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The Potential of New Technologies to Transform Tax Systems by Prof. Jeffrey Owens, WU

I would like to take 10 to 12 minutes to outline how I see technology being able to help resolve some of the basic problems that have plagued economies over many decades, namely:

1. Developing how to move away from a cash based economy to a cashless economy
2. How to deal with the growing volume of illicit financial flows
3. How to assist SMEs to take advantage of global markets
4. How to increase the tax/GDP ratio
5. Finally on how to reduce growing inequalities

I can only touch upon these topics but I do hope that my remarks inspire a broader approach than in the past to the use of new technologies to achieve these broader objectives.

Since I will be referring to blockchain it's useful to spend a few moments of looking at the way in which blockchain has the potential to transform our economies. The internet is rapidly evolving from a medium for information exchange to a tool for value exchange. The internet of value, driven by blockchain and digital currencies, is enabling peer-to-peer commerce on a global scale. Finding, accessing, transacting, paying, and settling with counterparties worldwide is becoming frictionless. Although it started in the digital currency arena blockchain is quickly becoming acknowledged as one of the most important breakthroughs for advancing global trade. It provides a

network platform that grants any user access to the global scale and payment capabilities traditionally only enjoyed by multinational enterprises.

1. SME and new technologies

Blockchain enthusiasts envision a brave new world in which technology empowers small and medium-sized enterprises to build businesses without relying on intermediaries.

These businesses are digital nomads existing only in the cloud and are rapidly growing in developing and economies in transition. They hope to create tradable liquid markets in both established industries previously dominated by intermediaries and industries in which effective trading was not feasible in the past.

The new blockchain based business models rely on computer code uploaded to tens of thousands of servers around the globe that work together and enable anyone to exchange information and payments immediately, directly, securely and at low-cost. Rather than trust in intermediaries e.g. large banks, these firms and the customers trust the software which is transparent and available for inspection by all. The traditional functions of an intermediary are taken over by the shared distributed set of a computer code running autonomously on the cloud.

The rapid rise of digital commerce will fuel this trend. Amazon and Alibaba alone now account for over 200 billion in sales each year, a number that is growing by more than 40% annually. All businesses are being affected by digitalisation.

This environment offers SMEs the opportunity to operate globally, contacting directly to consumer without barriers and at low cost.

Distributed blockchain based organisations are ones in which computer code applies to tens of thousands of services across the globe,

enabling participants in the networks to exchange information, goods and services for payment without a central controlling entity.

In the traditional markets multinational enterprise and financial institutions play a significant role in ensuring compliance with a range of regulations. With the emerging blockchain business model, however SME can bypass these intermediaries and organises peer-to-peer networks rather than around a central entity.

It is unclear how compliance with regulation and tax will occur in this new environment and who would be responsible for meeting these regular obligations, but again the technology may be able to offer a solution to achieve better compliance in this new environment.

2. Achieving better Compliance

It is not only SMEs that can benefit from these new technologies but also government.

They offer government a new approach to achieving better tax compliance.

The opportunity to leverage the power and the transparency of blockchain to recapture some of the tax gap by means of higher compliance and reduced administrative and compliance cost is significant. Trust and transparency are the hallmarks of blockchain solutions and maybe this is just what tax needs. Designing compliance into the fabric of this new blockchain technology would offer automation, transparency and the assurance of compliance with clear-cut rules.

Blockchain based businesses provide a unique opportunity to rethink the nature of compliance, potentially moving from a regime of periodic payments and reporting in which audits are the main enforcement mechanism to a real-time flow payments and information in which the automated monitoring or control is build into the systems and hence becomes the primary enforcement mechanism.

When the rules are clear such as in the indirect tax area, blockchain helps tax compliance. Developing these blockchains, in which compliance is a core component, the code allows compliance to be built into the basic business processes. Blockchain can enable us to rebuild trust in the tax system.

When the tax rules are unclear and subject to legal interpretation it's clearly more difficult to achieve this. Complying with these complex rules can be difficult for the taxpayer and for the tax administration and especially in cross-border business activities. Here we can look for artificial intelligence to achieve frictionless compliance. With more detailed information flowing through to tax administrations in real time, artificial intelligence technologies may be able to use this data to determine potential income tax obligations, including not only domestic obligations but also international obligations stemming from tax treaties.

Increasingly AI agents use deep learning, artificial neural networks became capable of performing tasks which were unimaginable less than a decade ago. Today we may be able to use these systems to deal with complex anti-tax avoidance rules and to assess the risk and the outcome of various cross-border scenarios. To succeed in these efforts machines will need access to large databases since these are required to identify tax avoidance. As in any other tax law dispute, parties may provide more specific data sets on a case-by-case basis. With access to these databases, AI can teach itself using a carefully predetermined set of searching conditions to identify tax avoidance fact patterns.

Ultimately, AI can learn to perform compliance related tasks, such as recognising when an arrangement is totally lacking in economic substance.

The goal of marrying the high-quality detailed company specific data collected via blockchain from companies (by C by C reporting, master and local files and EOI) and from existing audit files, will enable us to train AI engines to develop in ways which

assist tax lawyers, multinational enterprises, governments, judges and others dealing with cases that may involve anti-tax avoidance rules.

Indeed AI seems to be the perfect partner to support high-value jobs within tax administrations and business that require human judgement. Using an AI tax assistant may reduce much of the regulatory and compliance friction.

These digital technologies that are disrupting business and ending traditional tax compliance, may also present opportunities to enhance efficiency and improve tax collections within both tax and customs authorities.

Tax administrations need to seek scenarios that integrate existing technology with the vision of the future in which digital compliance is designed as a natural part of business operations for both small and large business - domestic and cross-border - with blockchain and AI being at the core of this transformation. I believe this opportunity can be best realised by integrating design compliance solutions into blockchain platforms to create compliance proof blockchains. The ability of these entities to be fully compliant globally will be a key part of their inherent value proposition.

The data captured on the blockchain also enables tax administrations to overcome some of their capacity constraints and to limit opportunities for corruption.

3. Moving away from a cash economy and IFF

Many forms of IFF thrive when cash transactions are the main means of exchange. If governments can gradually move towards a cashless society this will help move citizens out of the informal to the formal economy reducing opportunities for money laundering, bribery, corruption and tax evasion.

This can be achieved as can be seen from the example of countries as diverse as China, Kenya and Sweden lie behind Modi's vision of a digital India.

Tax administrations need to be at the forefront of this trend and especially when dealing with the shared economy. We should see UBER, Airbnb and the Indian equivalents as an opportunity to move sectors where cash has been king to electronic payment methods since if tax administrations can get access to these accounts they can tax the income and sales of those undertaking these activities. Ideally there should be a coordinated approach between tax administrations in the FTA to the main platforms.

At the same time technology can help facilitating cooperation between the different government deeply engaged in countering all forms of IFF: Customs, Tax, Social Security, FIU, Justice and MOF. A joint WB, UNODC and Vienna shows how this can be done in practice but one issues remains: the technical platforms used by these departments are often incompatible making the information exchange difficult. So when these departments are upgrading their technology they need to do so in a coordinate fashion.

Technology and especially blockchain, may also offer us the opportunity to create open and more comprehensive registries of the owners of business, including the physical owners of such opaque offshore vehicles as trusts, foundations, LLM and holding companies. The FATF rules are not bad but enforcement is weak. Blockchain can perhaps help us move towards national registries that are updated regularly and where the data are verified. But also we need to explore how we could use technology to link up these national registries. Again a task that perhaps India is well placed to lead.

And I think here government and business have a common interest. If I am a large MNE subcontracting services on a large railway project in India I want to know who ultimately owns the service company. Is it members of the President family or who?

4. Growing inequalities

Few would deny that developing countries, just like the vast majority of developed economies, have been growing unequal. This is not just a moral or social issue, it is also an economic issue. Work by the IMF and OECD shows that as income and wealth inequalities grow this breaks up social cohesion in society which in turn makes it more difficult to build up political support for growth enhancing structural policies.

The net outcome is lower long-term growth.

Governments have the power to reverse this trend if they wish. Education, social benefits, minimum wages can all help. But taxes also can play a role. Countries need to re-examine the arguments usual put against inheritance tax, NWT and taxes on capital gains in the light of the enormous progress made on tax transparency and new technology which can handle trillion bits of information.

Also we need to look at taxes on luxury products and to continue to improve offshore tax compliance by HNWI.

The international community needs to re-evaluate the role of taxes on reducing inequalities in the light of the revolution in tax transparency and emerging technologies.

No. 5 What government need to do to fully exploit these New Technologies

Here is my checklist: It's not a complete list and it's not limited to blockchain but could be a good starting point for governments considering to digitalise their tax administrations:

1. Be clear about the problems you want the New Technologies to resolve.
2. Recognise that New Technologies by themselves will not turn a poor tax administration into a good tax administration.
3. Review your existing regulations and procedures asking:

- Do we really need these? What can we eliminate as we digitalise?
 - Review legislation written in an analogue age to see if it works in a digital age. Especially on data security and confidentiality.
4. Determining the profile of the officials you will need and put in place a change management program. Recognize that culture facts are a key to success.
 5. Ensure you have a budget not just for setting up the system but also for maintaining it.
 6. Set up a public information campaign to inform taxpayers of how the changes will impact them.
 7. Engage with the private sector: MNE, SME, technology companies, advisors:
to get them on your side.
 8. Coordinate with other law enforcement agencies (customs, FIU, social security) to get interoperability between technical platforms and ideally encourage your government to commit to shifting towards a digital government (much easier to achieve a digital tax administration)
 9. Don't get distracted by the international tax agenda. Set your own priorities.
 10. Encourage universities to put on degree courses covering both tax and tech.

6. Conclusion

To sum up, technologies - those which we know today and those which will inevitable appear over the next decade - offer exciting opportunities for tax administrations and policy makers to provide a business friendly environment which stimulates growth, increases revenue, reduces the deadweight loss associated with tax and at the same

time reduces inequalities in the distribution of income and wealth and helping countries to counter to counter all forms of IFF. India has an opportunity to lead in this transformation given your governments commitment to the Modi vision of a “Digital India”.