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ECONOMIC AND FISCAL INCENTIVES TO ACCELERATE.
DIGITAL TRANSFORMATION OF DATA AND APPLICATIONS.
OVER TELECOMMUNICATION INFRASTRUCTURE
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>> CHAIR: Good morning, ladies and gentlemen. On behalf of the International Telecommunication Union I welcome you to this workshop on Economic and fiscal incentives to accelerate digital transformation of data and applications over telecommunication infrastructure. We have a quite interesting programme today and tomorrow. We want to get started with the opening session here. I have three speakers with me, two on stage and one remote.

We need to bear in mind by the way that this workshop is a hybrid workshop. We have, of course, participants in the room but we have also participants, moderators and speakers on remote and we try to handle this situation as best as possible. We need to bear in mind that there may be some technical oddities as usual and we'll be patient to resolve them tore fix them.

Without any further ado, I would like to give the floor to Sophie, the head of the regulatory and market environment division of our ITU Development Sector. We have, indeed, for those who are not familiar with the ITU, we have two sectors, three sectors in the ITU, and this workshop is jointly organized by two sectors, and the

Development Sectors, the Telecommunication Standardization Sector. We jointly run this workshop for both our interests. Without any further ado, I give the floor to you, please. Thank you.

>> Thank you very much. Good morning, good afternoon, good evening, depending on where you are.

I'm pleased today to address a few words to you on behalf of Ms. Sidy Diop, Chief of the Digital Knowledge Hub Department within the Telecommunication Development Bureau ensuring universal, affordable Internet for all is critical to accelerating process towards a Sustainable Development Goals. We saw that more than ever during the lockdown, during the COVID pandemic. We saw how digital technologies enabled us to continue our daily activities as close to as normal as possible and to continue social, economic growth. Of course, where there were those that were connected.

As we all know, economic and fiscal incentives in the digital economy are often considered global and national and regional challenge. They can also be seen as an opportunity. The opportunity to encourage investment and network deployment, to ensure universal and meaningful and affordable digital connectivity for all.

While governments do collaborate at regional, international level on digital services, economic and fiscal matters, what is key to all is to create that investment friendly policy and regulatory frameworks, to support Digital Transformation that permeates all industries and impacts market in all sectors. In this sense, we need to design long continue herm policy views to ensure the predictability and regulatory certainty. We also need that flexibility that is balanced against the stability so that we can promote innovative business and investment models and deliver connectivity for all use cases.

ICT policymakers and regulators and regulators across the sectors need to work together with other sectors to proactively promote those policies and regulations that encourage that innovation and effective competition among sectors, sector players in the ecosystem, but also thinking of consumers and how to row tect consumers.

-- protect consumers. As you know, ITU has a role as a global convener and a unique multistakeholder membership structure compromising 193 Member States and over 900 companies, research institutes, international organizations, academia. So it makes us -- we believe it makes us an ideal forum for all players to come together to debate on such critical issues.

Within the BDT, in the framework of our mandate, we are promoting such discussion through our annual flagship events such as the global symposium for regulators and Ad Hoc workshop sessions, convened at the request of our membership including the economic experts roundtable, we had a 9th edition that have recently, discussing economic and fiscal initiatives and actions to accelerate that Digital Transformation. Interesting outcomes from the discussions focus on potential economic and fiscal incentives that could be implemented to stimulate the deployment of infrastructure, including underserved areas and different potential economic incentives that could be adopted to ensure the introduction of advanced technologies such as 5G in support of the needs for the Digital Transformation of the economy.

The outcome report of the 9th economic experts roundtable will be launched very soon.

We have been conducting expert analysis on the economic impact of broadband digitalization and ICT regulation, and have some really interesting conclusions from those analysis and we encourage you to look and my colleague will talk about that in some of her presentations.

We also collect ICT data which we make available through our ITU data hub and that features hundreds of ICT indicators on affordability, trust, governance, sustainability.

We have a complete section on taxation of telecommunication ICT services and we'll have more details on that tomorrow.

I wish to take this opportunity to thank the ITU members for completing our surveys and to encourage you to continue completing our surveys and to visit the data hub. As we all know, ICT statistics and regulatory and economic statistics play an essential part in supporting data-driven evidence-based decision making.

It provides the basis for that cross-sectorial multistakeholder discussions and consultations and again this is essential for strong evidence-based decisions. Our work is also supported by the ITU-D and the stud Study Group works that look at ICT policy and regulation as well as economic aspects of national telecommunications ICTs, including consumer protection, cost modeling guideline, broadband deployment, infrastructure sharing, connectivity.

To conclude, I would like to say that government, policymakers and regulators need to think about economic and fiscal incentives, but think in a holistic manner.

Aiming to address the overall objectives of maximizing Digital Transformation of economies and societies.

I thank each and every one of you for joining us here and remotely, and look forward to today's and tomorrow's engaging discussions.

Thank you very much for your attention.

>> CHAIR: Thank you very much for your opening remarks.

The next remark will be given by Dr. Bilel Jamoussi, he's the chief of Study Groups department in the Telecommunication Standardization Sector.

The floor is yours.

>> BILEL JAMOUSSI: Thank you, Martin. Good morning, dear colleagues.

Online, we have Mr. Fernando de Faria Siqueira, the Steering Committee Chairman for this workshop that I see the title has been carefully crafted, economic and fiscal incentives to accelerate digital transfer medication of data and applications over telecommunication infrastructure. Certainly looking forward to the discussions around the theme of this workshop.

Sophie and distinguished colleagues, friends, It is my great pleasure to welcome you to this ITU workshop to discuss the evolution of the ICT ecosystem and associated questions for policymakers and regulators.

We have a diverse line-up of speakers and moderators to guide us through the technology, business and policy dimensions of our ICT environment.

We will take a global perspective recognizing that advances in ICT impact different regions in different ways.

Especially when it comes to economics and policy.

I thank you all very much for joining us. I congratulate our Steering Committee for bringing together such a rich Assembly of expertise.

ITU provides a trusted neutral platform to come together and exchange views and work collaboratively. Speaking of the perspective of ITU standardization our discussions over the coming two days relate predominantly to the work of ITU-T's Study Group 3 and our expert group on economic and policy issues, relevant to international telecommunications.

Study Group 3 offers ITU members a venue to strengthen the ties between technical innovation, business needs and economic and policy requirements, and the group works to bring together cohesion to the progression of technology and policy. The extraordinary pace of the innovation makes the complexity of this work clear to see.

This complexity -- its complexity is matched by its importance. Achieving common global understanding in the areas addressed by Study Group 3 can deliver meaningful, lasting values. In fact, Study Group 3 I believe will have a Rapporteur Group meeting next week and Plenary meeting at the end of that. I see many colleagues here in the Popov Room leading some of the work in Study Group 3 and I understand that the Chairman of Study Group 3 will be also joining us here in Geneva next week. I welcome you all to join us. ITU's global membership as Sophie mentioned, the 193 Member States and the vibrant private sector that continues to bring innovation.

In addition to the universities, international global organizations, we make a particular effort to support developing countries that seek to increase their participation in our standardization work and maximize the benefit they draw from international standards.

We also offer reduced membership fees for academia, start-ups, small and medium enterprises, and companies of all sizes in developing countries.

The dialogue cannot be complete without everyone around the table. ITU's work is driven by your contributions and consensus decisions. It is not us the Secretariat that decides at the end, it is really your contributions and your decisions by consensus. All participants' voices are heard and I urge you to make your voice heard.

Thank you very much.

>> CHAIR: Thank you very much, Dr. Bilel Jamoussi for your opening statements.

We have now the third speaker, Mr. Fernando de Faria Siqueira and he is, in fact, as he mentioned, the Chairman of the Steering Committee who prepared with the team this entire workshop for nearly two years.

The floor is yours. He's presenting from remote today. He could not come.

>> FERNANDO de FARIA SIQUEIRA: Thank you. Good morning, good afternoon, good evening, ladies and gentlemen.

Dear experts, colleague, my name is Fernando de Faria Siqueira. I work for the national telecommunication agency in Brazil. As Chairman of the steering team of this workshop, it is my pleasure to warmly welcome you to Geneva. I welcome the remote participants on this workshop, Economic and fiscal incentives to accelerate digital transformation of data and applications over telecommunication infrastructure.

Let me start with a few remarks for the setting the scene of this workshop. Actually this is not the first time that ITU has addressed matters of taxation of telecommunication services and related products. 11 years ago at a time when OTTs were over the top services, where it was still fairly novel, the first ITU workshop jointly organized among the ITU Telecommunication Standardization Sector and the ITU Development Sector on that subject matter that took place in Geneva.

Since that time, the telecommunication and ICT market has evolved considerably. Newmarket structures came forward, new business models have come forward with over the top services and new services and applications have emerged on a massive scale.

Such services and applications aren't typically provided by big technology, with the services inside of the companies, Internet service providers or ISPs.

We also do not want to miss acknowledging the importance of Digital Transformation and digitalization in many sectors, they are using all IP and new IP-based applications and services are constantly emerging where some of them such as IP-based voice communications are competing with traditional telecommunication services while all services don't have equivalent supports in the traditional telecommunication environment.

The information and technologies are all around us today. We have the Internet of Things, we use cloud computing service, utilize one mobile communication technologies, operated by virtual mobile network operators when we're connected through high speed fiber optical fixed networks. We enjoy video streaming, video is now accounted for more than half of the Internet procedure call bandwidth, entertain ourselves with offered sophisticated online gaming applications and we can anticipate realtime virtual reality applications in a metaverse to become possible.

All of the ICTs with their intensified usage in applications has manifested in a drastic ongoing increase on Internet traffic. This is just one trend among many new developments and phenomena that the last decade unleashed and as a result they put ambitious technical, economic requirements upon the underlying network and transport infrastructure.

Given the acceleration of the phenomena and other trends we're aware of various political and laboratory discussions that are going on in several jurisdictions about the adaptation of the economic, fiscal landscape in

response to this digitalization.

We are aware of the discussions and debates by stakeholders and proponents on what's known as the system that's called for a form of Internet usage traffic and there are financial matters that need to be looked at, equitable and Kansas recovery for the benefit of the Telecom service providers. In results, such costs, it goes back to the service provider companies, into the ISPs. Last year, as some of you may know, we wanted to organize an ITU workshop on OTTs and taxation. However, for certain circumstances we decided to postpone that workshop. Meanwhile we have rescoped this workshop to spend two days to give more room for presentations and discussions.

Today we do not only cover taxation matters but also looking to diversity of issues from a broader perspective. In this workshop we want to understand and consider all of the relevant aspects such as economic and fiscal and policy matter, fiscal aspects, alternative and other complimentary approaches looking at investments and the inclusion and the facet of Digital Transformation.

Ladies and gentlemen, I'm proud to present to you a very interesting agenda of this workshop with excellent speakers and presenters from ITU members and other key experts. A number of sessions that allowed the relevant stakeholders and proponents to share insights and perspectives with us. We have organized sessions that address the interests of the interest, Telecom providers and OTT providers, informing you all on international aspects with multilateral organizations and on international tax agreements, the academia and research community, addressing the societal aspects of digital inclusion and the interests of Civil Society.

We all learn a lot in the workshop and I'm looking forward to having a predictive, constructive dialogue and discussion.

Before we get started with the first session, let me make a few administrative remarks for the workshop. All presentations of this workshop will be published on our webpage. If you request the floor during the discussions, please press the button on your desk, when having obtained the floor to speak, say your name and which organization you are presenting.

If you want to raise a question or make comments especially for the remote participants on Zoom please so I can see the Q&A chat window and the session moderator will read it out loud and assign it to a panelist for follow-up. Tomorrow after our session, I want it review the entire

workshop and summarize the highlights of all sessions, where we are, what we can take home with us.

Thank you very much for your attention n concludes my remarks.

Without any further comments, I would like to proceed to the next session, and we'll hear about ITU-T Study Group 3, that's triggered the organization of this workshop. Let me now invite Mr. Ahmed Said to give his presentation, Chairman of the ITU-T Study Group 3 and he will introduce the Study Group and its activities as relevancy to this workshop.

Sir, the floor is yours.

>> AHMED SAID: Thank you.

Good morning to all of you. My name is Ahmed Said, Chairman of Study Group 3. I'm here today, really delighted that this workshop has come and we have been discussing this workshop for a long time as Fernando said. I would be happy to present and give a small synopsis about Study Group 3 and its mandate.

Let me start, I'm not sure if I'm going to share my screen or the presentation is already there.

Is my voice clear to everybody?

>> CHAIR: Yes. Go ahead.

>> AHMED SAID: Thank you.

Let me give a small brief on Study Group 3.

First of all, the ITU -- this slide, about the ITU, the United Nations specialized agency for information and communication technologies, it was founded in 1865. We have more than 150 years of experience.

Next slide, please.

So the global community of ITU is composed of around 193 members, Member States and around 800 plus private sector enterprise, academia, sector members, all these types of membership. Also the ITU has regional offices in almost all of the continents actually, most of the continents and most of the regions. We have in the African region, the Asia region, Europe, also the CITEL region, so with this network of offices, ITU commits to its global and regional tasks.

Next slide, please.

So as we know, ITU is composed, the structure of ITU is composed of three main sectors, the standardization sector, the technical standards, what we'll focus now, it is the standardization sector since Study Group 3 is part of the standardization sector. The sector is to develop technical standards and also to bridge the standardization gap and the fostering of cooperation between the national,

regional, international standardization bodies.

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So if we move a step down we have the T Sector and the standardization sector, it is composed of Study Groups, mainly Study Groups and also standardization advisory body. If we're talking Study Groups, which here we are going to focus on Study Group 3, Study Group 3 is the Study Group that is to manage topics related to economic and policy issues in general.

In the next slide, we move to the next slide please. We can speak about the economic and policy issues that Study Group 3 is following.

In details, we have the details of the topics that are discussed in Study Group 3.

Could we move to the next slide, please? Yes. Thank you.

Here, Study Group 3 is responsible for all the international telecommunication ICT standardization and all accounting matters related to the ICT and it will also include the principles and methodologies. Also, the regulatory models and frameworks that are related to the ICT, international ICT sector, also another man date is to study the economic and regulatory impact of the Internet, conversions and new services such as OTT which is our topic of discussion today.

Also Study Group 3 considers the new and emerging technologies and services since we have discussed a lot of IoT and Big Data discussions in Study Group 3 in the regulatory framework and also related matters related to the topics.

Also ITU, Study Group 3, it is the lead ITU-T Study Group on economic principles and issues and policy issues. These are the levers of Study Group 3.

We have more than 100 delegates that participates in Study Group 3 meetings, the majority are from the Member States. There is strong support from the developing countries to the work of Study Group 3.

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So for the Study Group 3 structure, we have four Working Parties. The four Working Parties are -- each of the Working Parties is composed of several questions, there are much more related to each other. So if you look at the Working Party 1, we have the charging and accounting and settlement mechanism. That is composed of Question 1.

Working Party 2, they have four questions, the Working Party 2 is the most generic Working Party in Study Group 3. It's talking about general economic and policy factors

related to the provision and cost of ICT service. We have Question 3, the general economic and policy factors and then Working Party 4.

The Working Party 3, it is working with economic and policy factors related to enablers of ICT services. We have two questions here. Question 6 and Question 11. Question 6 is dealing with international Internet and fiber cables connectivity, IP peering, IPv6 deployment and Question 11 deals with Big Data and digital identity and so on.

The fourth Working Party, Working Party 4, which is related to regulatory aspects of mobile communication, competition and convergence.

This Working Party, we have three questions, we have the international mobile roaming, the Question 7, Question 9, Internet conversions of OTTs and this is a topic today. Question 10, the competition, policy, relevant market definitions. The market power and competition, all of the competition areas.

So this is the structure of Study Group 3.

The next slide, please.

We go to focus on our main topic today, it is OTT, Question 9. So Question 9 we have the economic and regulatory relationship between Internet as I have mentioned before and over the top and international telecommunication network and services. In Question 9 we studied the economic and regulatory relationship between Internet an convergence and OTTs. We had discussed the terms and definitions of the recommendations related to the topic. We have been discussing many topics actually on Question 9 as you will see in the second slide. It is also worth telling that we have the Rapporteur Chair of this question, Ms. Hilda from Zimbabwe with experience in this area and has been working with us on that topic specifically for a long time with Study Group 3.

Next slide, please.

Here is a dive into the work of the Question 9. Some of the products that's been produced from the question, they're recommendations related to OTTs. We're very proud of having the first recommendation on OTT in the ITU, recommendation ITU-T D.262, collaborative framework for OTTs and it is a framework in order to promote competition, consumer protection and consumer benefits and also the dynamic innovation, sustainable investment and infrastructure development.

Also it provides the definition of OTT and I think that was mentioned, that these definitions, they're the

matter of national sovereignty and may vary among people, depending on the domestic regulations, and it is safe to say that's the first definition -- the first attempt to define OTT in a U.N. organization. It was done at ITU.

Also we have recommendation ITU-T D.1101, which is on enabling environment for voluntary commercial arrangements between telecommunication network operators and OTT providers and addresses the dimensions for strengthening the commercial cooperation between OTT and MNO and that was one of the most important recommendations or topics that's been discussed in Study Group 3 during the past few years.

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On the next slide, we have also recommendation which is our latest product of Question 9 and Study Group 3 in general, recommendation ITU-T D.1102, which is on customer recredits and consumer protection mechanism for OTT, which proposes initiatives to be taken by Member States and regulatory authorities and OTTs to provide good customer service and consumer protection for users of this.

Also we have regional recommendation on OTT which was published this year, approved this year, covering the needs of national and regional collaboration to overcome the challenges of OTT by virtual and effective consumer protection and revenue assurance for operators.

Next slide, please.

Okay.

These are some other outcomes from Study Group 3 on the topic of OTT which was actually the first output of Study Group 3 on this topic, which is the technical report on economic impact of OTTs, provided and maybe that was the door to commence our work on the recommendations which I had just presented, and this report, it was very beneficial report, which was issued in 2017 and it provides technical and policy and background of the international -- to the international community in both developed and developing countries as to the nature of the implication of OTT and related mindsets.

With regards to ongoing work in Study Group 3, on the regional, international level, we have many topics that are opened and still there is work to be done. So encouraging Member States to encourage -- to continue to contribute to this work.

We have OTT by person and also the OTTs in the context of the international Internet connectivity. Also the consumer issues related to the procurement mechanisms and consumer protection issues that are related to.

Other related work that we're working on right now.

For sure, we have the procedures, the misuse of facilities, also the economic impact of sandbox, we're working with Study Group 3 and the accounting settlement mechanism of the international telecommunication services.

And next slide please.

So the ongoing discussions, these ongoing discussions in Study Group 3 in general, for a way forward, we have a way forward for the ITU workshop on this topic and the purpose of having this workshop is to share information, also to give the views and experiences regarding the topic and to consider establishing collaboration and partnerships in studying this topic. Also to take into account the proposed work item, the lessons learned from the workshop.

With that point, we'll go through the Study Group 3 activities and I think that the outcome of the workshop is going to be part of our discussion in the next meeting for Study Group 3 next week hopefully and to make use of the experience shared here in our work for Study Group 3.

With this, I think I ended my presentation.

Next slide, please. This is the page of Study Group 3, if you need to contact Study Group 3, the email. I thank you for your time and hopefully we'll have an excellent workshop with good oud comes that will help us to proceed our work on this topic.

Thank you so much.

>> CHAIR: Thank you for the introduction, Ahmed Said, of Study Group 3.

Are there any questions to the Chairman of Study Group 3? We will place the URL online.

Any further comments? I don't see anybody raising the floor. We will proceed to the next session, this session 3. In fact, we have session 3, it is a huge session. We have two parts, sub sessions in it. I first invite Ms. Gaia Penteriani to join us here on stage.

We will be addressing the perspectives of industry on the economic and fiscal landscape and the moderator is Ms. Gaia Penteriani, she's employed by the GSMA association.

>> GAIA PENTERIANI: Thank you.

Hello, everyone.

So welcome to the first session. To session 3, the first panel session. It is quite a full one. We have several speakers and I would just like to briefly go over the structure and the names of who is speaking and how we go about if possible to have the slides be.

I was looking for the holding slide. That's fine.

I'm going to start with a brief presentation to

introduce the topics. We'll split the session on industry perspectives in two.

I'll give a brief presentation to introduce and then we'll have three speakers, first Aminata Drame, CEO of international networks infrastructure and services at Orange Africa.

Aminata Drame, there you are! You will be first up.

Then we'll have Ben Wreschner, who is chief economist and head of public affairs at Vodafone. He will be connecting remotely.

Then we have Jonathan McHale, from CCIA, the computer and communications industry association.

Then we'll have some brief reactions from the speakers and from the room.

We'll break for coffee then.

Then we'll resume and we have another three speakers, we have Deloitte, Thomas from Microsoft, and we have David.

At the end, we'll have a longer Q&A session where we'll invite everyone in the room and online to contribute.

I'm going to start with a brief introduction to the topics. We'll have lots of perspectives from the digital ecosystem which is varied, compromising many different business models.

As we know, digital services have grown expedientially in recent years. What you have seen in the left-hand side, it is growth in Internet traffic.

There are different ways to kind of segment the Internet value chain. On the right you will see a framework from a recent GSMA study on the Internet value chain.

As an introduction to the topics that we'll be covering today, I wanted to go over this framework which sees on the left-hand side content rights, companies, so companies such as broadcasters, individuals, content creators, then we have the various online services from marketplaces to travel, to social media.

Then we have enabling technology and services such as payment platforms and IoT platforms and Internet access connectivity. This would be Telecom operators or satellite companies and ultimately user interface. This would be hardware and software companies.

I know Tomas will go in to this in more detail. Essentially, there are many vary idea players and business models. These have evolved very differently over the years in terms of profitability and revenues, the different segments.

It creates implication for policy. At the core of the

workshop, it is tax policy for applying to all of the different digital services and it involves the domestic aspects as well as international aspects such as international tax agreements.

Tax policy is connected to many other types of policies and regulations that effect digital services to the extent that they also effect incentives for supply and demand players through profitability investment and demand for digital services.

All these different policies, they're very different, across the different -- applied different across the different segments of the value chain that we have seen before.

There are also different stages ever development for the different segments.

For example, regulation, it is very much mature and will be established for the Telecom sector and it is only just emerging for digital in the form for example for the Digital Markets Acting in Europe.

Similar, fiscal policy, tax policy is applied very differently and I'm going to focus for the remainder of my presentation on taxation applied on the mobile sector because GSMA members have a lot of experience on this. We have studied it very closely. For the rest of the workshop, it will be interesting to hear from digital players, also what's their experience in taxation from the emerging digital services taxes for example.

So broadly speaking, the best practice tells us that taxation should be broad based in order to be less distorted. It should account for externality, it should be seen as stable and enforceable.

In practice, the taxation on mobile, it is often complex. There are many different types of taxes that are applied on the sector beyond general taxes such as BAT, we have size, taxage on user, connection, various taxes on operators and license fees. I know that we'll get into this with Sidy in more detail.

The amount paid from sector-specific taxes, it is quite high as well.

Especially countries that have low tax capacity and low tax to GDP ratio.

As you see, the burden from sector-specific taxation which would be taxes applied on the Telecom sector specifically over and above the general taxation can go up to 30%.

These taxes vary very much. This causes uncertainty for investment especially. As we have been tracking tax

reforms in Africa, in just over five years there have been 68 reforms in various countries of which 55 were from sector specific taxes.

As I said, this is a phenomena that we mostly find in countries that have low tax capacity and low tax to GDP ratio. On the left-hand side, you see the tax to GDP ratios for Sub-Saharan Africa. The average for this is just 30%, in many countries, in Sub-Saharan Africa, it is much less than 20%. Countries, they face pressures to increase their tax base. There is also consideration related to the revenue composition because many of the countries struggle to raise direct taxes such as personal income tax. They have to rely more on value added taxes and corporate income tax.

Mobile is a convenient way to raise domestic revenues. Distribution network, highly local, the infrastructure is local, and so it's been used as a convenient tax handle. Governments are also very aware and they have to finance the broader Development Goals, including sometimes ambitious digital agendas. This is an evolution of the usage, the coverage gaps, so the coverage gaps would be people that do not live in an area that's covered by networks and the usage gap are people that live in an area that's covered but do not use the services.

So this points to barriers such as affordability and skills gaps. The graph refers to the global picture but there are quite large regional disparity, the coverage gap, it is 17% in Sub-Saharan Africa and usage gap is 61%.

What is the impact of taxation on the market, both on the consumer side and on the supply side.

Here you can see the percentage of taxes as a proportion of the cost of a basket of a handset plus 1G of data. In many countries, it is above the kind of average level, 20% and a lot from sector specific taxes.

The question is are consumers responsive to the higher prices due to taxation.

In fact, they are quite a lot. There was -- we did, this is from a recent study that we did in Tanzania on the impact of the introduction of a new levy on mobile money services and there was an idea that perhaps a demand for mobile money services was not as responsive to price changes especially places where traditional financial services are not as widespread. In fact, demand is very responsive, there was a big drop in transaction volumes and values after the tax was introduced and then the market kind of recovered a bit but on a lower growth trajectory.

What we find, taxation does restrict mobile

penetration and Sidy will talk about this impact and it has an impact on investment.

I just want to point out the channels through which impacts investment is both the direction through reduction in profitability as well as making investments and rollout especially rural areas, less profitable because there is not enough demand because people are facing a profitability barrier. This is very important in the context of wanting to close the connectivity gap.

This is what I wanted to say in order to introduce our session.

I would now like to call Aminata Drame to the stage to give her remarks.

>> AMINATA DRAME: Good morning, everyone. My name is Aminata Drame, I'm from Orange group. It is nice to see you all, we're the Orange international networks infrastructure and services. We work on connectivity in Sub-Saharan Africa. We have a network that's covering eight countries, African countries. At the same time, I'm the Chair of the Working Party 3.

I will talk about connectivity and digital identity. I'm very pleased to be here today to share the point of view for the industry on how to accelerate the Digital Transformation. Just to recall, for five, six year, past year, we work on recommendation related to how to be partners with OTT, how to have an impact on the digital -- of the acceleration of the digital services and we have had several recommendations of technical reports on OTT. For Telecom operators, what we have now, and I think the progress of those present have talked about the fact that we have networks and we have obligations to invest in the networks because our customer, they need to use digital services and we have to invest to be able to solve the traffic due to the usage. We faced a lot of challenge because we have to support tax, fiscal tax, regulatory taxes, and Africa, we saw some pictures in the presentation.

We have 30% of our revenue, we have -- we give the government or to the regulatory site. What Telecom operators also says, we have OTTs that use our networks. It generates the character of service problems and the regulator has to pay tax because our network is not able to support use of customers and we think it is not fair because the networks are to absolve the local services, what we offer to our customers, it we have as a service, we can't stop and it generates problems in our networks.

What we see also is for services, for innovation, for

infrastructure, in the previous contribution from the African delegates here we saw Telecom operators build their network and it is used by OTTs. Now we can't use this network because we have OTTs who have submarine cable project and what we operators say is we can't stop and just see them running the cables, the people say if someone does something without you, it can possibly do it against you. We're obliged to do it with them. In orange group, in submarine cable project by OTTs we are engaging ourselves and it is not the same -- we didn't have the same goal. We are in a submarine cable project and we're in the submarine cable projects because we have landings in the countries and we need to see what will happen and in the local site also, to be able to participate and to be partners with them.

It is a good sign on the part of saying that we're working and trying to have some partnerships. It's an example but in the same way we have services like mobile morning, we have services launched by OTTs in our region, in the same time, they don't support the same taxes like Telecom operators and we just think it is not fair, it is not fair for Telecom operators.

In the satellite, this is a -- even in submarine cable, the satellites, some services, operators say that it was -- we have these players now in the same domain and we think that the value chain is absolutely modified, exchanged because we have different players. The first one supports the taxes, it is taxed, the other one works across and don't pay taxes local Y they don't have the risk to have a tax from the regulatory because there is a local character of service, a problem of service locally. It is a Telecom operator.

In conclusion, what we think, it is yes, it is important to accelerate the Digital Transformation. We can't close our eyes on important challenge related to the identification of customers because we oblige as Telecom operators to do this locally f we don't identify our customer, there is a tax from our government. This is how to row tect customers, I want to talk about security, we have obligations on that. I think that the two points need to be clarified locally. The tax also to have systems that maybe one day so as not to have things happen that are unfair because if we want -- really want to invest, to be innovative, to be here for our customers we have to be -- if at every step we think, okay, the government, the regulators can punish us, it is -- I wanted to contribute that.

Thank you.

>> GAIA PENTERIANI: Thank you. It was interesting it hear about the rolling out of networks through Africa.

Throughout the workshop, it will be very interesting to hear your contribution and the responses to some of the other interventions and especially the local requirements and realities and kind of different demands from various government stakeholders and how you need to balance this with your business of building networks.

Thank you.

We're now going online to Ben. Hopefully he's ready.

>> BEN WRESCHNER: Thank you. I'm ready, can you hear, see me?

>> GAIA PENTERIANI: Yes. Yes. Hello, Ben. We can hear you. Please go ahead.

>> BEN WRESCHNER: Okay.

Thank you, Gaia, thank you.

Thank you for arranging this workshop, apologies I can't be there in person. I hope that the online version is almost as good.

So when taking about the topic as broad as of the economic and fiscal impact of our sector it is hard to start and where to finish. I triple digits to breakdown the intervention into four areas. First I wanted to give a check of where I think we are as a secretary, as an industry, then I want to spend a few minutes looking at what we have learned from COVID, it is not completely finished and we have the learnings which is important.

Equally, what we have not learned from COVID.

Finally, what needs to happen to address this.

So in terms of where we are, I will focus on the two regions where Vodafone is present in Europe and also through our partners in Africa.

In Europe, I will be a little bit blunt here, what we have seen in the last decade, it is that they have lost tech leadership in many aspects, the continent that was in the forefront of technology, it is at risk of being a taker of technology rather than a maker of technology. From our perspective, this is due to conscience policy choices that led to us where we are today.

If we look at how the sector is policed, we have seen entry barriers lowered artificially offering discriminatory options, exit barriers raised, in the form of restrictive consolidation, remedies and if it is at all allowed. Within the sector, we have seen a sector as a source of government revenue, most obviously in the form of high price of spectrum and also in cases in the Europe specific

taxes, we have seen a high degree of market intervention in terms of what we're allowed to do, not allowed to do. With the regulatory and competition focus, with the power, rather than looking at what's longer lasting effects of cross market leverage.

The result of this, it is in Europe sector, below that, it is costing capital. In Africa, we see similar and different nuances of this and we see a lot of value extraction from the sector, the previous speaker referred to this as well as Gaia Penteriani and it is through sector specific taxation or quasi taxation rather than spectrum fees and nevertheless, it is a part of extracting significant value from a sector like ours.

Also, I think it is very much with your presentation, Gaia Penteriani, a significant risk of people excluded from the economy, no longer because they have not had access to the networks although the case for more but more predominantly because they don't have access to a smartphone.

Finally, we also see increasingly attention toe tax, mobile monthly, which is, you know, a new, emerging technology still growing it, its capabilities, one which has a very positive inclusion effect, but where the taxation of it, it could really limit the extent of which it can drive financial inclusion.

With this, this somewhat gloomy picture, it is worrying as a sector which increasingly is seen as underpinning all other sectors and now as a sector which is responsible for the more broader, resilience of the economies and societies and being there to respond to crisis. It is a sector that's not able to do, to flourish given some conscience policy, economic and fiscal choices that are imposed upon us.

Talking about crisis, that gets to the second part of what I want to say, what have we learned from COVID. I think we have learned some things, a clear realization that networks were and are a lifeline. There is the critical nature of connectivity, it is now very much understood by many. It was -- we do believe that was realization to the extent to which the connectivity sector does lean in to crisis where needed and can be critical for keeping citizens connected, for keeping the economy wheels turning when other things work, what are breaking down.

Coming out of COVID, there is a realization that with need a green, inclusive economic recovery along with digitalization and connectivity, it will be central to that. We're also seeing some efforts to accelerate this

digitalization, we see the recovery and the resilience facility, unprecedented central fund of money raising by Europe and also an unprecedented level of economic support distributed to Member States to accelerate the green transition and the digital transition among others.

We are seeing more in international institutions efforts to accelerate the digitalization and we're proud to be part of the Partner2Connect programme and a commissioner on the U.N. Broadband Commission, all good examples of where the need to accelerate digitalization is realized and concrete measures must be taken.

To the next part of what I want to say, you know, what we have not learned from COVID, I will say two points here, so first, just the importance of the pace of execution. I say this in Europe whereas I mentioned earlier, we're at risk of falling behind as a continent in relation to technology.

Yes, the recovering resilience facility was put together in rapid time and it is impressive how it was done.

Now as we see the distribution of Member States, the actual programmes, that will be implemented to accelerate digitalization and accelerate the green transition, we see a slowing of the pace and we really have no time to lose and the statistic we often refer to is the fact that Europe, the current trajectory gets to transformational 5G ten year behind China, that's something that we cannot afford to let happen.

The final part, which -- the final thing -- second thing we have not learned from COVID, the final part of the intervention, whilst everybody understands the critical nature of connectivity, it is not incorporated in a quantified way into our conscience policymaking. One word here which I think is exceptionally important, it is going to help in the pontification, which is the role of externality, it is long understood that network services have associated in externalities, and this came to the fore now in terms of connectivity and digitalization and we have a need to incorporate this thinking into the way we set policy and to explain what I mean by this, it is when there is a societal benefit of consuming a service which is not reflected in the private individuals and decision making in terms of how much or at what price are consumers served in service. For example, when a citizen is deciding whether to purchase connectivity services allowing him or her to do online tax returns that person won't take into account the fact that the local government, central government will

have a lower cost to deliver their own public services. So that's not reflected in the private decision making.

We as network operators when we rollout our networks and into the rule communities, in terms of our decision making, an extension of the individual decision making, extent to which digital public services is more efficient and more cost efficient, it is not something that we can internalize in our own decision making in the absence of the government intervention.

So that's bringing me to the last part of my intervention, the crux, what needs to happen to see policy change to accelerate and digitalization.

Here I'll focus on the two most important topics of the day, there is tax and there is more broad funding of the networks that are built.

So we really heard a number of interventions on the tax side.

It really is a clear concern to us, the extent to which we are subject to a variety of new and innovative taxes, including spectrum here as well.

So on the tax side, what we really want to see, it is common goals and principles associated with tax policies. We want a tax policy delivering value for citizens in the long-term. We advocate for a positive social outcome and supporting equal competition, sustainable investment, giving confidence and certainty to all stakeholders.

That's really -- if we would apply those principles broadly, we will hope to see those preference taxes that already have been referred to reduced.

An understanding of the positive externalities from the connective, how it joins the economic growth and seeing the sector as a source of revenue for governments in the short-term.

In Europe we're still -- we don't have the areas on spectrum, we see that being put in place but less so, discriminatory conditions which are there to extract the value and we also see some movements on wind fall taxes on the sector which we believe are entirely inappropriate and of course there is the global tax deal which we believe would give a lot more confidence and certainty on the global tax position and we're still -- it seems to be stalled, not quite there yet. In Africa, as referred to, a number of times, it is very much the taxes which are holding back the industry, whether it is corporate tax, whether it is tax on handsets, tax on equipment, on service, on mobile money, we are taxed in a variety way and often with third parties involved in the collection of the

taxes which we believe holds us back.

Then the other area of policy which we believe needs to change, in relation to regulation. Here, especially talking about Europe, this applies more broadly, really we have seen in our opinion a regulatory imbalance. We have a whole industry of regulation which is being set up with a focus on just one part of the digital ecosystem. Gaia Penteriani you presented a slide I think that show that had broad digital ecosystem and the different value and different traffic within it. In Europe, we have a whole industry of regulation focused on the connectivity sector without really taking into account that this is one sector in a broader ecosystem.

We have seen recent moves to address that through the Digital Market Act and Digital Service Act, those just being implemented and it will take a long time to come into effect and implementation will be exceptionally challenging.

And the regulatory imbalance led to the economic situation that we're in today wrinkles the sector is below weight, not earning the return on capital and it is unable, the current trajectory to provide the capability and the infrastructure that Europe's economy desperately needs and the European society desperately needs.

Again, it was referred to by Aminata, we have the largest content provider, they're able to load traffic on the networks without any incentive to optimize traffic and really without taking into account the scarcity of capacity. Just to make that concrete, you know, content provider could switch all of its customers from standard definition to high-definition overnight causing enormous capacity up list on the network without really having any constraints centred, not to do that. And if this is left unchecked, we have a situation where we have high capacity 5G networks which are critical for economies and businesses to keep up in the global, you know, economic race, we'll have the 5G networks in cities and have patchy capacity outside of the cities which will lead to broader economic issues and externality. That's why we're calling for European regulation to address this situation. What we're asking for, it is the requirement for the largest content generators first of all to engage in commercial negotiation with the providers and that would be to agree to a fair contribution in relation to the cost associated with the exception of traffic that they generate.

If there is a failure of that negotiation, we would want a dispute procedure and preferably what's known as

final offer arbitration to ensure that a fair outcome is achieved. Here we're looking for E.U. level guidance to ensure this is not a regulatory free for all, we're supported by a sound economic principle, the very principles of certainty, of confidence, but also ensuring that it is ultimately in the interest of citizens and consumer welfare is enhanced. We believe this approach would address the regulatory imbalance and create the right incentives and the economic signals across the broader ecosystem and this would give the best chance of the networks built to support the economies to get everybody connected where they may be.

On that, I will close.

Thank you for your attention.

>> GAIA PENTERIANI: Thank you very much, Ben.

You have laid out very well the differential policies that are applied on the different segments of the Internet value chain. I hope that we can use this workshop to discuss those in more detail and whether the different policies and regulations that provide economic and fiscal incentives to the different segments do reflect the externalities that you mentioned, both positive and negative that are produced by the different segments within the value chain.

I will now call on to Jonathan McHale, please, if you can come on stage for your presentation. Thank you.

>> JONATHAN McHALE: Can you hear me? Okay. Thank you.

Good morning, everybody. Thank you for the opportunity for this very important question. Big picture, I think that the question in this area is do we have incentives for expanding the uses of networks and the expansion of data in particular or is the goal an attempt or inadvertent attempt to restrain the data and raise prices. We started out talking about fiscal, I won't talk about that.

There is one area of commonality, fiscal matter, of course, they increase the cost, thereby also suppressing demand to some extent with a welfare effect. Some of the other interventions, regulatory interventions such as what Vodafone would recommend would I think do the same.

This is not a new issue. It really started at the inception of the Internet when the Internet moved from a metered -- on a Telecom network moving from a metered system to a flat rate system. Flat rates, of course, encourage usage but they also suppress the ability of the entity that controls the monopoly to raise prices and

constrain demand. As far as back as 1988, there was the U.S. government sued in the attempt to try to put in police a system where they could essentially raise prices for traffic into Australia.

In 2000 this was looked at as well, they had an initiative, the Internet charging arrangement which was looking at how you could come up with cost principles for exchange of Internet traffic. Didn't result in a recommendation to regulate but various principles which were picked up on later on by the ITU. 2006, it was picked up by the former head of AT&T, nobody gets a free ride, these want to use this will pay essentially trying to look at the network as a traditional telephony network where incoming traffic would be subject to essentially a termination fee and that's a revenue generating mechanism for the company. 2008, ITU did look at recommendations for how you may cost traffic exchange. Those recommendations took a long time. I believe they have largely been ignored, the evidence for that, it is a survey that was -- has been done recently every year that says 99% of Internet exchange agreements are essentially informal, without compensation.

So is it different, in one sense, it is. It started out as a fight between telcos, AT&T against Telstra for example. Right. And of course the phone companies did not really have the control over the content and they were showing someone else's content, when AT&T was asked to please pay me, they couldn't control the origin of that.

Right now the telcos are looking at the OTT operators so it is another commercial entity, it is not individuals necessarily sending but it is the OTT entity that's the target now of the regulation.

I think the first point, it is true, a lot of the over the top data has been generated by a handful of companies, which may well change. That's currently true today.

The notion of not being able to make a return, I think that's disputed, there is evidence that disputes that. This notion of expediential traffic growth I think is also contested, we have a graph that may look at that as well. The assumption is only the telcos invest, not true, this is a massive investment by the OTT companies, and there is a call that we just heard from Vodafone bringing in regulatory intervention to address what is assumed to be a market failure and I will argue is not and it is simply a recipe for essentially constraining demand, raising prices, hurting consumer welfare.

An idea thrown out as a solution, taking market pay,

there is a determination charge attached to any traffic and the concept, it is in a way backwards. It is true that the traffic comes from the OTTs and it is requested by the user, the subscriber of the network. I will argue that the networks essentially, there is a -- there is a convergence of interest in how you handle that customer, because he's a customer both of the telco and of the OTT.

In any event, the traffic doesn't come, isn't generated by the OTT, it is generated by the users who demand the various services, content, application that is wanted. That I think has been relatively -- it is relatively undisputed by regulators and most economists.

A better model of looking at this, there are incentives to develop better apps and content which is a benefit for the telco, it is what drives the subscriber ship, nobody drive as smartphone unless you can access content and applications and yes it drives data, yes, data is increasing but that data increase is actually the source of their revenue, it is why somebody wants to upgrade the plan, it is why somebody wants to have a better phone to be able to handle better services.

Another, a simple graphic, why would you want connectivity unless you had the apps to develop it. Is there a commonality of interest between the app developers and the infrastructure providers. I believe there is.

This is very interesting graph. It is from a recently published paper by the research organization analysis, I have a reference at the end of the slide and I encourage people to look at it if you're interested in the details, showing the increase in data and the increase in overall network costs. Network costs have increased very, very slightly. Yet data that they have been able to support, it does increase significantly, not expedientially, but significantly.

The cost of data is going down. Needless to say, it is the source of the telco's ability to increase the profitability.

Hopefully you can see this and it is significant, the cost per gigabit that the telcos are faced with. This is a recent study from tele geography, the move to higher capacity, connectivity, it is significantly reducing cost and enabling higher profitability and the price reduction year by year, they're pretty significant, it is somewhat similar to Moore's Law in the computer system and again that's the model that I think is more helpful to look at.

The data growth is not expedientiel, it does increase year by year and it is certainly manageable and with costs

going down, it does provide the margin for networks to be able to maintain an increase in profit. There was an increase during COVID, you will see in 2020 the line goes up, the rate of growth, not the growth but the rate of growth went up, not surprise, people are at home, the demand did go up. It then leveled off and so it does appear to be quite manageable right now.

Why has the ability to move data, to lower costs prevailed, a big reason, and -- it is that the investment buy the OTTs has been significant.

So if you look over the past several year, you will see 800 billion of investment in infrastructure, a lot of it is in data centres, much of it is in submarine cable, a lot of it is in caching, that is the ability, that has demonstrated the ability to move the data closer to the user which reduces the costs of the telecommunication providers in having to reach back to the source of the information. Unlike in the beginning of the debate, where telcos complained that they had to go to Los Angeles to pick up the data, now Los Angeles brings data to Australia. That backhaul incremental cost that was complained about has essentially been addressed by many of the big OTT companies moving the data closer to the end user.

The market interconnection is competitive, there is no obvious reason I would see why regulatory intervention would be appropriate. Many regulators have confirmed this, the regulatory recommendations, BEREC, others came out with a report on net neutrality, recommending reading that, it is on what this -- what the trends need for regulatory intervention and it basically concludes that at the current moment certainly the rational for regulatory invention is not supported.

There's one country that's actually attempted to put in place a termination rate for data. That's Korea. They have put it in place not for the OTTs as a mandate, but it is mandatory between ISPs. So ISPs exchanging traffic within Korea when traffic is out of balance, they end up charging each other. Essentially, an interconnection rate for data internally, what's this resulted in? First, higher costs.

Quality of service, it has declined. It is clearly evidence in latency. There was a study on this a couple of years ago in Korea in the OCD, they were at the bottom because a lot of traffic goes out of Korea to come back into Korea because of the high cost within Korea. Diversity of online content has been affected, transit prices in Korea where you have essentially a tri-opoly,

three carrier, 90% of the market, 8.3 times the price of Paris.

What are practical effects of this? In 2020 a Korean start-up, a company, it was great to see the start-ups in the video space, that's the competition for Netflix who is blamed for the problem, they're unable to offer the high quality services in Korea because of the prices they end up being charged. Within Korea if they go, they ask an ISP to host their data the ISP will say, well, if that data is going to another network, I'm going to have to pay a termination fee and therefore I will add that fee on to what I charge you. They concluded it did not make economic sense. So quality was reduced.

It is an example that Vodafone gave, do you want 4K in the country, is there a way of pricing it at the retail level which makes it economically and technically efficient.

I would imagine that there would be. The data caps, different price tiers, et cetera. In any event, in Korea that's not an option.

Recently, last month, a couple of months ago, a gaming provider, simply reducing its -- the resolution of the services it provides, and also because of the determination fees that are evidence in Korea.

What would happen big picture if you put in the sending network party pace regime. If you are to do this right, correctly, and this is not the Vodafone, a different proposal -- not a proposal so it would be the fairway to do this you would attach to every website, every one of the 200 million websites visible on the Internet today, their ability to reach another subscriber would be subject to a fee. That's the only fairway to do this.

That's the way that the phone network used to be, everybody, big, poor, small, company, person, if you made a long distance call, you were charged the same amount. That's the fairway of doing that.

Since there is no contractual relationships between all of these end points in the Internet and the users who demand them, it would be impossible to administer. I don't see how it could physically be possible.

So what is the other solution that people are talking about? The idea of targeting what I think some people are calling large traffic originators, the big carriers. I think some people would use some of the E.U. methodology for finding what they call gate keepers. Of course, there is completely the wrong idea because they're really not gate keepers, they're big, they generate a lot -- they do

create a lot of traffic and it is a completely different concept.

The problem with this, it is you end up having to discriminate on the basis of size. You pick a subset of operators who are subject to a particular fee and all the rest would not. That's what Korea is proposing right now in legislation, Korean proposal is 1% of the traffic, 1% -- 1% of the traffic and a million users, it is a threshold.

Every time you create a threshold, you are creating a basis for discrimination, both traditional Telecom market discrimination and trade rule discrimination.

In telecommunication, you're not supposed to discriminate between the customers, and this would be discriminatory.

In trade, same idea, you're not supposed to discriminate on the basis of nationality or in the trade world, we have adopted this Telecom concept of discrimination as well.

All ITU members -- not all member, a good majority of ITU members are part of the WTO and this is the WTO rule.

Each member shall ensure that any service member of any member is accorded access and use of public telecommunication networks and services on reasonable and non-discriminatory conditions. The sending party network pace solution, if it were applied through this targeting of specific carriers would essentially have to be discriminatory and thus would be in violation of members of the obligations.

Those are my remarks. This the is a document I referred to that I recommend people looking at with respect to some of the costs just published available at a trade association encompass and you can Google that name and find it as well.

Thank you.

>> GAIA PENTERIANI: Thank you very much for your presentation.

Certainly it will spark debate. I'm sure that David, I know, will reply on several of these points.

I just want to say, I think it is important to recognize that there will be geographical differences both in the cost drivers as Aminata Drame had described in her presentation, and also in all of the policy and regulatory constraints that are applied on the different segments of the value chain like Ben had described earlier.

I wonder if I can just call on Ben, if you are still online, if you want to briefly respond to these remarks, to

what you heard so far from the speakers and then we break for coffee and we will resume the presentations after.

>> Ben: Happy to make a few comments back some interesting graphs presented, the traffic increasing, yeah, as a reduced rate, still increasing with great cost, increasing at a slower rate, also to an extent what, this doesn't reflect, or does reflect but not articulated, it is that we aspirator DOS have significant economic restraints and therefore we can only invest in a way that the market allows us to invest. Therefore, when you look at the four projection, it sort of reinforces the point I made about the risk that you get the patchy networks, such that we do, we do constrain or we do limit the extent to which customers -- that's what the market can only tolerate whilst having the huge increases in traffic in certain areas without the benefit of our investment being more broadly appreciated by people in non-cities and people who are lower income rungs.

That is why this is an important policy decision to make sure that we're in a world where we increasingly understand that the word scarcity that the scarcity, the activity is distributed and that goes to the point about the policy of the video. Do we want customers to have 4K, we want them to have the choice where they value it. Do we want content providers to switch to high-definition service provision on mobile devices on smartphones where it is probably indiscernible to the eye, no, not really if that means that the impact of that traffic holds back investment in other areas which have much broader economic and societal benefits. That's why it is -- I believe it is an important policy debate to be had.

Finally, in terms of discrimination, we don't see it as discrimination, that we have had years and years of different treatment applied as a result of market powers and market analysis, and what we're suggesting is very much in line with treating all equally, but where you do have a certain amount of market power, whatever word you want to use to describe it, and that it comes with different outcomes and requirements, something that we in the telco sector want to work with for many years and which we believe should be equally applied across the Internet, the digi ecosystem.

Just so quick responses to previous presentations.

>> GAIA PENTERIANI: Excellent. Thank you, Ben. Thank you to the speakers so far. We'll break for 10 minutes and do the Q&A after the second group.

Thank you.

(Break).

>> GAIA PENTERIANI: Welcome back. We're starting with the second half of our session. The first speaker is Sidy Diop from Deloitte. He will talk to us a bit more in depth about the economic impacts of taxation on the Telecom sector I believe. Sidy, please, the floor is yours.

>> SIDY DIOP: Thank you.

Let me see if the presentation is there.

Okay.

Yes. Good morning, everybody.

My name is Sidy Diop. I work as a partner in Deloitte based in France. I'm a former regulator, I started my career at the French telecommunication regulator. Today I would like to share with you some of our experience as consultants working with governments, operators, different stakeholders and we have been -- we have developed a model to help decision makers, you know, to assess the link better between the level of taxation and the development of the telecommunication sector.

So we did this study and developed this model five years ago and we did it for five different countries. So I will be presenting with you some of our results knowing that we worked for Sub-Saharan Africa countries. The example that I will be given here, they're taken from this applied model to these countries, due to confidentiality I will not be able to give the exact number. We will try to make sure that, you know, the main results are presented, yeah.

Most of my work, 50 to 60% of my work with my teams, within the African continent, the other is in French economy, telecommunication and there was a huge difference between the two areas when it comes to the place of the states.

As I'm living in France people sometimes ask me or make the remark, in African countries the straight are strong, saying that they see on TV, you have military officers, police, et cetera, but in points of the economic parts of the state, it is measured differently measured by the capacity of the state or the government to have enough fiscal space and if we take this, living in France, the French economy, French government is much more powerful than any other African countries. This has an impact in terms of, you know, behavior of states in the telecommunication sectors for African countries.

Countries, you know, they have to have -- they have to have a certain number of expense to be done and the numbers of sectors where tax can be -- where they can have some taxes, it is limited. This will impact the level or the percentage of tax for the given sectors. In the graphics that you have here, we see that overall if you take the French economy, let's say that 50% of the GDP goes into the French government, through the French government, which is very less the case in African countries where you have informal economy. The fact that you have informal economies and developed countries in general, they have the consequence, the following consequence and here you can see that, you know, the visible sectors, ICTs among them, but not only, banking sector, mining, all mainly contributed to the government revenues.

The telecommunication in some African countries are victims of their success. If you take the void that they have on the GDP, okay, 3% in this country namely, and you take the tax revenue, 6%, which is double the share of the revenue, which shows that, you know, in some specific sectors, you know, the governments will apply quite high taxation level.

The question that we have been asked in some countries that we work for is what happens is the taxes in the telecommunication sectors and here is the goal of my presentation, everybody has, you know, some qualitative response to that.

Our objective was to bring some answers and to see -- to measure what happens, of course, it is a model, it is an economic model and you have some assumptions. We have had no indication or having quantitative communication, even if there are -- if they're subject it a precaution since it is a model. I think it can be useful to do so.

That's exactly what we do in these studies, is to quantify, you know, the impacts when what happens -- what happens when you increase or decrease the given level of tax in a country, and to see in percentage in terms of, you know, broadband rollout in terms of consumer adoptions but also that was important for us in terms of impact on receipt, on the fiscal revenues of states soft-landing this is exactly what we did in five countries.

Using the technical -- using an economic modeling that we develop with our tax experts in telecommunication and economist.

Just to give you a before going into the model, giving you an overview of things that are happening in Africa, I

will be very brief on it, but you will have it on the slides, the different level of taxation, category of taxation that applies to the telecommunication sectors, those are directly paid in a certain way by consumers because they feel it directly in what they pay invoice or not and other, you know, directly paid by operators which are like universal service obligation, numbering fee, et cetera. They are quite diverse.

If you look at it also the diversity also, you see that in the percentage here between different countries, you know, taxes, dinner ways of taxing the sector depending on the country, it is dinner when it comes to taxation on twice or taxation on profits.

So to be able to compare it, you have to, you know, put an index, that's what we did here, for the different countries.

An index on 100, and we compared the different level of taxation and see what it represents in terms of percentage and we see that. For a lot of African countries, benchmark, this percentage is around 30%, around 30%.

After the introduction, I suggest that we move to the model I'll present to you the methodology and some of the results that we had, you know, in the specific countries.

You can see, you will see that the result differs a lot between countries because, you know, the economic response will be very different depending on the country, the economic conditions are different.

How does the model work? It's -- what it does, at the beginning, before going into the detail of the models, we take the current fiscal regime, we applied a different tax level, increasing living, we put it in the model, the two outputs that we're looking at is tax revenues in the mobile coverage and the adoption rate of this.

The model calculates the tax revenue and network average in different scenarios and what happens in the year after until 5 to 10 years. Our results will be to compare the situation, five years for instance from now, 2025 for instance, that's what we did here, and the difference, if we have -- let's say a shocking fiscality, and you don't have any shocking change. This is how the result would be interpreted.

So the dynamic model, that works for different years. And it is sensitive to the assumptions we're using to build the model. We'll be back to that.

We're taking into account the technical, economic characteristic of a given country, you know, consumer

characteristics which consumers consume, of course, and they will see, they will see the behavior in exceptions, an assumption that's critical here, it will be, you know, the elasticity of demand to prices. If you do a shock, a price shock on the sector the reaction on the volume, consumer, it depends on the elasticity of demand.

We model current behaviors, the operators, we look at the penetration rate, the level of coverage and all models are done in strong collaboration with operators, because the way we will react if they have more or less revenues in terms of investments, depends on strategies that they have.

So we spend a lot of time with these operators in each countries where we do the model to understand exactly how they will react and how to see -- how to see if they react, if you have a decrease in the level of fiscal pressure and how this will be related in temperatures of investment. Of course, they have shareholders also, some part of it, it may go to shareholders. In some times they -- you know, they decide to transfer that to consumers.

This is the behavior of the operators that we model.

It is very important that we spend time with them to understand exactly how they would react.

Basically, this is how it works.

Then we compute this in a model. We see if you do an increase in a given level of taxation, what happens in terms of the profit of the operators and which part of the extra profit will be transformed to investment and of course we modeled the level of the cost of deploying 4G network in the given countries so we will be able to assess, you know, the Delta of investment, how it relates in terms of Delta of coverage.

Okay.

In the following slides, I will come back to some of the results we have. Again, it is linked to the five countries that we selected where we worked for.

First result, one of the first questions, it was asked to us, it is what happens if we -- if we have a shock. By shock, I mean decrease or increase on the fiscal regime related to equipment.

Okay. As you know, there is taxation on equipment.

For the given countries, we don't see an impact in the models, two reasons for that, you know, the low processing -- sorry, the population, we were not -- we were interested mostly in 4G, smartphones. So the population, it makes that, it is a budget constraint of most of the population, they will not be able to afford some of the 4G mobile handsets. Decreasing by 5 to 10% will not have an

impact.

The other reason, it is that most of the countries you have an informal sector and a lot of the devices are sold through that informal sector. Since the taxation, you know, decreased, increased, we will only impact the formal sector, we will not have an impact on this informal sector.

Okay. These are the main results of the model, of what we were asked again to come back to my first question, it is how can we bring some quantitative, you know, relation to -- between, you know, the level of taxation, the decrease of taxation and the coverage and adoption rate. This is exactly what was done here. What we do, we compute several scenarios, this is an example, a sample of scenarios that we took. We lower tax by 1%, we lower the tax greater from 1 to 5%, okay, we have a scenario where we decreased -- we increased tax to see what happens in terms of network coverage. Also we have scenarios where, you know, the decrease is transferred to the consumers and the other one, it is not sent to the consumer. As you see here, the numbers in percentage, it is, you know, the percentage of the 4G coverage. The baseline is the current situation, it is the 53%. If you have a decrease let's say in scenario number 5, 5%, which is quite strong in taxes, you have an extra coverage -- you have the percentage of coverage of 75%, it is higher than the block chain scenario of 63%. So this is to be precise, this is what happens 5 years after the fiscal shock. Okay.

So the baseline, it is 5 years after -- if you don't have any shock, you have 53%, this percentage, and five years after the shock, you will have 75% of coverage in the scenario. You will have 69% in the scenario 3.

This is another way of looking at it.

It is in terms of, you know, other figures, rather than percentage, what happens in terms of number of consumer, okay, that are connected, less in terms of 4G, the decrease in price, et cetera, also what is interesting in the model, to see what happens exactly for the states. 5 years after. Okay.

This is a decrease of 7.5%.

The state will have less revenues, about 8 billion. Okay. This is what happens in the telecommunication sectors.

In the model also we linked, you know, the impact of the telecommunications in other sectors since, you know, the telecommunication sectors in most countries, especially African countries, countries like more Mauritania, low intensity, we have an impact cost on consumers and

activities. Extra revenues in other sector, that's what we capture and see how it relates to taxes for the other sectors.

Just this slide to show you that it is the result, it differs between different countries, this is 3 countries, but has very different specificities in terms of density, in terms of the place of the states, the investments, et cetera, and, yeah, just to show you that for the reduction you will have different reaction depending on the countries in terms of impact on revenues of states and also in terms of impact on 4G coverage.

Another interesting element, it is the question that we're asked also is does your resolve differ if you take different categories of taxation. Okay.

The only thing that we found, it is that -- which has an impact on the way that operators react, if you are tackling with taxes that, you know, are reducing the cost of operators in years that are next to today, first year, you will have a strong impact. You see, taxes that are on revenues will affect the operators today the same way in two years, et cetera. If you take licenses, the fixer fees, it will effect, you know, revenues of the operators in, the years that will be, you know, implemented.

As we are considering reaction of, you know, profitability of investment, this will have high impact, if you use, you know, fixed license fees it will have an high impact on the profitability of operators and result in more network coverage.

I think it is time for me to conclude.

Time to just have this simple slide, this is a model, and as I said, the model, it is sensitive to some of the assumptions we make, especially the elasticity price demand and sometimes we have to make assumptions if the country doesn't have these assumptions. This is a model giving the indication. This is a slide showing the reality.

For example, to finish, what's happened in Madagascar, what happened in France, the same objective was to reduce taxation and, you know, to have a stronger telecommunication sector.

Madagascar unfortunately, it didn't work.

The government did after reduction in 10% in 2011 of taxes come back to the taxes because there was no impact on the communication or the revenues of states.

For France, it was a success, in 2008, what was called the -- (French name) -- it was the difference between the two, in the French case, the reduction that was asked, you know, the fiscal gift that was given to operators was, you

know, written in the specification. The licenses, it was listed that they would have extra coverage that they have to meet in terms of, you know, obligations.

It worked very well.

So from mod toll reality, you need some extra conditions for that to work.

For instance, the good legal framework is something important for this to happen.

Thank you very much for your attention.

I will skip the last slide.

>> GAIA PENTERIANI: Thank you. I think that also points to the horizon in terms of governments looking. These are changes, policy changes that need a medium-term framework. The French example that you gave certainly had a longer time, framework in mind, Madagascar was expecting perhaps revenues within one year which is not going to happen with this type of policy interventions. I think it is really great to hear from you about the importance of quantifying the economic impact of these reforms and you mentioned the importance and the fact that the quantifications rely heavy on the assumptions of demand elasticity and also underlying the productivity effect so all of this, the impacts on tax revenue, GDP rely on estimates of the productivity which, you know, ITU and GSMA have done lots of studies, we have lots of evidence for the Telecom sector about the digitality effect and I would be very interested in hearing maybe today what are these productivity affects in the other segments of the value chain and demand elasticity, I showed a presentation we did in Tanzania, mobile money, exactly to this point but more evidence is needed for other segments of the value chain.

Finally, another point that I picked up from your presentation, the fact that at the very beginning, you looked at the public finance perspective and the few sectors that contribute to tax revenues much more than they contribute to GDP because they are easy to tax, which is something that I also shared in my presentation.

I think from this workshop I would be also interested to hear from other digital players what is their experience. Especially also I believe that there is someone from BEREC talking about the international tax agreements, you know, how Telecom is easy to tax. We know very well how to do that and the governments clearly know it very well and how to tax the other segments of the value chain, it has proven much more complex and OECD, you know, has been working on that for many years and many governments are grappling with that.

I think here, the experiences from the digital service taxes, it would be very interesting.

I have a couple of questions.

I can read from online.

One, it is around, it is about which year were the tax rates that you showed. I believe for the tax burden ones, which year do those refer to? If you could just answer that quickly and then --

>> In terms of here, as I stated at the beginning, this is quite confidential so it was did on purpose, we didn't put the exact years.

The first study that we did, it was like I said, five years ago, the last study we did, it was last year. For each study we took the current year for the fiscal regime.

>> GAIA PENTERIANI: Thank you and we'll have more time at the end for Q&A.

I will give the floor now to Tomas Jakimavicius, please, from Microsoft for your presentation.

>> TOMAS JAKIMAVICIUS: Good day, everybody. Tomas Jakimavicius from Microsoft.

It is really a pleasure to be here. I would like to -- am I in control of this or is someone rolling the slides? I wonder. There we go. Okay. Perfect. Thank you.

Today I would like to talk about Microsoft's perspectives in terms of how we're building and sustaining the global Internet economy together.

I think that the study group and the focus of the Study Group discussions has various angles and many different speakers were taking their own unique considerations into this.

I would like to bring Microsoft's perspective to maybe contribute from a certain different angle here.

I will walk you through some important considerations at the beginning and then we'll dive a bit deeper into Microsoft's own substantial contribution to the global Internet and take about Internet infrastructure as a whole that goes way beyond networks and how that suggests that there are so many different players within the modern ecosystem and towards the end of my presentation I'll provide some thoughts for further consideration that hopefully the Study Group will also consider.

So to start with, I think everyone realizes that this is more of a collection of network, it really consists of many indispensable, interdependent building blocks and we'll get to those in a second.

Those interdependent, indispensable building blocks,

they really make this whole ecosystem very diverse. Many barriers and contributors that sustain and transform the modern Internet. Cloud providers such as make soft for that matter invest heavily and are contributors to the global infrastructure, as a global company our mission is to empower every person and every organization on the planet to achieve more and to fulfill this mission we have a unique role in providing significant contributions to the global Internet. I think it is important to consider those factors that players like Cloud source provider, tech companies are actually contributing significantly to the development of the global Internet ecosystem.

Now, these market driven investments, evidence shows they're more effective, more sustainable when they are left for market-driven considerations. The success of the global Internet economy was really driven by these market driven incentivized investments. When thinking about all kinds of scenarios, John at the beginning of this session, when presenting also shared some of these considerations, forced financial transfer from one segment to another really introduces risks that may destabilize the system.

Stopping innovation, stopping total investment. So we tend to see that there are significant risks that have to be dually considered before we get to introduction of any kind of solution to a problem which in the first place needs to be identified.

Now, I want to share a little snapshot of Microsoft's global network. There were a lot of considerations made that we are talking here about Telecom network infrastructure which is, of course, by all means indispensable, yet the telco last mile connectivity, it is not the entire Internet infrastructure. I would like to point out that players like Microsoft, there are many other, they invest heavily into digital and global Internet infrastructure. Microsoft itself participates broadly and invests deeply virtually in all major building blocks of the Internet, including hosting infrastructures, data centres, nodes, content delivery caches, networks such as first mile, subsea, terrestrial cables, many add on services and just to show the level of deep cooperation our company alone has more than 20,000 peering connections across the globe. It is something that at times is not taken into consideration when thinking about who contributes to what in that sense.

Now, let me Zoom in a little bit closer into one of the regions which is Europe. Just to show the magnitude of these investments.

So in Europe alone, and Microsoft has been on the continent for 40 years now, but in Europe alone, over the last two year, Microsoft capital is spending more than 12 billion and that shows the significance of the contributions into the infrastructure and into development of the system in one single region alone by one single company.

You look at the broader picture and you picture how much more that capital spending has contributed collectively from the entire ecosystem.

Coming back to the Internet infrastructure as such, we need to consider it in a much broader, holistic point of view.

It is going way beyond networks. We have been talking quite a bit this morning about network infrastructure which if you see, in this graph, it is the third pillar amongst the 7 pillars we identify consisting Internet infrastructure. When thinking about the modern Internet infrastructure as a whole, you need to consider all of these pillars because every single player would -- within the value chain that would -- that also Gaia Penteriani has presented at the very beginning of the session, they contribute respectively to their own pillars and some players such as Microsoft and quite a few others are contributing to each and every pillar, even each and every segment within each pillar.

To consider the terrestrial network part which is in the third pillar and one element of that pillar only, you cannot limit the considerations just to that one, you need to look rat all of these because all of them are interconnected, all of them are contributing to the wider Internet infrastructure.

Now, that said, I think we they'd to recognize the codependence, the coinvestment, the collaboration between many players. Economic data shows that actually cloud network provider, telco providers occupy and sustain indispensable parts of the value chain and the digital economy and both contribute significantly. There is no doubt about that.

The investments complement each other. I want to emphasize that they complement each other. It is important to not only understand who gets what out of the Internet economy but also to actually depict who puts in what towards the Internet economy, so-called value injection versus value extraction. Rather than focusing on the last mile network access and when it comes to value injection, who puts in what, I think it is important to recognize

those tremendous efforts and significant contributions to the digital infrastructure deployment that various technology companies alongside of the telco providers are contributing.

I have already outlined how these are improving the entire ecosystem. Our investors are broadly within the infrastructures making the connections more faster, more secure, to bring them as close as possible to the end consumer.

With content delivery network, points of presents within the ecosystem. Having all of that in mind, only then can you properly evaluate the balance situation of the Internet value chain.

In that sense, I will probably go to some closing thoughts for consideration and we'll pit stop here for a little bit longer. While I share here a few thoughts on the slide, I have quite a few on my mind. Now, we have been raising a point here at this session, and this session description itself, it suggests that the raw considerations from the telco community to bring up again this so-called signing party network pace concept, and very true, it is none an easy one, it has been discussed in this institution a decade ago, it has been discussed in various different bodies in Europe as well. Yet, we see that such proposals have been consistently rejected as harmful.

We have not seen, are not aware of any demonstrated market failure in the system that would warrant a regulatory intervention of such kind.

So when thinking about any kind of intervention that would push aside the market driven approach you need to carefully consider it in the context of all those interdependence elements of the modern Internet ecosystem.

Most recently, the European regulators for electronic communications issued an opinion and suggested that the implementation of direct compensation mechanism was proposed by Telecom operators was not justified and given the current state of the market, they have found no evidence supporting such claims.

So yet again, we need to carefully listen to the regulatory community here and engage in that constructive, informative debate how to ensure that any kind of decisions that are taken by the policymaking regulator, community, should be data driven, evidence based, and decision making leverage, the kind of approach to inner connection on the market driven negotiation above regulation has supported Internet growth and the IP, it is committed to this. We believe this is not the problem and regulating this, it is

not the solution, but I think -- I think the recent BERAC opinion also confirms that. If anything, the connection incidents shows that the large Internet access players are able to use the bargaining power against the Internet player, if you will. Particularly that they can pose restrictive peering practices such as limiting the number of interconnection points and we have seen such practices still existing across different markets.

So it is important to look into these.

I think increase of demand for IP traffic, it is the major contribute tore the sustained growth to the telco marketer revenue. I will not dwell on this, this has been broadly covered. Again, I want to emphasize that we need to keep in view the entirety of the digital infrastructure, not just the last telco miles.

And if anything has caused the telco revenue decline or inability to invest and that has been also brought upon by Ben Wreschner from Vodafone at the beginning of the session, I agree on the points where one should consider the impact on heavy regulation and lack of incentives to invest you because of stringent policies, unfair spectrum licensing restrictions and deployment conditions, and the root causes of the segment within the Internet value chain, of not being able to invest more than they wish to should be looked at more carefully from those perspectives.

I think I already mentioned this, worth emphasizing, we need to recognize investments and contributions from all players along the Internet value chain as Gaia has outlined, quite eloquently in your presentation how different players are investing in different segments of the value chain, and it is interesting to look at the Internet, it is broad. One in which service provider, such as Microsoft are nodded free riders as some suggest but are contributors and heavy investors and are generators of the innovation and value creation.

What I would like to finish with is that dually considering risks for unintended negative consequences, that regularly treat interventions, it may introduce our tremendously important -- going forward, with he see in the coming months and years, those policy considerations coming along be it in Europe, elsewhere and I think you need to consider that introduction of the network usage fee no means guarantees or enhances the enhancement in Internet infrastructure investments and it may hinder the ability of the companies and the operators to meet connectivity targets because incentives to innovate, incentives to further step in and to digital infrastructure investments,

they may be hindered and we have seen examples in South Korea, what was mentioned yet again earlier in the session, how such interventions, regulatory interventions may bring unintended negative consequences. Up.

With that, I would like to conclude and I think the bottom line here, it is that we have, all of us in the Internet value chain, we have that responsibility to contribute constructively with fact based, evidence based approach and provide figures and facts to regulators and policymakers around the world and helping them to make those informed regulatory decisions and to avoid undesirable regulatory constraints or financial burdens that may stifle the whole business.

I would like to thank you for the time given to me. I would be happy to engage in the Q&A session.

>> GAIA PENTERIANI: Thank you very much.

From your presentation, recurring theme seems to be the importance of quantifying the contribution of the different players and you highlighted how -- there are different ways to slice the Internet value chain.

You have shown one. I have shown another from a GSMA study and you have pointed out that some player, like Microsoft, for example, are active in many different segments of the Internet value chain.

We have one last speaker for this session, David. Before I give the floor to David I would like to remind the people online that you can type your questions in the chat and right after David we'll open up a Q&A section and I'll pose the questions to the speakers.

David, the floor is yours.

>> DAVID GEARY: Good morning, everybody. Thank you to the ITU for the opportunity to speak to you all today.

I would like to speak to you about priorities and policy choices for emerging markets, a digital is an operator, we operate in 25 countries in the Caribbean, Central America and we have a complete suite of mobile, fixed, entertainment solutions, the markets in Central America and the Caribbean share many things in common with emerging markets around the world. Three of the key priorities for this region are connecting the unconnected and showing full participation of the region in the digital economy and building up to 5G and the future that will underpin this.

This gives rise to important question, is the region going to have the networks and will it be excluded from the digital economy, is it a second tier player, because it doesn't have the same level of connectivity the first world

has. Is it a digital decade for the region or a last decade? Are we making the right policy choices? Do we have the policies? Are we going to take action quickly enough? So a question, it is how broad networks can be funded and how big tech can be part of the solution. There is a global discussion and the market has changed in recent years. Let's look at the data.

We have gone beyond a tipping point, big tech is dominating network traffic globally and the top OTT account for over 66% of Internet traffic in the Caribbean alone and two-thirds, that's two-thirds of all traffic on the Internet is generated by a handful of companies and specifically three companies account for over 60% of the data themselves. This data surge is being driven by video. This is a completely different scenario from a few years ago.

Just in case anyone think this is about American companies, it is not. As you see, TikTok is rapidly emerging as a massive data user also. There will be others.

These companies are in the league -- in a league of their own, they're unavoidable trading partners and essential part of the Internet ecosystem themselves.

We know very well that big tech has seen huge growth from evaluations in the trillions of dollars now. So without question, it is that they're generating the data traffic and it is without question that they have the money to pay for the cost so they're not short of money.

So let's look at the other side of the equation.

Networks have to add capacity to cater for the rise in video traffic and naturally, there is a cost to this. Like other emerging regions in the Caribbean, broadband is mostly provided by mobile and costs of doing so, of adding capacity to cater for the growth of video traffic is estimated at 250 million.

This is about half of all networks in the Caribbean.

Investors in Telecoms, they're seeing declining returns and are not interested in investing 5G or future networks in this region on to the current financial model.

OTTs can afford to pay their way but they don't want to.

They believe that they can boost their profits if the end user in the Caribbean pays. However, it is not possible to keep raising prices to consumers in the region.

Projections show that Caribbean will be left behind and will not join the 5G digital economy in this decade. So another question, is it fair that the Caribbean

consumers are excluded from the 5G revolution because some companies make access profits by free riding on the investments of others. There is a global debate on how to address in what is in essence a market failure or a regulatory failure. The problem has been well examined over the years. At the ITU level, there is a number of reports in recent years that attempted to address this problem. The participants in the Broadband Commission, they published a moon shot for Africa in 2019, it is excellent, last year, they published a report on financing models to bridge the broadband connectivity gaps and this is a long, detailed report addressing many different levers that can be done to solve the problem of the unconnected. There are key recommendations. In particular, the principle that all companies who derive benefit from the use of broadband infrastructure should contribute to the cost of its deployment.

The Australia news media bargaining code is identified as a potential regulatory mod toll oblige big tech to engage to be part of the solution. The report advocates for a reformer USF where this is relevant and suggests that a pay or play approach, that's one where parties fund projects directly in lieu of making contributions may incentivize collaboration and investments in the projects and the report recognizes that emerging economies are considering the digital taxes and talks about this being a part for infrastructure. It addresses optimizing regulatory environment and reducing taxes to increase investment.

Elsewhere, others have sound the alarm, including the Asian infrastructure investment bank in the Florence School of Regulation, they warned that online platforms need to be part of the solution. Europe is recognizing the principle that all market players should make a fair, proportionate contribution. So far the debate, it is the intervention making this happen.

Needless to say, not everybody is happy about this. Big tech currently has free access to Internet networks regardless of how much video traffic they send and regardless of how much money they make. Or the cost to others. Naturally they don't want this to change.

They're using net neutrality and the commitments of operations to an open Internet to refuse to negotiate with them. They're leveraging resources and dominance to maximize the profits. This is totally normal. In a way, you can't blame them. This is what dominant companies do. They're not charity, this is a market failure. Regulatory

fame you're. A policy failure requiring innovation to fix it and big tech will try hard to persuade everybody that nothing should change.

There is a couple of recent papers published by consultants working for big tech and one by BAREC to argue against change. It is interesting to look at both at what these say and what they don't say. There is an intent to distract from the core issue.

Anyone here familiar with Monty Python may remember the Knights that are opposed to everything and their way of opposing progress was to tie people up in knots focused on the wrong things. So they said to the hero of Mottvy, King Arthur, he can proceed to its goal once it cut down all of the trees in the forest but he couldn't use a saw, he had to use a herring to cut down the trees and red herring delay progress and gets people distracted talking about the wrong issues. This reminds me of discussions on online harms a few years ago. Big tech said there were no issues and they tried to slow down regulation by raising red herrings, turned out they knew all along there were serious problems but they didn't want regulation as they were making money from these.

This is an industry that do and say anything to protect the profits. The same is happening again now.

So what are the arguments in these papers? Well, one argument is OTTs need their money for R & D, in other words we're better at spending our money than you are.

This is not a serious argument, you can try it in the local supermarket if you like, I said I prefer to keep my money and it didn't get me far.

Another argument, it is the investment in subsea cable, the data centres, this is true. These have their own costs and increase their own profits and don't address the huge data problems on networks.

You know, we're told that the data, it is not growing and it could be a blip during COVID and this is not reflecting the experience of people investing in the subsea fiber that think that data will grow, including the OTTs themselves by the way.

We should remember when talking failures, yes, OTTs invest billions in subsidy fiber and data centres, so on. The Telecoms invest trillions every decade in networks. So, you know, there is a proportionately there. Some are trying to reframe the argument about payment for services saying this is a tax, a payment for services is not a tax.

There is a case to be made about introducing digital service taxes in emerging markets to fund public service,

that's a separate matter.

Some say that the cloud computing could be affected. The reality of this, this is mainly about video. If I was a cloud computing provider, I wouldn't be as concerned about this.

BERAC did perform a report recently, they made the argument that big tech could not be free riding, expecting someone to pay your ticket is the very definition of free riding. I remember seeing a sign on a bus in Germany when I was a student and even for those that don't understand German, mine is Rusty these days, that sign was effective, you know, free rides unfair because others pay your ticket.

We come to the argument that telcos need OTT, that's a relationship, this is in essence an argument passing on price increases to consumers and big tech has to be careful not to say that directly of course. It goes to the core of the issue.

Telecoms networks used to be paid for by the services running over them.

Services are now delivered over the top. They're disaggregated from the network. We have to provide a way to reconnect the revenues and services to the networks that they run on.

We hear about the experience in South Korea, and the network prices may be higher there than in France. That may be the case. The law was introduced a couple of months before the sample that we saw earlier was given.

We can't really expect prices to change in a couple of months. In fact, that probably goes to the core of the issue, why the prices are historically higher, certainly the Korean regulator and the Korean lawmakers thought it was appropriate to introduce changes to address the problem.

Then we have an argument that net neutrality is somehow infringed, this is not an argument. Consumer services is not affected in South Korea and the courts confirmed this, this argument, it seeks to turn net neutrality on its head. The issue is that operators have no leverage because of their open Internet commitments and therefore big tech sits back, refuses to negotiate with them.

Finally then, we have the argument this is all very complicated regulatory stuff and it is going to take a long time to sort out. We hear examples of peering arrangements and told they're fine over a decade ago, we're told that this is now some sort of a standard party pay argument that was analyzed years ago. This is not about peer

arrangements from a decade ago. It is not about interconnection, not about old arguments. This is about the volume of data and networks in 2022 and the volume of data networks going forward from today.

This is not about the battles of the past. This is about the networks of the future.

So these are examples of arguments that complicate the issue and drags the discussion away from core issues. Let's be serious. There are two indisputable points that need to be acknowledged.

Big Data traffic dominates the networks and someone has to pay for the networks that is needed to deliver this traffic. The question, how do he solve this? A two sided market would recover costs from all users, this is not happening. Big tech can afford to pay but they have a dominant position using that to refuse to negotiate commercially.

So to conclude, what's the solution? The Australian code is a potential regulatory solution n could oblige big tech to engage with operators to agree to commercial solutions. In Australia, it turned out that the big tech were willing partners, once the legislation was introduced. As a final point, one size won't fit all, this is why it is important that the solution applies to just big tech to engage what preserves commercial freedom. Some big tech companies and operators may decide a partnership is more appropriate for a particular market. Others may prefer to agree on compensation for carrying traffic. Some big tech companies may be happy to engage and they would want to be certain that their competitors do not continue to free ride.

I happened to believe that behind all objections big tech would be willing to partner if it was a regulatory framework that required this.

Obviously if you're getting something for free you want to keep it going for as long as possible. The key issue, it is the market is fundamental changed and we need a new approach for a new reality.

Thank you.

>> GAIA PENTERIANI: Thank you for the witty conversation that was useful to counter balance some of the arguments made before.

We have gotten through all of the speakers. We're now moving into the Q&A session.

For myself, I'm very happy that we managed, Martin, to have a very varied speaking.

-- the environment and the market conditions, so we

managed to have a very broad panel with perspective from different regions which I think is very helpful.

I have two questions from online. If there is any question in the audience, please raise your hand. First question, from Intel for Sidy Diop, it is around -- to rephrase it, what is the impact of using tax revenues collected from Telecoms towards ICT projects and incentives. Essentially this I guess would refer to some sort of contributions telecom industries already pays in many, many countries contributions to funds the revenues, they go to regulators and the regulators, they invest them towards connectivity projects.

The point made, David was referring to the Broadband Commission financing report as a recommendation has it that the use of contributions should be broadened to all of the players that make a benefit from the digital value chain so not only from Telecom operators that are currently contributing.

The question was from the perspective of the economic impact modeling, what is your experience about using taxes in this way.

>> SIDY DIOP: Thank you.

I think it is very, very good question.

If I may rephrase it, if we reduce tax, what happens in terms of who gets the money.

We come back to the telecommunication part. If we reduce the level of taxation, depending on the countries again, depending on the legal framework, operators can bring extra coverage in the country and extra penetration rates.

Again, it depends on the countries. You saw countries where it did not happen so there is some condition to be met for that to happen.

If you take the states, and it is a good question, what happens if the money goes to the state, if there is no reduction or if there is an increase in the taxation level, then an increase in the resources of the states.

The answer, it is -- it depends on the country, it has to deal with what we call the clarity of the spending, the public spending, and quality of state public spending depends a lot -- it depends a lot among dinner countries in emerging countries.

One good classification, it is one that is provided by the IMF, it is used -- I use this sometimes, it is to monitor the debt level of each country.

The level, it is important, how the country spends money, how it impacts, you know, the productivity, the

country, the economic, et cetera. We have a classification done by the IMF which categorizes countries between I think four, five categories and it gives you an indication of the quality of the countries' spending and you have a variety of countries, spending, the extra revenue, it is used for spending, not investments. You have to pay the bills, the public agents, you know, the fuel, oil, et cetera, and you have other countries which will affect the extra revenue for investment. This investment, it will bring extra productivity.

So the answer, it depends on the country and if you want to have an idea of how, you know, international organization, I invite you to see the sustainability framework of the IMF which is an indication on quality of spending.

Thank you very much.

>> GAIA PENTERIANI: That's great. Useful information. Useful also for the case where these levies going to the finance Minister let's say.

So government spending rather than the regulator budget.

Perhaps also connected to this, there is another question from Tunisia, which is around how do government create incentives. I guess, you know, how do governments react in our world of crisis? I believe this is referring to the increasing pressure on government finance from COVID, from increasing debt burdens, exchange rates rising. So ballooning the free payment burdens, and the question is especially for developing countries, but I think this is a very interesting question. Countries in the west recently are facing now increasing government spending and debt pressure so, perhaps the issue that we have been dealing with, of the Telecom specific Texation in companies, they're very much revenue starved may present themselves also in the Western countries, I believe then Vodafone had referred to windfall taxes in Europe. We'll see.

This is a question to all speakers. So anyone who wants to take this? Go ahead.

>> AMINATA DRAME: Thank you for your question.

If I take the example of some African countries, just during COVID, we have some Telecom operators who have the sanctions, yes, sanctions, the regulator, they say that they have the services and they have to pay, everyone knows that this was not related to that pandemic but because the government needed money after you have several rounds of discussions, you would like the market to drop that and we see this kind of situation and one of the things, it is due

to the lack of revenue from our governments. This is an example.

>> GAIA PENTERIANI: I wonder if you're referring to the RC lately.

>> AMINATA DRAME: In sensory media gallon also we had the same situation. Yes. Yes.

>> GAIA PENTERIANI: Yes. Also the regulators are sometimes in a difficult position, because they are -- they need to raise revenue for the central government.

>> AMINATA DRAME: In yes, in this way. Yes.

>> DAVID GEARY: Could I?

>> GAIA PENTERIANI: Please.

>> DAVID GEARY: I think it is a really important question.

The governments face a challenge on how they fund public services. Yes, in the west, we can see the impact of that, it is beginning.

In emerging markets, this is an acute crisis.

Now, as the economy moves online, the governments are left with difficult choices. They increase tax on local tax payers, such as telcos, to windfall taxes and we experienced this ourselves. This is a diminishing poll as more and more of the market, the digital economy moves online, the -- there will be fewer, local areas to tax and so the governments are left with the choice of either increasing the tax burden on an ever decreasing local company or broaden the base to make sure that the digital economy pays its fair share of tax. The couple of reports in recent years that were interesting, it is a report that the tax take reduction in Africa was 2.6% of GDP, that's the tax take reduction. The Latin America would lose 130.4 billion in tax in 2020. That's equivalent to 59% of the entire spending on health in the region.

The IMF then, looking at the Caribbean Latin America noted that the reduction in GDP was higher than anywhere else in the world, 7% reduction on average compared to 3.3% reduction across the globe. Per capita, down 30% and was going to take it four years, that's before the current crisis that we're heading into to recover.

Then the World Economic Forum, global risk report from 2021, that warned of the digital exclusion of billions of workers and warned that this increases the risk of a livelihood crisis and is likely to exacerbate social cohesion erosion, we're seeing the social cohesion erosion, let's not forget it. We're seeing famine in Africa, we're seeing mass unemployment in emerging markets. This can't continue.

So we have, you know, nice solutions at the OECD, where the wealthy years nations in the world decided how they'll split up tax among themselves essentially. This is not a solution to the governments. Governments of emerging markets need solutions. The big question is how is the digital economy going to pay tax in emerging markets? How are the operators and the big tech players and others who are not in the jurisdiction, making money out of the jurisdiction, how much money in tax are they going to pay this year in 2022, how much tax are they going to pay in the countries next year in 2023, so on? This question can't be avoided any longer. This is a crisis for further developing world and emerging markets.

It has to be addressed.

Thank you.

>> GAIA PENTERIANI: Thank you, David.

I have another question for you online from the U.K. A challenging question referring to digital pricing.

Given we have clearly heard that the cost of gigabyte or the price for providers is falling rapidly, that's an assumption that could be debated upon, can digital explain why the Caribbean remains one of the most expensive regions for Internet service given the digital is the dominant provider.

>> DAVID GEARY: Thank you.

Well, first I wouldn't accept that it is. There are different considerations here. Firstly actually if you look at data price increase across the Caribbean, it is not -- that's actually incorrect, it is not one of the most expensive regions, pricing in different markets vary, you have one of the lowest pricing quotation on the planet as I'm aware in Haiti, other markets would have different prices. Certainly on average, the pricing is not among the highest at all.

There are problems for small island developing nations and the more developed markets don't face. Firstly, they're small, certainly they're islands, and so installing equipment and network, so on, it is more expensive and then you have cost to capital, you have the very different, the risks for investing in emerging markets are completely different from the risks of emerging, in developed markets and the cost premium, there are reports on this, the cost premium for investing in the Caribbean, indeed from Africa by the way, are amongst the highest in the world and so this is a completely different cost driver and it is a completely different issue in one sense, how do you -- this comes back to the discussion we had earlier, how do

emerging markets get the 5G and gigabit networks that they need to be part of the digital economy. Is it that they don't get them? We have a two tier Internet in this decade and possibly from what the next decade where you have things at the metaverse, so on developing and much of the world is part of this, they have these sort of networks and then you have everybody else, it is not part of the digital economy. That's how it has been working to date.

You have the world data not online. Half of the world is not in the digital economy. We're going to exacerbate this problem unless we address how these networks will be funded.

>> GAIA PENTERIANI: Thank you, David.

Did you want to say something.

>> SIDY DIOP: To come back to the discussion on what the governments should do, and I agree, you know, if you look at the economic perspective as the economist, the government rationally should, you know, have a long-term perspective and reduce -- reduce the burden at the level one, at the first years, however, if you discussed and have the chance to discuss with many of them, you know, many of them, not all, they're interested in what's going to happen in year one, how I'll manage to -- how I'll manage to pay my bill, pay the increase in price to the subsidy that will have to be in agriculture, et cetera. Believe me, they'll do everything that they can to do that.

I think it is time also to have innovative frameworks, so I think some countries will never do it.

Will hardly do it.

For the third-party will jump in, international institutions, for instance, it is to put in place mechanism where the state will be able to give the incentives and decrease it.

It is from an economical point of view, it is really a pity, you know, that we could go further in terms of deployment, impacts on economic developing countries that is possible and if the only constrain is the fact that the state has to manage the budget the first year, I think that they have to be some innovative framework, bringing together international institutions that will help the governments also doing those kinds of investments, it is an investment for them.

>> GAIA PENTERIANI: Thank you.

A good point. .

Please.

>> AMINATA DRAME: Yes. To just add something from what Sidy says, the government, the operator, having more

and more interest but not all means, they have to target every player that offers the service and it is important as a point, and on the topic of incentive, how to accelerate the Internet penetration, the digital development, the topic was raised at ITU by African members.

An example that I saw had morning, it is from digital players, we don't have examples of what happens in Africa, maybe global Y I also try to talk about what happens in Africa and I think that the gap we have, the challenge we are facing, it is more concentrated in Africa. For me, it is really important.

What we see, it is we have a lot of tax. We have a lot of questions from the government, from the regulatory.

At the same time, you know, the difference between two competitors, it is the capability to innovate.

We don't have the time for this, we are all the time stressed because you have other obligations that others don't have.

So for us, yes, we need to have equal regulation for all of the actors and player, actors or digital players, another point, it is I think the last, it is not OTT, first we lose the network, it is the part of customer who loses the services. Okay.

In Africa, we have a lot of abilities, things that we have to develop as Internet penetration.

Telecom operator, government, they put in place actions that are low population to access to Internet.

One example, it is the fact of lowering the prices.

When you take, for example, the price Senegal, it was lowered, the price, it was enhanced -- it was -- enhanced, okay.

It was the Internet penetration, and during this period we had a lot of usage of OTT solution, WhatsApp, TikTok, all others related to this usage. In another country, like they don't have the access to the submarine cable, they have a lot of -- they have a lot of -- the Internet, it was not as developed as in Senegal. We didn't notice this phenomena. People used what but it was not the same thing.

We have the revenue, it was not the same, so we have to improve the Internet penetration, and by improving the Internet penetration, it allows people to use OTT solutions that have an impact on this because we have all of the time to invest to have all of this traffic. We can say, okay, we don't -- it is not the origin of this thing, but --

>> GAIA PENTERIANI: Yeah. Yeah. It is an excellent point on -- and the price sensitivity as well.

You know, it can produce large impacts.

I think we can close the session if there is no other questions -- Jonathan.

>> JONATHAN McHALE: Thank you.

Yeah. I have a comment and then a question actually from my copanelist David. First, a comment, he's wrong on Korea Korea the law changed in 2016 so this has been in effect for quite a while, which is why the effects are well-known.

In Korea the ISPs do have the ability not a legal mandate, but the ability to demand network usage fees from content providers.

So my question for David, it is given that the assumption is, or the assertion is that you want to be able to negotiate with content developers, but it is difficult with the bigger companies, you don't have bargaining power, you want the government to come in, you redress that balance. With respect to those entities that do not have market power, or who are not big, do you, in fact, like Korea demand that the other entities pay network usage fees. If not, I didn't not.

A bit is a bit.

If they are contributing to network traffic and you want to charge them, why don't you?

>> DAVID GEARY: Thank you for the questions.

Well, firstly, the idea that somehow data prices in Korea went up 8.3 times in a couple of years is what happened --

>> JONATHAN McHALE: 2016, 6 years.

>> DAVID GEARY: That didn't happen, they're always higher in France. The case in Korea it is interesting. They introduced a law essentially to oblige partnership. The model that they pursued, it is a little different than the one that we think would work better. What we think is the optimal outcome, it is to focus on those companies that dominate the Internet.

This is not unusual, it is not -- nothing new about this. I think that Ben mentioned this earlier. We have the concepts of market power, competition over many, many decades.

We have new Digital Markets Act, it looks specifically at an -- identify, has mechanisms for identifying the companies that are gate keepers, and that exists, that law exists, it exists today.

And then we have the example in Australia, very similar process, stemmed from an investigation by the competition authority basically in Australia which then the

law was introduced and that allows for the designation of specific companies that have an inequality bargaining power.

This is not about the small use, this isn't about the 200 million websites, it isn't about, you know, startups and Korea whatever, this is about the big platforms that are now unavoidable trading partners, some would now argue that are part of the Internet ecosystem, part of the architecture themselves. This is about facilitating negotiations. It is not about, you know, regulating a specific price that everybody pays and trying to get everybody on the Internet to pay a price.

This is about trying to get big tech player who is are dominating networks up to two-thirds as I said of network traffic in the Caribbean that's now accounted for and three of the companies account for over 60%. This is where it is going. This is coming back next year, those figures, they'll be higher. This is about getting those companies to do the right thing and to pay their fair share.

What is that payment? Yeah, it will differ in different markets. Different networks have different cost structures. Absolutely, a mobile network, a fixed network, they're not the same. Different regions of the world will have different solutions that would work.

Partnerships do exist already. There is a part of Facebook for example, meta is involved in a great partnership in Peru, the Internet there, it is a fantastic example of how partnerships can work.

This is about creating the incentives to negotiate and arrive at something that works for everybody.

As I said, this already exists in Australia, this is not a new thing. Big tech didn't want to introduce in Australia, when it was introduced, you know what happened, they dealt really, really quickly under the legislation and will haves no need for regulatory intervention. This is what the industry is arguing for, something similar, allowing everybody to come to the table and to win. Let's not forget, the more that the Internet penetration is driven, it is better for OTTs too. They get more customers, and everybody can win. The important thing is, that nobody should be left behind, it is just not right that we'll have a two-tiered Digital World. We need everybody to come together to invest in networks.

>> You didn't answer the question, why don't you ask the smaller ones to --

>> GAIA PENTERIANI: I believe --

>> This is about the big dominant players, this is

about big tech, about the three, four companies that are dominant, they have significant market power and they have been identified as having significant market presence with the European Commission, in Australia, other countries. That's what this is about.

>> GAIA PENTERIANI: Thank you. We're a bit beyond time.

I have one last question from online.

I believe, you know, David explained the possibility to designate the gate keepers in a way that's been devised in the digital markets in Europe.

There is one last question. Then we'll close this. We're quite behind with time. I think it was a great discussion. The question, it is from Telefonica, and I believe it is about how do you project traffic growth for the future and how you are planning to -- what is the strategy behind that.

>> Thank you for the interesting question.

First of all, there are many complex elements in that question. I will try to address it.

In an equally comprehensive way.

Now, I think what the question implies, it is that there is an expected increase in data traffic, yet what we have been observing, evidence shows that data growth is actually stable. It is not expediential.

I think one may be deceived that indeed there is an expediential growth of data traffic because of the COVID phenomena and it was also mentioned previously, at the beginning of the session, one of the presentations, but I think what is important to realize before I get to the bottom of the question, it is that overall telco operator community, they claimed that their economic status is deplorable although the economic data shows otherwise. It seems like they have been offering healthy high dividends in many regions higher than the average of the past years. When it comes to revenues, sure one may see that in certain cases they have in declining and this is definitely not due to traffic data growth. On the Carrie, the Internet access business in the most sustainable, it is the most sustainable of telco services if you look at it, even GSMA, the Internet value chain report that you have illustrated suggests that Internet access companies have grown 11% over the last years. Getting back to the core of the question. What is the predictions, how data traffic will evolve, evidence shows that the growth is stable but it is not expediential.

I think we as a company, like any other company within

the Internet value chain, we'll continue participating broadly and investing deeply in virtually all major building blocks of the Internet. Those include the infrastructure, those include data centres, subsea cable, content delivery network caches, points of presence, within the network, and also actually in quite a few cases, we bring those points of presence to the municipal level of the last mile networks aiming to bring that connectivity as close to possible as the telco networks and thus very closely collaborating with the telco operator community to do so.

I think Microsoft and Telefonica, it is a prime example of how we engage and contribute to one another's growth and have that mutually beneficial relationship.

To conclude maybe, I think one important thing to realize, that while understanding that there is constant growth in terms of data traffic, companies such as Microsoft, other cloud service providers, we actively groom cloud traffic off the public Internet. The majority of our enterprise cloud traffic does not even traverse the public Internet for that matter. The global network uses the so-called cold potato routing as a default routing mechanism that observes traffic in the private global network from the point of presence, closest to the end user bypassing the public Internet as long as possible in the cases where that business to business connectivity is not in place and does not bypass the public Internet.

There are all kind of different measures put in place by tech player, to address that data traffic growth and to address it not only from the investment perspective but also from the more nuanced approach in terms of how that traffic is being managed and what kind of innovative approaches are being introduced.

That traffic, in the first place, it is requested by the customer of that telco provider, it is being delivered in an as efficient as possible way. I think we'll see those examples increasingly more in the future. That's exactly the beauty of the Internet ecosystem, everything is so interlinked and interconnected. That each and every stakeholder in the ecosystem sustains and increasingly invests in their own parts of the Internet system too. You nurture it, deploy further.

I will stop with that. I think this is definitely a debate that would require further and more interesting exchanges and I would only wish for more constructive approaches as we have this session.

>> GAIA PENTERIANI: Thank you. We all agree from the

private sector that all of the different players should be entitled to a fair return on the investment.

We'll see what other sectors think about that in the rest of the workshop. We covered a lot in had session around different policy levers that exist and potentially could be utilized with that return.

Thank you very much for all of your contributions. It is very interesting.

We'll see you after lunch. Thank you.

>> CHAIR: Just a brief administrative notice, we have a lunch break now until 2:30 local time. So then we'll continue with the session 3B after the lunch break. Please enjoy your lunch. You can -- we have in the ITU, in the middle building, we have a cafeteria that you can find food. You can find food also outside. There are restaurants around, there is a supermarket, a gas station, et cetera. So you will find whatever you want. We'll see you back. Thank you.

(Break).

>> CHAIR: Hello. We're ready to start chairing the session, Kari Ballot-Lena?

>> KARI BALLOT-LENA: Yes. Good afternoon to everyone. Revery happy to be here. I'm Kari Ballot-Lena, I'm Director of digital policy and regulatory at TMG and we take a multidisplay their approach to policy and regulatory issues across the entire Internet value chain.

We work with governments, international organizations, operators, manufacturers and tech companies to find strategies and solutions. I'm happy to join you today as well as to continue the discussions from our previous session and provide some additional inputs from the content application provider, the CAPs. I would like to welcome the speakers and highlight the format of the session.

Each speaker will present their views. That will be followed by a Q&A session, and then we'll have a wrap up discussion that will entail both sessions A and -- both session A and B for today.

So without further ado, to introduce our speakers we'll begin with Mike Blanche, from Google's -- from Google, head of Telecom strategic relationships of the EMEA.

Mike does lead the strategic approach, working with key Telecom operators around the world and engages with policy conversations through international organizations.

Mike, I see that your presentation is up so I will let you go ahead and take the floor.

>> MIKE BLANCHE: Good afternoon, everybody. Hi. Thank you. Let's check this is working.

Can you click on the presentation? Okay.

It was working before. Is it on? That's -- no.

There we go. That's always the first thing to try.

Good afternoon, everybody. I'm Mike, I work with Google. I have spent almost 30 years building Internet infrastructure on the network engineered by -- I'm a network engineer by trade and I would like to talk about the principles behind some of the topics we're talking about today in terms of how traffic gets delivered across the Internet and how different parties work together to make that happen. Also a bit more on what my day job is, building partnerships with Telecoms, partner, working together for mutually beneficial auto comes.

This is, indeed working. Great. How the Internet works in one slide, we have users on the left-hand side, this is a cat wanting to watch a video, they have a connection to the Internet provider, ISP, there is transit networks in the middle, connecting to the whole Internet, linking all of the Internet together and on the other side, there is this content hosting web content, where it is stored and a content network as well. That content hosting is connected to.

The first thing, I would like to talk about, it is how the Internet is a request response mechanism. Users ask for content and services and applications and blogs and video, so on, and content providers respond with the content that users ask for. Everything on the Internet is a request response mechanism.

So content providers such as Google, Netflix, other, we wouldn't send any traffic out on to the Internet if nobody wanted to look at our content. It is a request, a response mechanism. Talk about if there is content providers generating traffic or imposing traffic, all those requests come from users. Users who have paid for an Internet connection.

Traditionally the way that people connect to the Internet, it is by buying transit if you're an ISP, you buy transit from a transit network, like an ISP's ISP, as a content provider, you buy transit to connect the network to the Internet and the payment flow is towards the middle of the network which is the transit providers, traditionally the companies that have built the international networks that connected over the globe to make sure that every network is connected to every other network and there are multiple layers of things. 27 years ago when I first

started in the industry, I was a small content provider and I did exactly this. I set up service and I bought transit and that made the services that were on the servers available to everybody on the Internet. I have paying my way as a content provider, ISPs pay their way as well by getting subscriptions from users for the Internet access and they pass that money on to transit providers.

Let's say that as a content network I meet an access network at a conference network here in Geneva. We realize that we have equipment in the same building in Geneva and we both still are paying the transit network to connect network, to connect on networks together.

Why don't we connect on networks directly and then we don't have to pay for the transit provider for that traffic going directly between the networks. We still need transit for everything else on the interrupt and we need transit in case that connection famous, the backup, the transit provides an important role, but if you can combine those beneficial arrangements between content providers and access provider, then it can help save money to the ISP, they don't have to pay for transit, save money for the content provider and probably improves the user experience, there is a more direct route for the content provider and the access provider.

So mutually beneficial relationship, it is win/win for everyone. The incentives are aligned between Telecom operators and content providers to do things like this to help make the Internet work more efficiently and effectively.

There are tens of thousands of different networks on the Internet and there are millions of different relationships, interconnection relationships that help to make the Internet as resilient, reliable as it is. The amazing thing, 99% of the arrangements are done without any paperwork, without any contracts, the industry norms of how the networks connect together, it is so well understood by everybody in the Internet industry that you don't have to have contract, paperwork, liability, lawyers, we love lawyers but that's -- let's keep them out of the connection! It helps the Internet to be resilient, reliable.

BERAC recently came out with an assessment of some proposals under discussion today and they didn't see a problem with how the interconnection market works at the moment, they saw it work well, they didn't see a failure. They see these relationships between content providers and access providers mutually beneficial.

As one more optimization to do there, install a CDM, content delivery network, this is different layers of the network, the most popular content goes close to user, everyone watching the same, it is delivered close to where the users are in the access network so you don't have to go all the way through the Internet saving ISPs money, improving performances for users. There is no free riders on the Internet. Everybody is paying their way, you pay by buying connectivity from somebody else or you invest in your own infrastructure.

Companies like Google pay billions of dollars on data centres, the picture on the top is the data centre in Finland, 2 billion euro investment, we fill those with hundreds of thousands of servers to provide the services that we offer to user, and we build networks across the globe, this is a picture of us landing a submarine cable in Japan, that's a half Billion Dollar investment, to connect the networks together, so the data centres together, also to connect out to where users are into the major cities, where we do that here in that interconnection with the ISPs and we carry that the vital last few miles to users.

What you say WHA does this make? The cloud. This is a picture of clouds. It is a lovely picture. In the cloud is not just Google services or Amazon service, Microsoft, they're services that are made available to other people. If you use G mail, you're using a Google service, if it is Spotify, you're in a Google cloud customer, so if you're listening to Spotify, that traffic appears to come from Google because it is coming from Google cloud. Not Google cloud but from Spotify. If you're watching video on demand from a German TV broadcaster, that could come from AWS. So this discussion about how vast majority of the traffic comes from certain providers within that, there are hundreds of thousands of other companies that are using that traffic.

We carry the traffic 99% of the way. This is Google, there was a Microsoft network picture, we invest billions in infrastructure, we invested 24 billion euros last year in infrastructure so that traffic is brought 99% of the way to users. We landed the cable recently to Africa, the West Coast of Africa in TOGO, if you're there, we carry the traffic there and then the ISP and the Telecom operators carry that traffic in TOGO.

Using the content delivery network, sitting inside of the ISP network, we bring that traffic closer to where the users are.

We have -- we work with over 1,000 ISPs, 200 countries

to bring that content very close to where users are. If you're in Cape Town, you're watching YouTube video, you're watching them for a Google server in Cape Town, not from hundreds of thousands of miles away.

What's this mean for those fiber networks and the 5G networks that we all want to get built.

The key thing, it is that we need applications and services that use those technologies, need fiber, that need 5G in order for the investment case for the networks to work.

Internet traffic is not exploding, Internet traffic growth is not expediential, in fact, Internet traffic growth is slowing down. Recently there was a report showing Internet traffic growth rates are decreasing year on year, still going up, but by less and less each year. Could the problem be that there is too little traffic to justify users upgrading to 5G? Why would you upgrade to 5G if there is nothing that needs 5G, 4G is good enough. Right.

So, we work for a closely -- the Telecom operators, to try to find ways to work together to drive demand for the services. There are three ways to work together. Core business elements, to drive demand for the 4G, 5G, the broadband to your home. The second one, improving, the building on network, making network efficient, improving customer service, reducing errors and the third is helping Telecom operators expand new areas. What other business cans they do.

Just to finish, three examples of how we do that, firstly, on driving demand, first of all, Google builds Androids, mobile phone operating system that we make available, that's on billions of phones worldwide. My phone just went off in support of that! We have invested billions in building the Android platform that drives demand, Telecom operators, data services. Then we build applications that can run on top of that. this is Google map, a feature that we're rolling out in cities around the world, live view, and I was in Bucharest for the Plenipotentiary a few weeks ago, I was using this to get around. You hold up your phone, it uses -- your camera, it detects where you are, it shows a picture on the phone with a big arrow on it saying walk this way, it is better than looking up, looking down, trying to match it up, it is great but it needs high bandwidth, 4G, 5G to work well and it encourages users to upgrade the high bandwidth, high performance services. This is one example of how we're helping to drive demand to Telecom operator services.

Secondly, enhancing technology and operations, this is a picture from wireless network planner, which is a service that we make available to Telecom operators to help them find the best place to put mobile phone to provide the best coverage at the lowest cost. When Google street view cars are driving around the town, taking pictures of streets, there was a laser on top of the car, spinning around, mapping the shapes of the buildings, lamp posts, so on, we have great data about of how buildings are set out in cities. We can help operators find the best place to put their network, to put their mobile phone to provide the best coverage for users at the lowest price. Another way we're working with Telecom operators.

This is a picture finally of a nest security camera, this is an example of how Telecom operator cans expand into new business areas and to do things that tech companies can't do. Telecom operators have often a fleet of engineers and trucks installing fiber in people a's houses and connecting to the network. As they install that, why not security camera, they can sign you up to the cloud storage service for the security camera so that you can look at the pictures on the camera anywhere. This is new revenue, the Telecom operator, new businesses that they can get into, working in partnership with content providers such as us.

That's all I had. I think I got it in 10 minutes. Just about.

Just want to say thank you for the time. This picture is to remind us it is all about the users. It is all about making sure that they can have access to the content and services they want over the best networks that they can possibly have and the next innovation, when the next generation comes along, myself, 20 years ago, when I was setting up the server, connecting them to the Internet, they can set up the new services that drive innovation. This has helped make the Internet what it is today and that's really important to protect we think, the innovation. Thank you.

>> KARI BALLOT-LENA: Thank you, Mike. Takeaways from that, reducing costs of ISPs, improved user experience as well as how the partnerships do have various benefits, including promoting core business development and enhancing technology and creating a business opportunity.

With that, I would like to invite our next speaker Thomas Volmer from Netflix where he is the Director of global content delivery policy. He specializes in the development of hyper scalability, open Internet

infrastructure at the intersection of tech investment, engineering and public policy.

We do welcome you to share your views on how content providers and network operators cooperate to accelerate Digital Transformation.

>> THOMAS VOLMER: Thank you. I would like also to thank the ITU for inviting us to present the perspective of an intern taken. Company on this debate. Netflix, it is an entertainment company first and foremost, we distribute entertainment in the form of mainly TV shows and movies around the world for our members to enjoy. We operate in a competitive space that is online entertainment, we compete with gaming provider, with other streaming providers, and not unlike Telecom companies, we are in a flat fee for subscribers and we have to constantly invest in new content for our members.

I think last year Netflix reported over 15 billion of content investment which is more than half -- about half of our revenue.

Like telco, we know what it is to keep investing in CAPEX every year and compete very hard with other entertainment companies.

We don't mind it. We think great stories can come from anywhere in the world and the Android, everywhere in the world. That's what we focus on doing.

We're also heavily regulated industry, Netflix is, for example, to give an example in Europe, we are regulated as an audiovisual media service with all sorts of obligations that come with those regulatory ties. For example, investment obligations and content, cultural levies, I think in the past few years we have paid, invested over 1.5 billion euro on those obligations alone.

Netflix in the current form wouldn't exist without an open Internet, one where users can just pay to have access to any content that they like and this is a space that we're comfortable in operating because we think this is well aligned in sense of media sensory media actives between connectivity provider, such as telco, content providers, such as Netflix, I'll talk a little bit in today's presentation about the incentives that each has and then how those incentives are actually put in practice by telco, content providers like Netflix.

I'll conclude with some of our views around the proposed I think network usage tax or fee, fair share, this concept that somehow Internet traffic should be subject to an additional charge.

First, the incentive, as I said, Netflix invests money

in content primarily for our members to enjoy. We think that the availability of content online is what makes people want to subscribe to high-speed broadband in the first place. This is a positive demand signal which then drives more investment in connectivity, more people online, more people that are susceptible to subscribe to Netflix. By having telcos invest in networks, by having Netflix invest in content, we see this virtual circle of investment in the perspective strength for the benefit of the consumers and overall the economic welfare. This is not just theory, it works in practice.

Typically Netflix services are bundled in the plans because it benefits, it adds value to the network. So specifically you describe to a high speed broadband plan with Netflix included, Netflix gets new subscriber, ISPs, more revenue, users have access to great content that they love. So that's the value proposition that's put in practice.

We have a lot more telco partners around the world. This is specifically for bundles in telco plans and typically we work with operators to I went great that Netflix from the telco set up box, innovative, mutually beneficial business models.

For connectivity alone, evidence shows that Internet users that subscribe to high quality video services like Netflix or high quality gaming services like Xbox or PlayStation will also be users that subscribe on average to higher broadband speed. You really see this kind of wheel of mutually -- mutual benefit clicking into gear when you can sell more content and faster speeds for the telcos.

The question was raised, what are the incentives to make the content travel efficiently on the network and indeed it is not an easy engineering problem to solve. You can imagine that with 200 million subscribers around the world if all of our content was downloaded by the entire world by Hollywood it would not work.

The submarine cable would not be able to accommodate this. Unfortunately would not be able to accommodate this, the result, it is the dreaded loading wheel that nobody wants to have in the middle of their video, their entertainment.

This is the worst possible thing that can happen if you're in the middle of a movie, a stranger things episode, you want know what's what, you don't want to end up with the wheel. Nobody wants that.

So the solution, of course, it has been to distribute the content geographically so you don't have 200 million

streams traveling from Hollywood to the world, they actually travel from around the corner. On this map, you can see the number of deployments, we have the servers around the world, Bocks that host the Netflix contents so that you can download the movies from around the corners.

The white dots, the server, they're related to the ISP partner, we have thousands of them included even in island nations, less developed territories and Netflix is a member of the Partner2Connect coalition with the ITU and we have pledged to improve the availability of content for hundreds of millions of users in the coming years by deploying more such caching boxes with our -- with the help of our ISP and data centre partners. Those boxes are fairly small and generally they're well accepted also by the partners because we keep engineering them to be as small and as energy efficient as possible. There again, you see this notion of the incentive to avoid the spinning wheel to be as efficient as resource efficient as possible, already aligned. So with half rack, which is basically 8 server, each server is a size of a pizza box. So the size of a big dog, you have the entire networks catalog and you can serve over a million households by current rates. Such a box is also very energy efficient, you only have 5 kilowatts of power at peak, less than an after household for 200,000 streams. We really are already incentivized to be as efficient as possible to distribute the content to make the experience as good as possible for the users.

We don't stop there.

We also want the streams to work on any possible device. When you're watching the latest series of the Crown, released now, you can watch it on your TV, that's what the vast majority of our members do, they like the big screen, I cannot blame them, I like that too. You can also watch on smaller screens and in this case we also optimized for the small screen, meaning that if you're watching on a small screen that cannot display 4K you won't get the 4K Netflix, just the right amount of pixels that the screen can accommodate.

Again, why do we do? It is because we do not want the spinning we'll of death to interrupt you while working and watching on the phone. So there is no point in sending more pixels than the device can receive.

We also compress the video, I hope that this comes across okay for the online audience, sometimes the video compression carries a message, but normally you see on the left-hand side the typical encoding, codex for online images and on the right-hand side, the same image uncoded

using the latest technology that Netflix contributes to through the device co dec development policies we participate with. The goal is to make the streams as efficient as possible. On the right-hand side, a better image with half of the amount of data used. In the past five years, the same stream has reduced its data intensity by 50%, meaning the same exact movie, half of the amount of data with the same amount of data you can have twice the amount of streaming at the same quality. This is the continuous improvements that the streaming industry is incentivized to bring for the benefit of all.

To give a sense of perspective to watch the Netflix movie in HD we recommend below 5 megabits per second of bandwidth on the connection. Most ISPs around the world will easily sell you 20, if not 100, a gigabit of bandwidth. Allowing you to easily adjust the bandwidth that people pay for, allowing them to easily watch 5, 0, even 200 streams simultaneously if they wanted to. Now, that's a big household, I don't know if the Netflix plans accommodate for 200 concurrent viewings, but certainly there is room to do anything you want, whether it is eLearning, gaming, whatnot.

Overall, we estimate that the necessary flix works around the world on open connect, our content delivery network, the caching servers I mentioned earlier and on the encoding technology contributes to savings for Telecom operators to the tune of over 1.2 billion every year. Certainly in the past few years. We expect such will remain true in the future.

So you can see that whether it is from the commercial perspective, the fact that content drives demand, consumption, or from the cost perspective, that efficiency, the drivers, they already exist, you can see that they're in perfect alignment of incentives between the entertainment industry, streaming, in the case of Netflix, as well as the Telecom industry which takes us to the kind of -- the controversial topic of today, it is this notion of network usage, traffic should be a kind of punished in the form of a tax. So we think this is wrong on two accounts. Either -- first of all, taxing network usage is really taxing the demand for the network. By taxing network usage, you will suppress user demand going to reduce demand and reduce investment. You will have a counterproductive effect.

Then also, another view, it could be, well, this network usage, it is some kind of a new wants, it creates cost on the network, some kind of a negative externality.

That's also wrong. In fact, studies from all of the prevailing, let's say regulators, even industry analyses, researchers show that while, yes, traffic is growing, not at an expediential rate, but it is growing steadily, the fact is, neither the electricity consumption, the overall costs of the networks are growing. Generally what we see, it is that because there is an incentive to be as efficient as possible, the efficiencies that go into network technology, into content delivery technology offsets the growth of usage. Whether it is cost, whether it is energy, it actually is projected to be in the overtime and certainly this is what we have seen in the past ten years.

So whether you want to tax Internet usage to stimulate investments it is wrong because it will do the other way around. You are actually going to suppress demand and investment or if you want to punish, a negative externality, actually there is none, our recommendation, of course, out of today, it is to really put behind us those old notions of usage tax. We think that this debate was already solved a decade ago with the debate and we think that the industry is better off with each parties investing in the relative strength, content companies, content, tech companies on tech, network companies on networks.

Thank you so much. I look forward for the discussions.

>> KARI BALLOT-LENA: Thank you. That was a helpful discussion. Thank you for providing us with a clearer understanding of how content does drive shared value. Particular Lynette flix' open connect and how that helps to deliver content locally.

I think it was also very interesting example of the incentives by -- that CAPs have to promote efficiencies.

Being remit, I was able to see very clearly the different images and the different image qualities and I think it served a good example of how there is incentive to become more efficient and to deliver higher quality video while using half the data as well as grounding this within the context of investments within the Internet ecosystems.

Thank you.

I would like to welcome our third speaker today, Alisia Tambe, from Meta. Alisia Tambe is head of international organizations for connectivity and inclusion at Meta.

Her work is at the intersection of law, tech policy and international development. Today she will focus on OTT investments in digital infrastructure, examining CAP investments in the various types of digital infrastructure

and highlight how these investments continue to contribute to Digital Transformation and the Internet ecosystem as a whole.

Thank you very much. I open the floor to you.

>> ALISIA TAMBE: Thank you so much, Kari.

I think it is really important to discuss this in many different contexts. You know, Meta applications are used by billions over the world and it is important for to us make sure that we give people meaningful connectivity rain opportunities to communicate together and giving small businesses the opportunity to make sure they can communicate with their customers and grow in other countries. It is important in the context of talking about the investments not just from Meta but for others in OTT players, in different -- around the world, and basically speaking, recent research. It is great to go now because you have heard a lot of this before in terms of the analysis report and I want to really hone on that, for one, it is independent research that was done, but it is a very credible research firm and it is important that we look at research that is evidence-based, that way we can make evidence-based policymaking.

It is important to have these different research aspects, that way when making decisions, seeing what are the financial contributions, we're taking a lot of different things and different considerations.

As you can see, when we're discussing the recent investments, we have invested over 120 billion each year in Internet infrastructure from 2018 to 2021. This is over the last four years. If you actually go through the report, you will see that's a 50% increase from previously.

And just from 2011 to 2021 we have invested over 800 billion in Internet infrastructure.

This is a really large number but we also wanted to know how it works when talking about the relationships. So it is bringing traffic closer to end users but it is also improving the quality of broadband users and it saves ISP's money because it is close to 5 to 6.4 billion each year.

When we're talking about these traffic generated to customers you have to understand it is not leading to large increases in telco or operator costs.

If you look further into the report, you're going to see since 2017 global traffic delivered over fixed and mobile access networks actually increasing significantly but over the same period network related annual spending by Telecom operators remain relatively the same.

So when we're making these arguments, it is important

to show that the annual spend did not really change too much.

Just so you can see, for example, this is another figure in the report and I highly recommend for you to go through it.

These are the investments, just broken down by hosting, transport, delivery. I know you saw it earlier.

When looking at the 120 billion number, it is important to see where it lies in between the hosting transport and deliver Y honestly hosting, having the largest number.

Transport obviously, talking about the submarine, terrestrial cables and this figure here, as you see, these are a lot of different investments in submarine cables that you have from different gaps in OTT players, you see Amazon, Meta, Google, Microsoft here.

You will notice which ones were announced as of 2018 and which ones were announced after.

It is really important to see that this is another example of why we have a symbiotic relationship, we're partnering with telco operators to make sure that you can bring better quality and bring different broadband capacity to different areas.

This is just one of the examples you heard from earlier speakers how this plays out with different companies and how it is really truly invested. You have similar points when talking about hosting data centres and quickly moving to peering and caching, the study I mentioned, investments that OTT providers had made in embedded Caching saved 5 billion-dollar as year. Then with caching of traffic, domestic ISPs provided further savings in helping in terms of IP transit costs.

I think some of the colleagues had mentioned earlier, it is important to hone in on this.

Just going a little bit back in terms of what we're talking with subsea cable, submarine cable, it is definitely one of the important subsea cables I would love it talk about. For meta, just for the world basically, it is the most comprehensive subsea fiberoptic to serve the continent, this is big, 45,000 kilometer, covering 33 countries, across 3 continent, primarily in Africa, but it is really, really important, you can obviously see the different countries that are included.

There are 42 it open access landing stations.

What I think is particularly important here, like I said, in the slide that had to do with some of the other companies, what we're doing with subsea cables, the fact

that this is a consortium of different telecommunication providers and investors to really bring this on an open access basis. We partner with these different -- we partner with the different Telecom operators to make sure that there are these subsea cables.

Some of the different partners that we have here, it is MTM, Vodafone and we're looking at different studies. So RTI for example, that this is an independent non-profit research institute reports that to Africa will improve the GDP of Africa by.85%, equivalent to 36.9 -- 36.9 billion USD within the first two, three years of operation.

I think it is important to also note that we're talking about different landing exchange points. It is giving more diversity. In Nigeria, for example, we're able to use a different landing station than using just Legos. There is different opportunities for different countries and it is just one example of why it is so important to have these different partnerships and how we partnered together.

You go on the to Africa website and you see the CEOs from these operators, they say how good of a partnership this is and what this means for the different communities and how it goes into effect.

Also noting that this is just to Africa, but there is also a lot of different subsea cables that we invest in. Particularly in APEC, we also have two subsea cables that are already in service. Another analysis Mason report showed how this would add to the GDP and create up to 3.7 million jobs in APEC alone. We have some in Europe, it is the highest capacity transoceanic cables in the world. These are just a few of the examples and then there is also some others and there are different investments we have been making.

I think it is important to show more how this is contributing overall to the Digital Transformation. You see that the subsea cables arrive, you know how the network is being built out and we're talking about Internet speeds. I really want to go into the consumer aspect. This is where consumers get to enjoy better speeds, they increase their consumption of digital content and products. When you have this, it helps making, you know, businesses easier, a lot of the work we focus on, it is with start-ups and different organizations and providing marketing skills, digital skills for starting business and other aspects like that. Without any of this subsea cables arriving, without any of the infrastructure, it is hard to build upon that. Then you have consumers who are also coming online for the

first time. We have other services, free basics helping those coming online the first time. You know, that need, you know, intermittent service and to make sure that they remain online.

This ultimately helps with different businesses and economic development and when we're talking about local content and what others can do within the country, this is all coming -- this is only one example, this is some of the benefits of subsea cables after they arrive.

Then you see how this is in overall increasing GDP and where we talk about local jobs and how we're building and boosting the economy.

So again, I think it was earlier, when our colleagues from Microsoft were talking this, this is just one form of contribution in the Internet ecosystem of what we can contribute to and this is just speaking from Meta, there are so many other companies that are doing similar work but, of course, going through the different sectors and the different components that go into improving the Internet ecosystem.

Again, we have heard it before, but we have seen that the Internet has proven its ability to adapt to the changing traffic patterns. When we're talking about all of these different investments, something like mandating network usage fees is going to threaten to undermine the Internet ecosystem. There are going to be less incentives to really be involved and to contribute to infrastructure development when you're having something like mandating network usage fees.

I think I honed on this a little bit earlier, it shows from 2018 to 2021 network related cost for ISPs only increased by 3%, even though the traffic increased by 160%. So making that argument, it is the numbers don't add up in the sense of saying this is something that Internet service providers are losing money from the traffic. It is not something that we have to worry about being, you know, unsustainable costs for telco operators because there is nothing that is proving that this is a market failure. We're not having to identify something to address this. Right now we're working as an ecosystem collectively and it is important to make sure that any approaches that we take with this, it is evidence-based and it is something that we're working with as a whole system and collectively.

I think I'll turn it back to you. Thank you.

>> KARI BALLOT-LENA: Thank you very much.

I appreciate you providing those very specific data points on OTT investments and infrastructure around the

world, including the subsea and terrestrial cables and data centres as well as providing some specifics on Metas to Africa, subsea cable, and the importance of that in terms of improving the choices and quality of products for consumers and that without this infrastructure that the Telecom operators, other, they partner together to establish consumers without realizing the extent of the benefits.

Thank you for that.

For our final speaker, for our session 3B, I would welcome Megan Funkhouser from the information and Technology Industry council, ITI, and at ITI she's the Senior Director of policy, tax and trade. ITI has broad tech industry membership, including equipment maker, content provider, software providers and more. Her focus is on advancing ITI member priorities in the international tax and trade policy space and so I think today she will help take us to a higher level view of the tax and trade policy implications of potential network usage fees or similar levies.

I hand it over to you.

Thank you.

>> MEGAN FUNKHOUSER: Thank you so much. Thank you to the ITU team for inviting me to contribute to this discussion.

My name is Megan Funkhouser, I lead the tax and trade policy team at ITI, the information, technology industry Council as Keri mentioned. We represent 80 of the most innovative countries across the breadth of the global technology industry. When I say breadth, I truly mean it. Our members include companies in hardware, software, services, cybersecurity, platforms, semiconductors, network equipment, consumer products, business to business products, and also tech enabling companies like Visa, Seaman's, Toyota, all driving innovations in their fields. We take a global approach while headquarters is in Washington D.C. we have an office in Brussels and we have representatives on the ground in New Deli, Seoul and San Pablo. As previewed, I'm going to take a step back from the technical discussions here to talk about the tax and trade policy considerations that also contribute to policymaking around the economic and fiscal landscape in which Telecom operators and content application providers operate.

I think in the last few presentations we have seen a lot of maps that have a lot of different points and lines in between them. Those maps underscore the cross-border

activity that's inherent in the functioning of the Internet. Immediately it brings to mind the trade policy implication, what happens when a border is crossed during a transaction or activity. Another ancient as well at the treatment of different companies in the market and how certain policy decisions may affect the operating of that market.

For example, the draw backs on what happens when imposing costs or requirements on forum provider, destroying market incentives or to explore the concerns perhaps on a tax on the delivery of online content, the trade implications for such a tax these questions matter to the considerations, design, scoping, et cetera of any regulatory framework or approach that is under consideration. You know, this is related as well to the questions about what is the form, whether it is a fee, a levy, a tax, who is going to or from and for what purpose or activity. So I'm going to discuss first the trade policy commitments that are relevant to the conversation before spending a few minutes on international tax principles and developments that should be kept in mind also.

Why are trade commitments important? Trade commitments provide predictability and reliability for everyone participating in a market. They facilitate the liberalization or opening of service markets. Trade commitments benefit companies of all sizes. They are particularly important for micro, small, medium-sized enterprises. Larger companies may have more experience navigating different markets, they may have somewhat more capacity to hire people to address challenges, these are less equipped to bare the higher cost and greater trade frictions that resulted from fragmentation. When considering the benefits of trade commitments, it is important to remember that there is this disproportionate benefit for the actors. Let's start with multilateral commitments. First and foremost, the World Trade Organization general agreement on trade and service, which includes market access commitments, national treatment and most favored nation treatment, most commitments entered into force in 1995, they have been around for a while.

The treatment, it is when domestic and foreign services and service providers, suppliers, excuse me, must receive the same treatment. It is important to remember when you're looking at this commitment that this applies not only to the cross-border flows of services, but also to services that are delivered through an in-country service

presence to serve that net market. And if best access conditions are conceded to one country, those same best access conditions are expanded to all participants in the system.

National treatment and most favored nation treatment, more commonly referred to at NFN, it is foundational, the governments committed to one not discriminating between domestic and foreign provider as in not to discriminate amongst trading partners.

Bilateral trade commitments reaffirm or go beyond the multi commitments and I'll draw on a few examples from the U.S. Korea free trade agreement that are relevant to the pending legislation or to legislation on mandatory network use fees and also to keep in mind for the broader conversation as well, would be helpful.

For example, Korea has full market access commitments in telecommunications and commuter related services. A mandatory network use fee, however, would essentially apply an additional tear riff on the content providers and the data sent on a cross-border basis effecting the ability of the U.S. content providers to provide services in the market. Especially when considering the ability to compete on a level playing field against domestic providers. It also includes full commitments for national treatment and most favored nation treatment.

Beyond that, under Article 14.2 Korea is required to make sure that U.S. service suppliers have access to and use of any public telecommunication network or service, including circuits offered in the territory or cross-borders on reasonable, non-discriminatory terms. Therefore, it is not reasonable for proposed legislation or other regulatory frameworks to further restrict the options for content providers whether the U.S. or other places to access -- or the U.S. scenario, to access the Korean network, particularly given existing service reliability obligations already in the market.

So when I talked about so far binding trade commitments, that means that they're subject to dispute settlement provisions. There is also a role though for trade disciplines whether binding or voluntary in supporting the thorough policymaking process, taking into account good regulatory practices, for example, which are intended to guide the development of technical regulations that can prevent the imposition of burdensome costs or other negative consequences that could arise from unnecessarily regulatory differences or perhaps to treatment in the market.

For example, an early focus on steak holder engagement, we have been discussing broad public consultation, facilitating the greater appreciation for the nature of interactions between consumers, content, application providers and broadband operator, such consultation could consider aspects such as how a possible paid requirement may affect innovation within the broader intimate ecosystem or perhaps the effect on companies that operate globally.

The practices also focus on transparency and inclusivity, allowing for example adequate time for interested persons to submit comments.

There is an implication for other ongoing priorities introduced by the government, many governments for example have adopted, developed an adopted plan to drive the digitalization and connectivity across different levels of government for individuals and communities and for businesses of all sizes. The policymaking in this space explores the approaches on achieving the digitalization goals and the broader innovation policy goals.

For example, what would be the effect on a business that's seeking to adopt a digital tool to improve productivity and to engage with new markets.

Second to last, basing regulatory decisions on publicly accessible high quality data, evidence, available information and assessment of the risk. The last presentation, there was a great overview of the materials and studies that are out there that are done using a solid methodology that can be used and relied on in these circumstances. Last but not least, to support the coordination among central government agencies with the aim of producing better outcomes and also regulations that are consistent with international trade obligations. So there is one takeaway, it is to make sure that you have a trade policy person who is in the room and it is part of the conversations to understand how it affects the bigger picture. And the engagement internationally.

That wraps up a broad overview of trade policy. I will spend a few minutes on tax. I recognize that the next session focuses on the inclusive frameworks negotiations to address the tax challenges arising from the digitalization economy. I will not spend much time explaining that project. I wanted to highlight though a few principles we have learned along the way relevant here.

Following the 2017 mandate from the G20 finance Ministers, the OECD and the inclusive framework restarted the work on developing solutions to address taxation and

increasingly digitized economy, despite the multilateral organizations, some governments have begun adopting the unilateral approaches which have evolved in scope over the years. We went from in 2019, the adoption of the 3.0% tax on revenue derived from the digital advertising, user data, digital interface to the 1.5% tax on provision of services through digital marketplace and we have seen a broader one, digital taxes. The proliferation of the measures causes instability in the global tax system and has trade barriers to companies looking to engage with end user, consumers or users in other markets.

More Nan 135 governments as of October participated in the inclusive framework coalesced between the two pillar approach with the income and the reallocation of certain taxing rights, establishing a global minimum tax rate and providing for the withdrawal of unilateral tax measures.

It is important to know pillar one of the 2 pillar solution, which has to do with the reallocation of taxing rights, notably it includes a lower nexus effectively, so this determines what is entitled, a share of the profit it's, for governments over GDP lower than 40 billion euro.

Global tax challenges require the challenges, we have used the negotiations taking place here for the best way to address these tax challenges and it is an opportunity to look for the principles guiding much of that work now, what we have learned. That are relevant here. First and foremost, I would say don't attempt to fence the digital economy. Back in 2015, the OECD, inclusive framework found it was not feasible to do this because the digital economy is the economy itself. So it is important to remember that it is part of this idea of what activities are you trying to encourage, discourage in the economy and the negative impacts that can be taken to consumer, end user, whether that is a business trying to digitalize and enhance the productivity to enhance new markets or individuals and communities trying to communicate and stay in touch.

So also there is the principle of taxing the income once, that's avoiding the multiple taxation on the company’s activities. It is also the point of imposing taxation on the challenges arising from taxing, imposing taxation on revenue instead of income. Revenue is everything generated by the sale of a good or a service while income, it is revenue minus expenses.

So that the resources the company devotes to realizing the sale are accounted for in temps of taxation.

This is important because when you are applying a tax on gross revenue, it presents a higher burden for companies

with smaller profit margins or lost leading companies. It leads to a much higher effective tax rate than an income tax.

Last but not least, the structure also means in some cases that the burden of that tax can actually pass on to consumers or the end users. Last but not least, one of what -- what we have learned, the importance of avoiding criteria that's designed to target certain companies, in the context of digital services taxes, scoping involved duel threshold it's, targeted globally successful companies excluded from the domestic competitive lens. I think when -- because we are -- any scoping that's looking to target certain companies that does raise immediate concerns with the trade commitments, as mentioned earlier with national treatment whereby a government, a jurisdiction, domestic competitors should be treated the same as foreign competitors that are also competing in the market.

I want to close by reiterating the importance of incorporating the policies in the conversation. As we have talked about the future of the Internet, 60 governments are going to uphold, the Internet should be a single, decentral lieder lied network of networks, you can make an online service and make it available to everybody in the world, that's the value of the open Internet, the value of an open architecture in that cross border nature is why it is critical to take trade in consideration when discussing the landscape which Telecom operators and content and application providers operate. I hope my remarks provided context for how the considerations should be incorporated into policy discussions.

Thank you very much for the opportunity to participate in the workshop. I look forward to the discussion ahead.

>> KARI BALLOT-LENA: Thank you. I appreciate discussing the potential fee, tax, levies could impact the international trade and tax commitments and providing an analysis from a different perspective for what we have seen of the session so far as well as bridging the next sessions topic regarding international tax agreements.

I found it notable saying that the digital economy is becoming the economy itself.

So incorporating tax and trade policies into the discussions would be crucial to maintaining an open Internet.

Thank you for the presentation.

I think as we start getting in some questions from our participants, from the audience, I wanted to take an opportunity to pose some questions to our panelists and

then we can -- we're starting to get some questions coming in, in the chat from the participants.

First, I wanted to go back to you, Mike, and to see, to get your thoughts on the roles and responsibilities of the various players when it comes to deployment and operation of digital infrastructure.

>> MIKE BLANCHE: Thank you. I think that the key thing here is as the number of the speakers have said, it is that it is a symbiotic relationship, one drives demand for the other and it works best when they work together.

I also fundamentally think there are two different industries.

The Telecom industry, the job of the Telecom industry, it is to build network that's then sold to users as the part of the monthly fee for their data access.

The job of content and application providers, it is varied and for Thomas here, it is the job to keep mostly the big stars happy and to make great movies and TV and the vast majority of the investments is in content rather than in necessarily the infrastructure that supports it.

For Google, we spend more on infrastructure and we also spend even more on the software and the applications that runs on top of that.

There are two very different industries. One is all about the building network, setting that with subscribers and the other is providing great content and services that help the other industry and works together with the other industry in this relationship and there are two separate industries. We have seen both industries, they are contributing at the moment in different ways and the Internet ecosystem has grown and thrived for the past 30 years with the current environment. We should think carefully before we start to think about changing that.

>> THOMAS VOLMER: There is also this notion, there is a notion of return on investment, and what is expected. I think different industry means also very different risk reward profiles.

If you look at the Telecom industry, in the past 20 years, it is always the same big names. Online content, however, it is very, very different list of names. It used to be that Yahoo, Craig's List, map quest, they were the most popular websites and online content, no more.

Ten years ago, when we were having the discussions around this, Netflix did not exist in Europe, now it exists. Tomorrow there will be more services online, clearly the life and death of online services, it is much more dynamic, much more risky, so that also explains why

the return profiles are different. On the other hand, infrastructure that has a payback time of a decade, but very guaranteed pay back that offers less return, it is just a norm economic of lower risk, lower return.

>> KARI BALLOT-LENA: Thank you.

So I think we can -- we're starting to get more questions come in. Let's -- I'll ask perhaps one more question and we can open it up to the floor. So I was wonder, how could say network usage fees, some other levy depending on how it is structured, how could this effect the incentives for say innovation and openness within the digital ecosystem value chain.

>> It will ultimately disrupt existing agreements that's in works for 20 years. (Alisia Tambe) there is not much incentive to make investments in infrastructure and then you have things like the benefits that ISPs were getting from local caching, it is not there anymore. Ultimately, those who will get there will see that price, that higher prices, it will be the end users, you won't have as great of a quality of service. I don't think that it is going to be something that helps with innovation. Like the chart that I had shown before, you may start off with something like local caching, those three transport local caching, you have that, but the effect that it is going to bring on to the consumers at the end, you're not going to get the companies who are able to build, create businesses and innovation and exchange of ideas. It is really going to disincentivize further collaboration.

>> KARI BALLOT-LENA: Thank you.

Did any of the other panelists want to chime in on that one? I can move to some of the participant questions? All right.

So this particular question, it is from Mr. Sharma, from the Telecom Authority of India, it doesn't appear to be directed at any one presenter, but Mr. Sharma would like to know as part of a developing country, who gains from these investments in the Internet ecosystem? So he asks while our service providers have to invest as much, if not more in upgrading the networks. I think ultimately, who is gaining from the investments in the Internet ecosystem any takers?

>> I think everybody gain, there is research that shows Internet access drives economic growth, drives education, it drives entertainment, it is one of the reasons why we're here. It is we want everyone to have access.

Everyone plays their part in investing had that,

Telecom operators investing in the networks, content operators invest in developing content and applications and also in networks as well. There is also wholesale networks that help to stitch all of that together and to make it work fantastically.

There is studies about the economic impact of infrastructure investment by content provider, I think that Alicea mentioned a study, it was done in APEC a year or so ago, it was one, and so everyone, the investment drives return, economic growth, that was a key point in the presentation.

I don't know if anyone else has anything to add.

>> I completely agree, just like the RTI report had said (Alisia Tambe) in terms of the subsea cable that was built in APEC, that's a projection of I think 3.7 billion jobs. So when you're putting the numbers together, it is completely the whole eco system. It may not be the first thing that you see, but obviously when it gets down to it, it is going to be the consumers as well who are able to benefit especially developing countries.

>> KARI BALLOT-LENA: Thank you, both, very much.

So Mr. Sharma had a corollary question, a follow-up question to that, if you could give a more region wide break-up of the investments that have been holiday in the Internet ecosystem. I think that we looked at it sort of globally, and in Africa, but if you can offer some other regional investments that would be helpful.

>> I'll send you the link to the paper that was recently released, it has a breakdown I think by America, by Europe, EMEA (Mike Blanche) and Europe by APEC and there is information in there by region.

Just to think, I think of one investment in that part of the world from India, Google was an investor in a submarine cable running from the Middle East to India, and we did that in partnership with the Telecom operator, it was us working together to improve the international connectivity into India and we have a significant investment within India as well.

>> KARI BALLOT-LENA: Excellent.

I think, I don't want to run over time too much. Please Martin, other, let me know if we need to start wrapping up the Q&As. We have a question here from Mr. Ashton heart in the United Kingdom. This one is tore Megan. In terms of expanding on the comments on GETS, Mr. Hart would like to know whether those proposals that you suggested today in terms of treating domestic providers more favorably than non-domestic, would this be contrary to

the national treatment and non-discrimination principles of the GETS and it is also maybe in the Telecom Annex.

Thank you for the question. I wouldn't necessarily apply it to any of the specific proposals. But where I do think the idea of different treatment is for domestic (Mike Blanche) and informed providers comes into, for example, if a foreign provider is required to make a payment to a network operator, but then a domestic competitor is not required to make a similar payment to a network operator. That would present a very clear issue in my mind of a national treatment option.

It would also -- it brings up a point that I didn't touch on in my presentation, but I do think it is relevant to the discussion as well. It is that when considering the framework, it is also important to consider the development and the growth of the content provider industry and what are the opportunities for example, is the government modeling the policies that will also provide opportunities for domestic content providers to export and to make it again, this is a very interactive, interoperable world and so really taking into consideration what are the policies that are going to support growth into new markets and to support exports overall.

Thank you.

>> KARI BALLOT-LENA: I think that about wraps up the questions that we have received --

>> CHAIR: There is a question from the floor, please. There is one more question, did we address it from Mozambique?

>> KARI BALLOT-LENA: Oh, this is -- this one, yes, this is for Netflix, for Mr. Thomas Volmer, the question, it is how can developing countries regulate Netflix as Europe does.

I'm not sure if that's on the topic of fees within the context of interconnection. I open the floor to you.

>> THOMAS VOLMER: Thank you. For interconnection, it is really the topic of the day, I'm sorry, I'm not an expert at the audiovisual regulations, but for interconnection, the networks on the Internet, interconnecting through mostly unregulated markets and the reason for this, it is the incentives in the interconnection market already converge into a very efficient system as we have seen growing in the past. The reason, one of the reasons why network usage fees don't make sense, it is that there is no such thing as network usage, all network, they invest to connect to everybody else. That's what providing access to the Internet is when

a network provides access to the customer, they provide access to all other networks. All works have an incentive to connect to each other.

This is why I networks naturally cooperate, naturally interconnect free of regulation, mostly free of connect, based on a handshake, it used to be my day job to travel in places like Mozambique and interconnect with networks over there and I have a ton of fond memories in Mozambique and we have one case of regulation of interconnection. I think it was quoted in the section this morning, it is in Korea which is really the textbook example of trying to a round peg in a square hole, imposing this principle that is the logic of the Internet, it is turned upside down, instead of everybody needing to connect to everybody else, it is, let's say, it is a network, receiving network saying that the whole world has to connect to me. Which, of course, does not work in the context of the Internet.

There is a lot lot of documented negative side effect. I can list a few, some were mentioned this morning.

I think that the main one, an increase in cost overall, the overall competition, IP transit in particular, the price that companies pay for wholesale bandwidth, it is much higher than even in comparable country, so I think it is two times higher than Japan, the two countries that are in fairly similar geographic situation, lower investment, all of those recent submarine cables we have seen very few of them, if any at all land in Korea. So less investment, higher prices. Users quality goes down, latency in particular, it is consistently documented as one of the worst in the OECD countries.

And also just regulations creep, right, the regulation, they were enforced in 2016, since then there were new regulations, service stability in 2020 to mandate some conditions on how online services operate.

Now there are new discussions for additional law, so the reality is, when they try to create a regulatory framework that's not compatible with the logics of the Internet you will struggle because you keep having to create new regulations from scratch so, from that perspective we're recommending interconnection to remain mostly unregulated mode. Unregulated.

>> KARI BALLOT-LENA: Following up on that, what is your take on the idea that there has been some change in the markets in terms of a handful of companies generating high volumes of traffic, and the importance of very cost work investments in order to achieve 5G and beyond. What are -- what is your take on that, and had do you think that

there have been some technological market and other changes that would warrant a new look at intervention.

>> There's a lot to unpack in that question. A lot has been covered in the panel. I think if I leave the workshop with one thought, there are different businesses that should focus on their strength, right. The content industry invests in movies and TV show, software industry invests in software, networks invest in network, and overall, all of the investments, they act as catalysts for each other. The demand, it is compounded.

Ultimately, universal connectivity, connecting everyone, the unconnected, it will benefit everybody, it is not about a handful of, you know, video streaming services, online gaming companies, it is about having -- giving the ability for kids to attend a virtual classroom, for workers to do remote working, for the government to be able to collect a tax and administration online.

Of course, the benefit is for society overall, of course, each, you know, industry needs to be rewarded to the level of their risk. I think that we see at the moment a lot of private equity investor investing in fiber around Europe, on very long-term capital Outlook, which is a positive thing. There is the cost of capital, the lower cost for end users. And if there are market failure, that prevent, that prevent universal connectivity from being achieved, they should be addressed. Of course, but not through mechanisms that will have nefarious consequences like so-called network usage fees, traffic taxes, that have been discussed today.

>> KARI BALLOT-LENA: Excellent. Thank you.

I think that's our time for the Q&A portion.

My understanding is that we now have a wrap up session for both sessions 3A and 3B.

Is my follow mediator, Gaia Penteriani, is she available? Would you like to begin the wrap up session.

>> GAIA PENTERIANI: Hello. Yes. Sure. I'm happy to join in.

>> One comment, to follow-up on the discussion on the trade issue, and whether it effects this policy, this morning, I did raise that as an issue, that the obligation on most members, not discriminate between users. OTT would fit within the category of users.

So they use the OTT, so they're subject to the additional fees, they would be subject to the additional rule.

I think that the Vodafone count tore that was it is not discriminatory because they're big, we have called them

gate keepers or something, but it is discrimination therefore on the basis of size. So it is worth thinking in the Telecom context, if you think about when the rules began, why do Telecom regulations have a non-discrimination rule in them.

It was because the telcos typically have a monopoly on determination, and therefore the governments have said we don't want you to be discriminating against users and giving some users benefits and others less benefits. There is an incentive to abuse the system because of your termination monopoly.

If you think back to when this rule began, it is the equivalent of charging a bank because they're big an extra fee for the phone service as opposed to the laundromat.

Smaller company, maybe it wouldn't be subject to a fee.

Ironically, the bigger users are typically more efficient.

Arguably, the bigger user, they should be charged less and in the Telecom World, that's one area where the type of discrimination is allowed.

You are allowed to have volume discounts, but that's a lower rate for people who actually drive more volume because the assumption, it is that they are more efficient.

The bottom line, when you have discrimination on the basis of volume, on the basis of size, you do run into serious problems with respect to discrimination rules.

Thank you.

>> Could I comment, please? I have had my hand up for a while? Thank you.

Firstly, I would like to thank all the speakers for their interesting presentations. We had a session earlier obviously which perhaps that they may have have heard from big tech and Telecom operator, I understand that there was a big tech session requested, I'm not saying that the speakers requested that, but so much for a balanced debate.

Perhaps it was a good idea to give us a bit of an education, but it is clear this is not a balanced panel and is quite one sided.

Having said that, you know, we have heard a lot of the arguments that we have heard earlier this morning, which as I described earlier, many of them are what I would say red herring, big tech invests in their own business, yes, it invests this subsea cables and data centres, and all of the rest of it, they invest billions, worth of Telecom industry, and they invest trillions.

They do that to maximize, you know, for the interest,

in the interest of their own business, it is -- it is not philanthropic, it is in the interest of their own business. We have to remember that. Why else do they do it? Data is increase, data traffic is increase, yes, it is increasing expedientially. I know that the Mason report, that big tech commissioned, it suggests otherwise, but then we could look at what credit Swiss say, for example, that they expect data traffic to increase on a basis of 37%, currently it is increasing 30%, it will accelerate. It will end up a 20 increase in data over the next decade or so. That was even a modest use of the metaverse.

We think about the metaverse, we think about IoT, we think about autonomous vehicles, et cetera, obviously, not to mention Connecting the Unconnected where you know half of the world is not even on the Internet at the moment. Data is increasing, that's why everybody is investing in subsea cables. Big tech and other investor, of course, it the open Internet important? Yes, it is, everybody say it is, that's the problem.

There is no incentive for people to come together and to negotiate.

There is a lot of complex regulatory arguments appearing, et cetera, this is a new situation on a dominance on Telecom networks by a very small number of players who are producing data and generating it, by the way, consumers don't request half of this stuff. They don't want adds, they don't want algorithms making certain content deliberately addictive, so on.

More importantly, it is now accepted that some big tech players are dominant on the Internet, they're part of the Internet infrastructure. Then you look what's happened in Europe, they have introduced the Digital Market Act this week, which provides a mechanism to designate certain companies as being in that privileged position, Australia did the same, that wasn't a problem.

So, you know, this isn't the case of trade laws, discrimination, whatever. This is about recognizing the market dominance where it exists and addressing this reality through regulation.

There are other points mentioned, you know, cost another one, yes, the point is that the costs, they're dominated by two, three players, the telcos invest all Capex, in the Caribbean case, half of it for essentially three companies, we're working for you now. That's what's going on. That means we can't invest for the betterment of the citizens or the countries and because there is a limited amount of Capex, that's why investments

are -- someone mentioned they're not increasing, they're not. They're not increasing their investments. Investors won't support that any more.

You know, we said earlier, yes, big tech will argue hard they tonight want this to change, obviously, and, of course, they are, they're getting something for free, they'll present every argument possible. You know, what we haven't seen is in any of the presentations today, it is the question of the volume of data that's been addressed, nobody has mentioned that, we're not supposed to look at that. What's that casting, how are we dealing with that? We have a new reality as we said, the markets have fundamentally changed and we need new solutions to these. Thank you.

>> GAIA PENTERIANI: Thank you, David.

Maybe if I could say a few words to wrap up the two sessions.

I think it was great to hear from Meta, Google, Netflix also because they discussed how they are collaborating with network operators and they showed us many projects that they're doing in partnership.

I think a takeaway for me, it was certainly, which we also touched upon in the first session, it is around -- I think we all agree and it is widely recognized that there is a positive impact of digital technologies on society and many -- all of us, we have done many studies around this economic contribution. There is potentially the quantitative evidence gap in the sense of quantifying the social contribution, the socioeconomic contribution of each of the segments. Of the value chain.

Which I think would be certainly interesting to look at.

Then I think a valid point, I think it will be important to clarify, I mean, there is a lot of discussion today around the could called OTT shared debate. I think it is important to clarify that this is not a tax, a tax is something that goes into the treasury, goes into government finance and contributes to government spending. What's being debated, it is not that.

In any case, it is relevant only for certain -- the debate itself, it is relevant only in certain geographies.

I think what could bring us nicely to the next session, it is to understand, you know, if we do talk about taxation and government finances, how do we tax the digital economy both in terms of direct taxation as, you know, the project, it is trying to work towards -- to address the cooperation tax issues as well as in direct taxation, as we

have seen in the first session, Telecom industry knows very well about Telecom specific taxation in terms of the direct taxation and the digital industries, they're now starting to find out about the digital service taxes, the special taxation, I think that Megan mentioned the first decks ST was introducing in 2019, quite recently. So we can now start to gather some evidence on the impact of those as well and how those are implemented.

Thank you.

>> KARI BALLOT-LENA: Thank you. I recognize our time limit.

I will be very brief.

I was able to catch the session 3A, I think I logged on at about 5:00 a.m. my time to get that information. It was very lively. I appreciated the active discussion and the various viewpoints.

Session 3B, it was I think intended to build on the discussions in the first session and so it gave an opportunity to provide some inputs directly from the big content providers that were being discussed in the first session, to give some context for investments and digital infrastructure, whether it is in the data centres, subsea terrestrial fiber, as well as highlight the partnerships that currently exist between network operators and the OTTs and how, you know, the content can also drive demand for broadband.

So then we took a look at all of that, we took a step back to view them from this international trade and tax perspective to see how the various fees and I recognize that we're in a tax discussion and these would not necessarily be taxes but how they could potentially impact very multilateral, bilateral commitments and how they fit in with a bigger global tax scheme.

So I yield the floor back. I also want to apologize, it is -- moderating remotely can be challenging. I'm sorry I was not able to see the hands raised on the floor.

Thank you for staying with that.

With that, I do pass it back to the ITU.

>> CHAIR: Thank you very much, Kari and Gaia for both of you for moderating this very interesting dialogue on the industry perspectives and industry views.

I think we are a bit over time.

No worries.

If you so agree, I will give you a 15-minute break. Just to comfort break or so. Then we'll start at 16:20 with the last session for today.

That's my way forward. I see nodding. Thank you very

much, and let's reconvene in 50 minutes.

Thank you.

(Break).

>> CHAIR: Ladies and gentlemen, can I kindly ask you to be seated. We want to get started with the last session.

Ladies and gentlemen, we thank you for having a resolution, we're coming back to the final session, session number 4 on the ICT market impacts of international tax agreements and I'm pleased to invite Mr. Ahmed Said from Egypt to be the moderator for this session and to introduce the keynote speaker, Mr. Giammarco Cottani from BIAC.

Are you ready to take over?

>> AHMED SAID: Yes. Thank you very much.

Thank you for allowing me to moderate this important session.

First, my name is Ahmed Said, I'm the Chairman of Study Group 3 and also I'm a senior expert at the national Telecom regulatory authority of Egypt and the advisor for the Minister of CIT Egypt, the economic, statistical division. Welcome to the session.

This session, number 4 on ICT market impacts of international tax agreements for this ITU workshop on the economic and fiscal incentives to accelerate Digital Transformation of data and applications over the telecommunication infrastructure. Long, vital, it is very meaningful and important.

As outlined in the session, the description, this session aims to provide participants with a thorough understanding of the efforts undertaken in the inclusive framework on solution and profit shifting web initiative in terms of the tax challenges for the digital economy.

As to digital service, multinational enterprising, this session, it has the objective of broadening the knowledge on relevant aspects that is related to the and to possible -- to have the infrastructure. This session, it is scheduled for 45 minutes. -- (technical issue). -- and the governments, and advocating for policies that enable the private sector to pursue the economic growth and development and societal prosperity.

Giammarco Cottani will cover the efforts undertaken for the two pillar initiative of the OECD/G20 framework and the solutions and the profit shifting, which is the BEPS. Secondly, we will conduct a fireside chat, whereby we'll have some discussions on this topic and finally the session will open some questions from the audience for the last ten minutes of the session.

So allow me now to give the floor to Mr. Giammarco Cottani who will deliver his presentation.

You have 20 minutes for the keynote presentation. The floor is yours.

>> GIAMMARCO COTTANI: Thank you, and good afternoon, everyone.

First of all, let me thank Martin, the ITU for the kind invitation to speak today.

Again, I work for a multinational group but speaking today on behalf of BIAC, the business industry advisory Committee and therefore I would like to in my presentation to give you first a brief snapshot of what the OECD is all about, mentioning very briefly what the BIAC input within the work is all at the moment involved on the two pillar solution for addressing the challenges of digitalization and then I will try not to give you too much of a headache because I assume that you already have had a very busy first day to explain a little bit of what the two pillar solution is currently all about, specifically we're going to focus on the accreditations of the new taxing right for market jurisdictions, we're going to explain what is corporate minimum income tax, it is all about, potentially to understand how the telecommunication industry is going to be affected by it.

If you allow me, I will now project my presentation that I hope you can all see.

Let me start, first of all, for those of you who are not acquainted by the OECD, the organization of economic cooperation and development, what is all about, how it has been created and what the work is currently focused on.

The OECD, it is indeed an international organization that is based in Paris. It was created in the wake of the end of the Second World War to start administering in Europe the Marshal Plan. I would say today the main focus, it is that of establishing a number of international standards to find solution on a number of range of social, economic, environmental challenges, and clearly, as you can imagine, in the kind of life that you're living today, digital is core, and tax, sound fiscal policies, they're generally an important aspect to guarantee what I would say is the ultimate mission of the organization, that is better policies for better lives.

I think it is important specifically to try to highlight the compensation of the OECD, what it is all about. It is currently composed of 38 countries and most of the work is the creation of a technical standard for a number of a variety of subjects that touches upon the

global economy in order to then share the international standard on a global basis. It is a consensus-based organization and as far as we are concerned, the OECD is considered to be the lead organization in creating international standards.

To give you a very brief example, there are two areas of international tax, such as exchange of information or transfer where all of the countries around the world basically are following the guidelines of the OECD as the standard centre.

This certainly does not mean that the OECD is reclaiming supremacy towards other organization or association in developing sound tax policies. You may indeed have activities of other international organizations such as the United Nations, other regional organizations that are very active and with respect to which the OECD as a representation and as an active and very collaborative dialogue.

Specifically I would say that if we focus on international tax, what is important to note, it is that the work that currently is -- that the OECD focuses on, it is not limited to 38 countries and as mentioned by Ahmed Said, I would say that on the mandate, the G20 finance Ministers, now we have approximately 130 -- more than 137 countries, 141 to be precise that are currently working in this context of the international framework to take a challenge that arise from the situation of erosion and profit shifting that can occur where potentially multinational groups, tax payers of any sort, they may appropriately apply rules of international taxation. This is more the exception to the norm, and this is certainly the response that's been requested at a political level to try to limit the if he nom no not only of tax evasion but the aggressive tax planning. Where does the business community stand in this work? The business community certainly represented by this very active organization, that is the business industry advisory Committee or business at OECD, that there is the official representation of the business community within the organization.

The BIAC as normally referred to, it is created a year after the creation of the OECD in 1962 and basically the goal of this business unit, it is just to focus on a number of policy areas. We have at the moment 30 policy groups including tax where businesses try on a consensus basis to proactively and constructively input on the OECD work on the significant initiative.

So I think it is very important to again try to cast

away some doubt that at times the perception of governments, tax payer, when it comes to the issues of tax, it is confrontational.

This is definitely not the case.

I will say that specifically on the work on addressing the tax challenges of digitalization, that BIAC is the main proponent of stakeholders advancing a successful outcome and advancement of the work where of course if you can imagine that it is 140 countries sitting around the same table, some of them with an urgent need but not all of them represented officially, sometimes there are areas of friction. Certainly, the work of BIAC specifically in tax is one of supporting inclusive growth for the ultimate goal that the OECD perceives in the fiscal policy, one of nurturing, flourishing cross-border trade and investment.

Certainly, there are I would say two key tenants that generally businesses requires when a project around a tax policy is developed.

Number one, on the one hand, businesses want clear rules, that means rules that are administrable, that do not create a significant over compliance in terms of administrative burden when it comes to fulfilling and complying with tax obligation.

On the other hand, I will say the clear goal, and one of the clear objectives that BIAC is trying to input in every tax project, that is developed, within the OECD Secretariat, it is one of avoiding double taxation.

I would say, and we will see this notion and terminology coming up very frequently in a moment when discussing the OECD project on addressing the tax challenges of the digitalization, the importance ever tax certainty, meaning avoiding controversies in order to avoid if disputes arise and if they arise to solve them in good manner, it is the primary goal that many are trying to achieve, from a government perspective also the more disputes arise, the more significant costs and also ineffective use of resources that the government has to face.

Where is -- how is the business in the OECD, how is the input to the OECD work, as you know, as you may be aware of, the OECD has a specific centre on tax policy and administration called CTPA, that basically covers a full spectrum of the international tax agenda projects and for each of the tax agenda points, there is a specific Working Party that within the OECD is in charge of pushing forward the work.

For instance, the work around tax treaties, it is

certainly one where you have a Working Party producing a number of discussion drafts that are generally publicly available, they're posted in the OECD website and every I would say public stakeholder, not necessarily the one within BIAC can be free to contribute to it.

Generally the work and the input provided, it covers direct and indirect issues and currently focused on an area that are extremely important and specifically for those of you who have a little bit of acquaintance with tax work, this acronym BEPS, it is not a bad word, it stands for base erosion and profit shifting, it was the project that started in 2013 and took two years in order to be initially implemented as a result of the 15 action items that were developed as a response to help governments to find the resources needed to tackle the financial crisis that exploded in 2008.

Some of the BEPS issues, specifically the first action item that was developed in the Action Plan in 2013, at the point, number one, well, I do want to solve the issues associated with taxing the digitalization of the economy. I remember that back then I was representing my country of origin, Italy, as a former tax administration official, I remember that the conversation, they were heated, there were different stakeholders that were involved and indeed it was not possible to find a solution. Why it was not possible to find a solution, because clearly with addressing the task challenges of digitalization we are focused on implementing the overhaul of a tax system that was developed in 1930.

So just to give you a very brief high historical snapshot, as you can imagine, in 1930, the economy was mostly based on brick and mortar activities and nodded on digital activities as we face today in 2022.

I will say that it is rather inevitable to have the tax system somehow updated, significantly updated.

There was no agreement because today according to the current system that we have in place, a government, a country, they can tax the business profit of an enterprise only in instances where there is a physical presence in a specific country.

So if I am a multinational group that provides Telecom service, cloud services in a foreign jurisdiction, and in this foreign jurisdiction, I do not have a branch office, I did not incorporate according to the local domestic laws, I will not be in position to tax the business process that would arise by having a certain subscriber base or user base in that country.

For such a reason, clearly, some of the solutions that were developed in 1930 were not instrumental to respond to the current way in which businesses now run their businesses, their activity today. It has been needed to bring forward some of the work that in 2015 the OECD with the BEPS project only partially concluded and what happened, basically if you allow me, this is just a brief slide focused on the work that the OECD, the Committee objectives that BIAC has in promoting the international tax rules that support the cross-border investment and we have arrived at the so-called two pillar solution and basically I have tried without again giving you too much complication to explain what the two projects are all about. The two pillar solution, pillar one, pillar two, they tend or are aiming at finding an answer, both from a political and a technical standpoint to some of the questions that were left and addressed in 2015 because of the fact there was no political agreement among the countries that were sitting around the table of the taskforce on the digital economy.

As I mentioned to you earlier, because the OECD is a consensus-based solution, if a number of significant countries do not agree on some of the solution we cannot advance in getting new standards.

So first pillar, what we call pillar one, pillar one, they tend to respond to situations where market jurisdictions might have as a business, a significant number of users or subscribers active can tax some of the business profits of a foreign enterprise without being physically present.

So according to the pillar one solution, the goal is to create a new taxing right, this new taxing right would be called amount A, that would allocate a share of the profits of an enterprise for market jurisdiction in situation where certain requirements, certain criteria are met.

Again, let me -- I think this is an important concept to highlight.

According to the current rules, if I am a company that's resident for instance in the United States of America and I'm a distributing service or product in the foreign country without having a physical presence in that specific country in the form of a branch office, for instance, what is a permanent establishment, without incorporating a local entity, the market country where I'm distributing my service, supplying my goods, cannot tax that business according to business tax. Certainly, according to the current roles, I can be ready for that

specific situation in that taxation, as supplying on the electronically supplied services.

I think it is important here that when we think about this type of solution, when you think about taxes, you do not only have to think about corporate income tax, because the GDP, if you look at the percentage of revenue to GDP of every single country around the world, you do not only have to factor direct taxes, but also indirect taxes such as V18. If I'm a streaming company, and I'm providing my video on demand services to a foreign jurisdiction, I am already paying the V168 the service. It pillar one focuses on the direct access. I think it is important that before going into various criteria, why having such a solution is important.

If we do not have such a solution, countries that are often representing market jurisdiction, regulators and most economists thinking about the European -- some notable European Union jurisdiction, such as France, Spain, Italy, or if I'm thinking outside of the E.U. countries like Turkey, India, have already tried to find their own solution to introduce this kind of unilateral measures such as the digital service taxes that I heard that were already mentioned before, that are very detrimental to the fair cross-border trade. Digital service taxes, like any other unilateral measure of similar effect leads to double taxation and why they lead to double taxation, because digital service taxes and other unilateral measure, fees of any kind, they can inevitably not be covered by tax treaties and therefore the cost of everybody doing business will significantly increase. What countries are trying to do right now, they're trying to agree on the key tenants of pillar one by saying good, I will try to retreat and there is the political commitment as achieved in the October of 2021 by the G20 finance Minister meeting in Rome whereby the digital service taxes, other unilateral measures of similar effect will be withdrawn as soon as there will be an agreement around the implementation of the new pillar one.

What is this pillar one requiring? Basically, I'm going to attribute a new taxing right as mentioned before, amount A, that irrespective of whether or not a multinational enterprise will have a physical presence in a market jurisdiction, that market country will be able to tax a percentage of the profits of a multinational enterprise.

We are not, however, talking about all multinationals.

So first of all, it is important to highlight that the

Telecom industry, like any other industry will be in scope of this pillar one solution in so far as certain criteria are met, specifically if a multinational group has a threshold of -- exceeds a threshold of 20 billion euros of revenues on a consolidated basis and to obtain a profit margin that is above 10%, that multinational group will be obliged to pay the percentage of profit to market jurisdiction in a specific amount that will be 25% of profit in access of the 10% margin.

I will spare you all the details on how the very complex way in which this amount will be calculated. I think it is also important if I can provide you -- I see that there is already a question on what are the countries and market criteria that influence and define tax policies. I come back to this question in a moment if you will allow me that.

I think let me provide you with a specific example here. First of all, I would like to show you with an example how this amount allocation will take place.

Imagine that we are having a group revenue, a multinational group that obtains revenues of 50 billion euros. Okay. So we're already above the threshold of 20 billion euros. On top of that, there is another cumulative requirement that has to be that this multinational group in, order to reallocate a percentage of the profit, under amount A, it has a profit margin above 10%, in my example, this multinational group obtains a profit margin of 16%.

According to the current rules, I will have to allocate to the market jurisdiction, in my example, market jurisdiction A, market jurisdiction B, market jurisdiction C, 25% of the 6%, the 6 of%, it is 16% minus 10%, that I will have to reallocate to the market where I have a number of subscribers or users.

First question is, how am I going to calculate the amount A to be attributed to each market.

I think that this is actually one of the questions that some of you have already raised.

The allocation to market jurisdiction would be based on what we call the implementation of a number of revenue sourcing rules.

If the multinational group in my example would derive more than 1 million euro in revenue from that jurisdiction or such a revenue they have hold can be reduced to 250,000 euros for the developing countries that have a GDP lower than 40 billion euros, well I will start to reallocate to this market jurisdiction part of my amount A based on

revenue sourcing rule.

This means that it doesn't matter whether or not the multinational group has a physical presence in market jurisdiction A, market jurisdiction B, or market jurisdiction C because amount A will basically overcome, bypass the current shortcoming of the actual rules, as I mentioned to you earlier, business profits, they can be taxed by market jurisdiction according to the current rules, only if I have a physical presence.

Countries, part of the inclusive framework, they're at the moment working hard to try to find an agreement, not only to determine the technical complication and filing obligation to reallocate this market jurisdiction A, B and C, the percentage of reasonable profit, but it will be also important to determine what would be the countries that we'll have to relive the tax payer from double taxation.

How does this apply to the Telecom industry.

The Telecom industry, it is going to be subject to the rule, the same way that, for instance, the construction industry or the digital industry, in so far as the criteria of 20 billion euro, and 10% of the operating margin, it will be met.

So this is the core of pillar one.

To pillar one, why this project, I would say this first flag, it is so important because this is a pillar one, it is I would say the project were -- the political stakes, they're high in the sense that only if pillar one succeeds in the implementation, by means of a multilateral Convention, then the countries that have currently been employing and are currently introduced the digital service taxes, the unilateral measures would be removed, certainly it will not make much sense from a policy standpoint to have a proliferation of the digital service taxes or other unilateral measure of similar effect in situation where currently we're in negotiations, they're ongoing.

There is a determining of a fixed return for marketing and distribution function that applies to all businesses irrespective of criteria in order to guarantee that not only a market is somehow protected from situation where I also have a physical presence. On the same token, I will also be in the situation to consider the amount of taxes, the market jurisdiction in order to guarantee two businesses the level of tax certainty that is needed as a result of the very significant administrative compliance process that would be a -- pillar one, it is about a revolution of the current international tax system as it was designed 100 years ago. Then we have the second leg of

the project, it is the one that possibly the press has been picking up I would say with greater level of attention, also because the political agreement is somehow already there, it is the introduction of a corporate minimum income tax of 15%, what we call the global minimum income tax against the profit shifting that's generally referred to with the acronym of pillar 2.

In a nutshell, pillar 2 requires that all of the multinational groups that have revenues in access of 750 million euros, so as you see, unlike pillar one, here we have a lower revenue, this new mechanism, it will require the application of the top-up tax, in all of the instances where the effective tax rate in a country is brow the minimum rate that's been conventionally determined to 15%.

The key question here would be how am I going to compute the effective tax rate. There is a specific ratio that's been currently developed by the OECD inclusive framework and for those of you who are interested in approximately one time, the OECD will release publicly a list of all of the provisions around this provision and pillar two that will require as a starting point to calculate the effective tax rate I would have to create a ratio between adjusted taxes, so the amount of taxes that I am paying from a current and standpoint and a denominator, I have the level of income, the financial accounting income on the financial statement.

What will happen here, it is if the rate is going to be below 15%, the country general why have the ultimate entity will be entitled to apply the top up tax, generally under the form of an income inclusion rule, where basically the group and entity will collect the top up tax due from any subsidiaries in a low tax jurisdiction.

Or I can also have as a country the option of introducing qualified domestic minimum top up taxes that would be collected locally in a jurisdiction.

So very simple example. If I'm a multinational enterprise, and I have my ultimate copyright in the United States and I have a subsidiary that's resident in a jurisdiction where the effective tax rate is below 15% and if the United States of America will introduce a provision similar to the income inclusion rule, the United States would be able to collect the top up tax based on the difference between the tax rate that is currently incurred within the market country or in -- where the subsidiary is present below 15% and the minimum rate of 15%.

But it can be also then that the same market where I

have my subsidiary, if the -- if the country will introduce a qualified domestic minimum top up tax, that the country itself will be able to collect locally the jurisdiction that is specific amount of taxes.

So you are all in Geneva, Switzerland, it is one of the countries that is currently working to introduce as of 2024 and it is also changing the Constitution to do that, a qualified domestic minimum top up tax for the very reason of not avoiding or rather to prevent the taxes that would not be taxes, Switzerland would be taxed by another country like the United States in the event that Switzerland would not introduce the qualified minimum top up tax. On top of that, there is another provision called the under tax payment rule, also referred to as under tax profit rule that would function as a backstop mechanism in situations where the country a should apply, there is a top up tax, it would not be able to impose or charge anything because it does not have any system in the income and inclusion rule.

I'm trying here to streamline something that we will discuss here, it could be discussing here for hours.

The mechanism, it is complex. I would say that currently the discussion in terms of implementation by countries on the two pillar solution, it is seeing more advanced level of negotiation and agreement on pillar two, the minimum tax, it is pillar one, the technical conversation is still ongoing. Certainly there is an important political commitment that will certainly push the change in the status quo and obviously the Telecom industry, the TSC industry will not be excluded by that. It is important to start taking proactively that these rules, although they're very complex and they don't need to be discussed, they will certainly be the implementation of one day or another.

Having said that. I would stop here and apologize that I took 9 minutes more than expected and I'm happy to take any questions and I would like to thank you for your attention at this time of the day talking about taxes.

>> AHMED SAID: Thank you for this presentation.

Thank you for the overview and on the two pillars and I think that we needed this information. (Poor audio quality).

>> I apologize, I do not hear you very well. Could you kindly repeat the question, please?

>> AHMED SAID: Okay. Okay. So -- do you hear me well now.

>> GIAMMARCO COTTANI: Better. Thank you. Yes.

>> AHMED SAID: Okay.

With the introduction of this new tax, how do you think that the telecommunication market impacts may vary regarding some economic factors like in developing countries, the resource rich countries, you have comments like that.

How would this -- how do you think that they may impact.

>> GIAMMARCO COTTANI: Certainly, I think there are two elements that we'll address the issue. First of all, I believe that if we look specifically at pillar one, pillar one, it is the political goal of expanding the taxing Rights of market countries. When you think about market country, I'm thinking specifically about the developing economies.

Certainly I think that this can be an element where on the one hand, while the political objective is very clear, that you also need to have a kind of reality check on how administrable this will be also from the tax administration of a developing country.

So for instance, pillar one, amount A, it will require a significant element of multilateralism in terms of exchange of information for tax administration to attach amount A, the Telecom industry like other industry also have to prepare itself to be ready to not only compile, but to also share the information, for instance, around the streams of revenue that they're generating in a market in a way in which the developing countries, again, any -- I would say any government around the world would be able to understand.

Personally there is still a long way to go I think when it comes to the development of a clear, effective administrative rules. This is where BIAC is trying to provide input, just specifically until now we have been working to respond to some of the discussion with OECD to improve the tax framework.

I believe that on the second part of the question, so the impact on the investment, R and D investment, you see often, hear often in the tax world, the question, it is is there enough substance to justify a specific activity, and you would see specifically that in both pillar one, with the return, there is a specific factor called return on depreciation in payroll, or in pillar two, with the substance-based income exclusion, all of the activities that are factoring, impacting in the development in a positive way, with certainly supported by governments. All of the activities that will lead to actual economic real investment, when it comes for instance for the Telecom

infrastructure, the employment of skilled workforce to develop and transform data will certainly be favored by both mechanisms.

Certainly the Telecom industry can play a big factor there.

>> AHMED SAID: Thank you.

I have received a question right now from our audience.

What are the market, the countries, the markets, criteria that influenced, define the tax policies.

>> GIAMMARCO COTTANI: So it is -- it is a very good question. I would say you have obviously when it comes to countries that are, of course, very much invested in the process, you can certainly in the United States play a major role, also because there would be the United States, it would be the jurisdiction that would have to surrender, if you allow me to use this term part of the taxing right over profits in favorable market jurisdiction.

Also you have a number of very important countries around the world, both within the APEC region, the Latin region, within the European Union that's particularly active, and has been particularly vocal, to try to find a balance between what market country cans get and what countries that instead will surrender in terms of amount A, double taxation relief.

When it comes to the criteria, that market countries will be able to use, the main criteria would be connected, sales, the amount of revenue, sales, the users that may be in a country, that will justify the application of a taxing, right.

Certainly you may see that some of the criteria, they're the ones that are unfortunately used in the context of digital service taxes as well.

Generally, this is the main element, I would say the main benchmark that's used in order to have market countries assert their taxing right over amount A on a specific percentage.

>> AHMED SAID: Thank you.

I think we have a hand raised from the floor.

>> Perhaps you have covered it from the last question, with respect to the government, many of those, they're not part of the inclusive framework, but what is the impact in terms of tax that they would be able to collect from amount A of pillar one because the amount that they may get, it may be smaller than what they would be able to collect through a digital service tax that they can apply unilaterally and they can control.

How do you -- do you have an assessment of that? Thank you.

>> GIAMMARCO COTTANI: It is a very good question, thank you for that.

I would say certainly it represents an easy way for countries to collect amounts. Obviously, they're easy to quantify, and generally they're leading to immediate collection. To say that this it is easy to determine.

On the other hand, there have been a number of studies by the OECD specifically around pillar one and pillar 2 that refers to approximately 140 billion euros, the amount it would be reallocated as a of amount A. These numbers are proximate. I guess it is very difficult to give you an exact number at the moment because the rules are currently under debate.

When it comes to again the allocation of amount A, how you would determine amount A based on technicalities such as the marketing distribution, safe harbor, the number can vary. I completely understand where you are coming from and obviously this is the answer that a number of countries are at the moment trying to apply, so let's use digital service taxes to keep certain other jurisdiction around the table, at the moment I think we would be able to answer your question more accurately by the end of the year, beginning of next year, when we are going to have a new more detailed set of rules in place.

Maybe I can tell you what I personally think, although from an administrative standpoint, this may seem as the most appropriate way out, they have a huge problem.

The huge problem, it is that they lead to double taxation. If you have double taxation, automatically there is a disincentive for countries to invest.

I understand that specifically in the current moment that we're living, you know, having a possibility of having easy access to money by governments is very important. I fully appreciate that.

I think having a multilateral solution as it is the one that we're trying to reach out to, it would be in my opinion the most appropriate way out.

I appreciate where you're coming from. It is a very legitimate question and I cannot give you the economist answer right now, I don't have this number other than the high-level approximation, but I can certainly tell you that from a policy standpoint, unilateral measures will be more damaging in the long-term than what they seem right now in the short-term.

I don't know if I answered your question.

>> AHMED SAID: Thank you, Giammarco.

I don't know if there are any questions? I see no more questions on the chat.

Neither have received any questions from the floor.

I think it is fine now. We can close this session.

First of all, I would like to thank --

>> CHAIR: There is one more question here from CIA.

>> AHMED SAID: CIA?

>> CHAIR: Yes.

CCIA.

>> CCIA.

>> Okay. Okay. Yeah. Thank you. Thank you very much.

>> CCIA: Thank you very much for that excellent overview, very clear, very well presented.

I recently saw that Canada has actually introduced legislation to institute a unilateral digital services tax. We were very surprised. We thought there was an agreement not to do unilateral in position of taxes. Can you help explain why you think that they did that, what the prospects are for meeting the deadline they set in legislation for this to be done by January of 2024.

>> GIAMMARCO COTTANI: Thank you very much. Thank you for this question.

I can give you a politically correct answer and a politically incorrect answer.

>> Incorrect, please.

>> GIAMMARCO COTTANI: So I would say that the reason why Canada is going forward to passing that unilateral measure as simply to force some countries to remain at the table of negotiation around pillar one. I think -- I'm not disclosing anything that's coming as a surprise to you that the United States of America specifically has certain representatives in the U.S. Congress have some sort of reluctance/skepticism in understanding why our countries should surrender taxing rights over our profits where the key value added functions are taking place in our country.

Canada, the countries like Canada, many other, they're just thinking, well, if there won't be an agreement, we don't want to wait for too long.

I think your question, it is also raising an important aspect that is where does the technical policy start and when does politics begin.

I think that I like what I have seen in 2015, pillar one, it is clearly driven by politics more than policy. Clearly the solution would be I want a multilateral solution, but if I'm Canada, and I see that I don't find a

multilateral solution, I need to respond to my own citizen.

The same way in which already, you know, some of you referred to 2019 with the European Union, but already in 2016 India was the first country that around the world introduced this levy because they were unsatisfied with the outcome of the action 1 report on the digital economy. Where it will end up, I think that the solution is very clear, the solution is if we do not -- we're not going to be able to achieve a solution by the end of 2023, at least in terms of agreeing on some of the key political tenants of the -- specifically pillar 1. Pillar 2 is going to happen. Then we'll have chaos. Chaos means proliferation of the unilateral measures around the world, double taxation, and possible compromise brief presentation trade retaliation because country, you know, again, possibly the United States, they wouldn't take that lightly, the fact that it is a market country introducing a provision that's outside of the scope of tax treaties and lead to a detriment of some specific industries.

I think it is in the interests of everybody here to try to come up with the possible solution that is also administrable.

I come back to the-point that Ahmed Said had said earlier, a big contributing part, we all agree on the rational, we want to put the tax administration of the developing country, in the position to be able to administer very complex rules.

>> AHMED SAID: Thank you again for your answers.

I don't think that there are remote questions now.

>> CHAIR: From the room here, no.

>> AHMED SAID: Not from the room or the chat.

I think we can thank everybody and thank TSB for allowing us to have this important session.

Also I would like to thank Giammarco Cottani for his good presentation and actually his informative session and the value that we received from his expertise in that area.

I would like to thank all of the audience for attending this session. Also I would like to thank TSB for preparing this important session.

Thank you, everyone. I will give the floor now to TSB to continue.

>> CHAIR: Thank you for having this excellent session.

At the end of today, we ran a bit over time. Sorry for that. We all benefited from taking home the results of the discussion today. We have heard a lot of information, there is no more session for today.

Tomorrow we start at 11:20, the first session which

has been moderated by myself on the multinational aspect.

So with that, I close today the activity and I wish you a good evening, a good day, a good night and hope to see you back tomorrow in this workshop again.

Thank you very much.