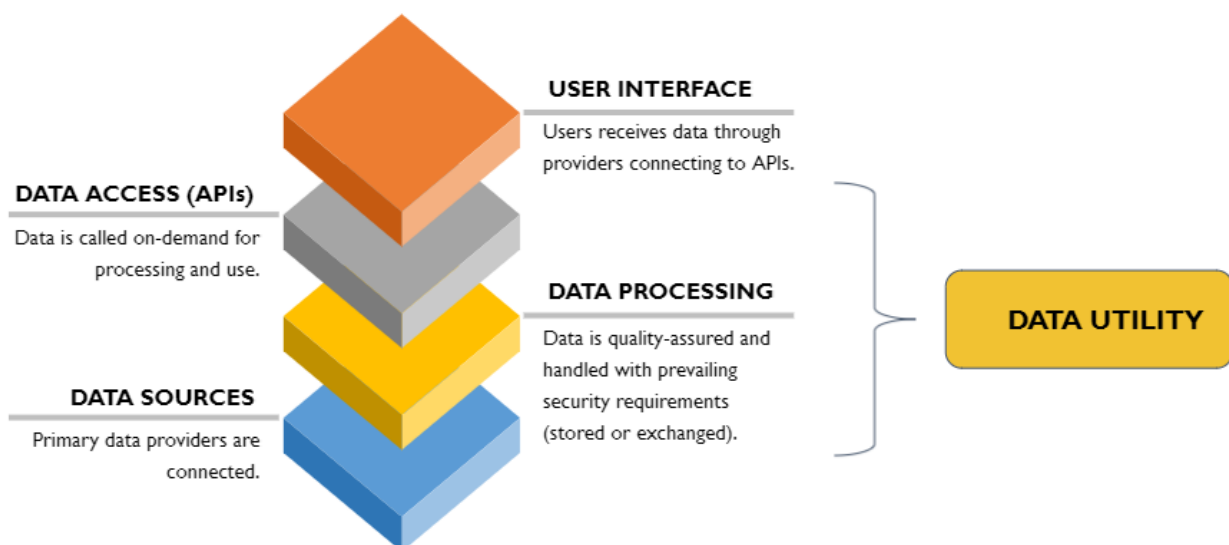
- Reduced transaction costs for both lenders and MSMEs through reduced frictions in foundational data collection, and faster or even automated processing.
- Potential for a secondary market through increased primary deal flow, and improved and trusted quality of primary lending through use of validated data
- Maximise existing cost spent on data creation and storage by creating greater efficiencies and a myriad of uses. Packard Enterprises found that only 6% of data created is used, but data centres are expected to consume 8% of the world’s electricity by 2030.

In the same way that regulatory initiatives like Open Banking increase competition, the data utility itself will not compete with the private sector. It aims to provide a common data infrastructure as a public-private partnership to increase competition and improve consumer outcomes. A specific mandate in the development of such data utilities must be on providing ways to utilise the data for supporting unbanked or informal MSMEs.

A Data Utility should function as an enabling digital infrastructure to bring more lending and other services, including financial literacy, to MSMEs globally. It would be not-for-profit, but with a commercially sustainable business model. While data utilities may have to be established in each jurisdiction, as far as possible they should be built on common standards and principles, and eventually become interoperable to support cross border data sharing.

The development of such a solution requires participation by policy makers, regulators, banks, digital lenders, service providers, technology companies, and representatives of MSMEs. The due diligence process for any potential solution must cover issues mandated by regulators and bank prudence, such as technology integration, risk models and management, compliance, data security and privacy, fair lending, and reputation risk. A critical concern would be data security, and the design, development and maintenance of the Utility would need to be consistent with global and local standards.

An envisioned technology stack for such a Data Utility is illustrated below.



As a next step, an initiative with public and private partners should work out the details to build and test an MSME Data Utility in at least two jurisdictions. This could be piloted in a first mover country in a sandbox approach, while in parallel be elevated to relevant international policy fora, like the G7.

Implementation

This is the time to act and jumpstart the economic recovery from the pandemic. The European Union is leading the global conversation on more inclusive and customer focused regulation of data ownership and digital privacy, including adoption of open banking. This is a natural next step extending principles of data ownership, competition, and inclusion into the digital economy for the benefit of MSMEs everywhere.

The development of a prototype and proof of concept for a data utility will require:

- Policy alignment with financial decision makers in first mover countries, as it is inherently a public-private partnership.
- Regulatory alignment and support, including a focus on consumer protection and incentives or requirements for data sharing.
- Consumer protection considerations to ensure the voices of MSMEs are included in the design and development of the utility and ensure it serves its ultimate end users.
- Data protection and privacy considerations to ensure all data is secured to the highest standards and the design complies with local data protection laws and regulations; and
- Technical design to balance data security, usability, and consumer focus, with special attention to realistic design parameters for the current level of the financial sector and digital development in target jurisdictions.

Cost and Time Horizon

In 2022, a design study and pilot engaging partners to finalise location-specific needs as well as global protocols is expected to cost Euro 2,000,000 spread over two years, to be managed by the People Centred Internet. Short term benefits of the initial pilot would be to deliver access to financing and literacy modules in a single country by 2023. Over the medium term, as financing is anticipated to scale, the effectiveness of the model in stewarding inclusion and transition by MSMEs will be validated, and international finance will be introduced to the ecosystem, enabling capacity building by 2025.

Additional countries would also be added to the pilot, validating the protocol designs. The cost of adding a country is estimated to be Euro 1,500,000, including short-term operating costs, and encompassing local design requirements. By 2028, we intend to have proven the ability of the Data Utilities to be self-funding.

Partnership for the Goals

The establishment of Data Utilities will need to be championed by national financial and digital regulators, and by forward-looking financial institutions and technology companies. Resistance may arise from financial institutions and technology firms concerned about increased risk exposure and regulatory capital

charges that widening the lending universe may suggest. Accordingly, a public-private partnership must be present at launch, to provide a constructive environment for experimentation. Regulation can help to overcome resistance for the benefit of MSMEs to build more inclusive, competitive, and vibrant digital financial services, and ultimately demonstrate the value of collaboration between regulators and the regulated. However, long-term incentives will align, given increased lending opportunities and deeper engagement from natural holders of the loans, to support the development and growth of inclusive partnerships. Ultimately, such an approach will also grow the opportunity for lenders by bringing more previously unbanked firms into the financial system and support their own sustainability commitments as they are better positioned to steward the adoption of planet-friendly practices.

Partners who have been engaged include the Habibie Center in Indonesia, Ashoka's leaders in SME cooperatives in Indonesia and the Grameen Foundation for local expertise in digital and financial literacy. For technology expertise, the People Centred Internet, MIT Media Lab, Hasso Plattner Institute, and other expert organisations have been engaged. Public and private organisations like the SME Finance Forum, Women's World Banking and ThiNK in Kenya have also been engaged with and have expressed interest in participating in the design study. The ITU's lead in cross sector digital regulation has been consulted.

This proposal has been designed such that G7 leaders can easily launch and enable this initiative with an initial small financial commitment. A small group of leading financial and data regulators can work in collaboration with industry representatives to establish pilots for testing and refining a Data Utility Model. The required technology is being advanced by leading research universities such as MIT with the National University of Singapore Business, Law school leaders examining the governance, regulatory and techno-legal considerations. Legal and policy requirements can build for example on the technology innovation set out through the EU Payments Service Directive 2 and GDPR. An example for such a technical model has already been pioneered in India under the Account Aggregator Framework (Shanti, S., 2021), building a natural bridge to the 2023 G20 Presidency of India, should Indonesia, one of the preferred pilot countries, be selected for the 2022 pilots.

Endnotes

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About the Authors

Tamara Singh – People Centred Internet



Tamara considers global systems and the nudges that may help to render them more sustainable, drawing on her expertise in Financial Systems, Digital and Sustainability. Her portfolio career allows her to devote energy to her profession and passions. Tamara's career crosses energy, financial services and fund management, governing trading floors in London, New York, and Asia Pacific. Having earned her stripes at Centrica Plc, BP Oil International, Deutsche Bank and Macquarie Bank. In Singapore since 2012, Tamara served Westpac Banking Corporation and GIC, the sovereign wealth fund where she contributed to digital transformation and sustainability initiatives. Tamara works at all levels across industries to better the finance ecosystem and to further enterprises through sustainable business practices. She holds Board positions with Conjunct Consulting, Southeast Asia's first social change consultancy, and the People Centred Internet, a 501(c)3 non-profit organisation. She coaches leaders of organisations and advises start-ups navigating sustainability and scale.

Mei Lin Fung - Institute of Electrical and Electronics Engineers



Mei Lin is Chair of the Sustainability Technical Committee for IEEE's Technology and Society group and leads the Assessment Committee for IEEE's Humanitarian Activities Committee. She chairs the Industry Connections Social Impact Measurement working group of the IEEE Standards Association. She is chair of the People Centred Internet which she co-founded in 2015 with Vint Cerf. One of the early pioneers of CRM at Oracle, she built on earlier work at Intel, and studies at MIT under future Nobel Economics winners, Modigliani, and Merton. Socio-Technical lead (2011-13) for the US Government Future of Health initiative she began as subject matter expert for Networked Improvement Communities (2009-10). She is the convener of the Digital Cooperation and Diplomacy network working closely with the UN agencies, ITU and UNDP, and serves as an advisor to GovStack Global, supported by Germany and Estonia.

Eileen Murray – People Centered Internet



Eileen Murray is a long-time financial services executive, investor, and thought leader. Ms. Murray is currently Chair of the Financial Industry Regulatory Authority (FINRA), where she has served on the Board of Governors since 2016. She is also a board member of HSBC Holdings plc, the Guardian Life Insurance Company, and the Irish Arts Center (An Claidheamh Soluis), and a strategic advisor to Aquarian Holdings, a private holding company. She is the former Co-Chief Executive Officer of Bridgewater Associates, the world’s largest hedge fund and has held several senior executive roles at Morgan Stanley, where she served on the firm’s management committee. She held senior roles at Credit Suisse, becoming the first woman to serve on the bank’s executive board. For her industry leadership and extensive philanthropic work with several distinctions, she has been recognized with many awards, including: the Women’s Entrepreneurship Day Organization Pioneer Award in Finance from the United Nations, Hedge Fund Journal’s 50 Leading Women in the hedge fund industry, and U.S. Banker’s Most Powerful Non-Bank Women in Banking.

Anthony Lacavaro – People Centered Internet



Anthony Lacavaro is a Principal at Aquarian Holdings, where he heads marketing and communications. Mr. Lacavaro is also an advisor to several start-up ventures in the artificial intelligence, data security, and digital media spaces. He was previously a Managing Director at Guggenheim Partners, where he served as Head of Corporate Communications. Prior to that, he was an Executive Director at Morgan Stanley. He began his career as a journalist covering asset managers, financial markets, and technology. He earned an M.F.A. in English from the University of Massachusetts, Amherst, and a B.A. from Hamilton College.

Matthew Gamser – SME Finance Forum



Matthew Gamser is CEO of the SME Finance Forum, the world’s leading centre for knowledge exchange, good practice promotion and public-private dialogue in this field. The SME Finance Forum is managed by the International Finance Corporation (IFC), the private sector arm of the World Bank Group, for the G-20 countries’ Global Partnership for Financial Inclusion. The SME Finance Forum’s network includes over 240 banks, fintech companies, development banks and other institutions involved in financing SMEs. Its members operate in over 190 countries and serve as key partners for the G20, APEC, OECD, and other multilateral institutions in their work on small business financing and financial inclusion. Dr. Gamser

has over 40 years' experience in private enterprise and financial sector development. Matt worked for IFC, the private sector arm of the World Bank Group, for 17 years in various positions from Washington, DC, and Hong Kong, where he has focused on SME finance and on financial sector development. He spent 25 years in management consulting and in senior leadership in an international NGO. He holds A.B. and A.M. degrees from Harvard University, and M.Sc. and D.Phil. degrees from Sussex University (UK), where his work focused on the management of technological change

Brian Omwenga - Tech Innovators Network – ThiNK and University of Nairobi



With over 15 years working experience in the local and global ICT sector, Brian is a software and systems engineer with large-scale digital transformation expertise. He has reviewed and formulated technology policy curricula for universities and leaders in the ICT sector both in Kenya and Africa. He has authored several publications and is a holder of seven (7) filed and granted software patents. He is the team lead at the Tech Innovators Network (Ltd) that has developed an open-integrated-collaborative platform styled as the “Digital Business Hub” (in conjunction with the Kenya Private Sector Alliance KEPSA), which is a useful online resource and support centre, serving through a one-stop unified stack and platform, the needs of innovators and the business community in their digital transformation journey (<http://think.ke>). He also founded the Tech Innovators Sacco for the support of youth innovators. He holds various advisory roles and sits on the boards of Ecobank Kenya, Pacis Insurance and the Business Registration Service (State Corporation). He is the Vice Chair of the ICT sector board at KEPSA. He earned his master's degree in technology and policy from MIT and is a doctoral candidate at the University of Nairobi.

Ndemo Bitange - University of Nairobi, and the newly appointed Ambassador to Belgium for Kenya



Bitange Ndemo is Professor of Entrepreneurship at the University of Nairobi's Business School. His research centers on the link between ICTs and small and medium enterprises with emphasis on how ICTs influence economic development in Africa.

Prof. Ndemo Chaired the Kenya Distributed Ledgers and Artificial Intelligence Taskforce that developed the country's road map for digital transformation. He is an advisor and Board member to several organizations including Safaricom, one of the leading telecommunication companies in Africa, a member of the OECD Expert Panel for Blockchain,

World Economic Forum Global Blockchain Council (part of the World Economic Forum's Global Fourth Industrial Revolution Councils).

Besides having been a Permanent Secretary of Kenya's Ministry of Information and Communication where he was credited with facilitating many transformative ICT projects, a Senior advisor to UN's Global Pulse (Big Data initiatives) and the UNCDF's Better than Cash Alliance and UNICEF's Innovation Council. He is an Open Data/Big Data evangelist and dedicated to simplification (visualization) of data for ordinary citizens to consume. He writes two columns every week for the Business Daily and Nation on-line.

Homi Kharas, The Brookings Institute



Homi Kharas is a senior fellow in the Center for Sustainable Development, housed in the Global Economy and Development program at Brookings. In that capacity, he studies policies and trends influencing developing countries, including aid to poor countries, the emergence of the middle class, and global governance and the G-20. He previously served as interim vice president and director of the Global Economy and Development program. He has served as the lead author and executive secretary of the secretariat supporting the High-Level Panel, co-chaired by President Sirleaf, President Yudhoyono and Prime Minister Cameroon, advising the U.N. Secretary General on the post-2015 development agenda (2012-2013). The report, "A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development," was presented on May 30, 2013. His most recent co-authored/edited books are "Leave No One Behind" (Brookings Press, 2019), "From Summits to Solutions: Innovations in Implementing the Sustainable Development Goals" (Brookings Press, 2018), "The Imperative of Development" (Brookings Press, 2017), "The Last Mile in Ending Extreme Poverty" (Brookings Press, 2015), "Getting to Scale: How to Bring Development Solutions to Millions of Poor People" (Brookings Press, 2013), "After the Spring: Economic Transitions in the Arab World" (Oxford University Press, 2012), and "Catalysing Development: A New Vision for Aid" (Brookings Press, 2011). He has published articles, book chapters, and opinion pieces on global development policy, global trends, the global food crisis, international organizations, the G20, the DAC, and private philanthropy. His upcoming book will be on the subject: history of the Middle Class.



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Deutsches Institut für Entwicklungspolitik gGmbH
Tulpenfeld 6
D-53113 Bonn
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