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CHALLENGES AND OPPORTUNITIES FOR AFRICA'S NEXT DECADE

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DEWS: Welcome to the Brookings Cafeteria, the podcast about ideas and the experts who have them. I'm Fred Dews. Today's episode features my interview with Dr. Brahim Sangafowa Coulibaly, Senior Fellow and Director of the Africa Growth Initiative at Brookings. About the Initiative's new report *Foresight Africa*, top priorities for the continent 2020 to 2030.

In the conversation, he addresses some of the report's key findings including progress toward the sustainable development goals, job creating on the continent, new strategies to address the impacts of climate change and the effect of the fourth industrial revolution on African countries.

Also on today's show, Jenny Schuetz, a Fellow in the Metropolitan Policy Program addresses the rising housing costs across the country and how to make housing more affordable.

You can follow the Brookings Podcast Network on Twitter @policypodcasts to get information about and links to all of our shows including *Dollar and Sense*: The Brookings trade podcast, *The Current*, and our events podcast. And now on with the interview. Coulibaly, welcome back to the Brookings cafeteria.

COULIBALY: Thank you, Fred.

DEWS: So, as I said in the introduction, we are talking about the Africa Growth Initiative's new report *Foresight Africa*, top priorities for the continent, 2020 to 2030. This is by my count the 10th annual *Foresight Africa* report from the Africa Growth Initiative so congratulations on that. In your introduction to the report, you

call it a special edition. How is it special?

COULIBALY: All right. So, this edition is special in the sense that we are focusing on the next 10 years. In previous editions we focus only on the priorities for the next year but we thought it was important to take a step back from the year to year coverage and kind of focus on some of the mega trends as we see them affecting the continent. And also what challenges that can bring to policy makers as well as what could be some opportunities for them to take advantage of while managing the challenges that the trends could bring.

DEWS: And I'll also note, I don't know if it's a coincidence, 2030 is the year when the sustainable development goals from the United Nations, that's the aim of the SDG's which we will get to in a moment.

COULIBALY: Mm-hmm.

DEWS: Is that a coincidence or is that part of the thinking here?

COULIBALY: No, that's exactly right. We also thought that it was an opportunity then to take stock as to where they stand in terms of the progress towards SDG's now having been like one third of the way through them. And then what it might take in terms of recalibration of policies to make sure they achieve their targets.

DEWS: All right. We will get to that in a moment but you also write at the beginning of the report and I'm going to quote you. Never before has the region been better primed for trade, investment and mutually beneficial partnerships. What are some of the factors in Africa right now that are making this possible?

COULIBALY: Well, so I think the first factor to note really is the overall economic environment is very positive. We have seen economic growth that's been really strong and if you go back to say the year 2000 and you look at projections say through 2024, you would have had like one third of the African countries growing at a rate of five percent or higher. So that's a quarter century of really solid economic growth.

Going into the next five years, seven of the 10 fastest growing world economies will be on the continent. So that's a very positive macroeconomic environment. But we are also seeing a lot of improvements in terms of governance. We are seeing improvement in business environments. It is very often we see most African countries you would notice that the top 10 best performers in terms of doing business tended to be on the African continent, half of those top 10 performers.

You also notice that there is a lot of enthusiasm and progress toward regional integration where now they are going to knock down barriers to create and then facilitate free movement of people as well as the transport linkages. So all of that provides really a catalyst for Africa again to tap into its potential.

DEWS: I will just say for listeners that the report Foresight African which you can find on our website, Brookings.edu, is full of really incredible data graphics and information and also the way it's structured, it's a multi author report. There are expert authors from Brookings, expert authors from outside Brookings who are contributing in all different areas to this report. Do you want to say anything more about the structure of the report, the nature of the report?

COULIBALY: Well, so it basically has six overarching chapters, right. In the first one we touch on the sustainable development goals where we kind of take stock as to how much progress has been made so far and where could there be some challenges and where do they need to recalibrate the policies.

And then in the second chapter, we address the issue of governance which is central and very critical. The third chapter looks at the issue of the demographic trends and how can they contribute to more structural economic transformation for the continent. With the youth bulge that the African continent has, what are the strategies to be able to benefit from that demographic (inaudible).

And then in the next chapter, we looked at the challenges caused by climate change which is really big and a critical issue for the continent, for the global economy in general, but even more so for low income countries including growth in Africa.

And then the fifth chapter looks at the fourth industrial revolution and asserts that how it's important for Africa to capture that fourth industrial revolution through the new technologies that are now available and how they can be utilized to achieve development solutions.

And the final chapter there looks at the issue of regional integration and what progress has been made so far and what are some of the benefits for achieving this regional integration by 2030 and how an integrated Africa then can position itself to interact and deal with external partners.

DEWS: Well, let's go into a few of these major themes.

COULIBALY: Yeah.

DEWS: Let's start with the sustainable development goals. I'll quote again from the essay on the SDG's where it says that progress so far in the SDG's has been notable but falls significantly short. Can you first just remind listeners what the SDG's are?

COULIBALY: All right. So SDG's stand for sustainable development goals. It's a global initiative led by the United Nations which provides some time bound targets in various sectors of human socioeconomic developments that countries agree to achieve by 2030. So if you will, it's sort of like a blueprint to achieve a better and more sustainable future for all by 2030.

We have 17 goals, it has multiples targets. But the SDG's do not really say how you do it. So that is left up to the countries to come with their own strategies on how they will achieve those SGD targets.

DEWS: So in what way has progress in Africa on SGD's been notable?

COULIBALY: Progress is notable in a number of areas. Let me touch on a few. First is if you look at the primary school enrollment, there is a target that all countries should achieve 100 percent by 2030. Half of African countries have achieved 90 percent coverage and are on track to meet the 100 percent target by 2030.

We are also seeing improvement in some service delivery areas. For example access to clear water is improved. I think from 59 percent or 61 percent. Same with access to electricity, that has gone up from 39 percent also to 45 percent.

The under-five mortality, we have as seen improvements there where it's dropped from say 85 per 1,000 to 76 per 1,000. So while it is still below the global average which is at a little under 40 and is significantly below the target. So those are notable progresses but there's still some ways to go.

DEWS: And those are examples of ways progress has fallen short. Are there other, more significant ways that progress on the SDG's has fallen short of expectations?

COULIBALY: Right. So the ones I listed are places where we have seen improvements. But then clearly we still have what, 10 more years to go so but the places where its fallen short clearly would be on the first SDG target which is poverty eradication. It's aiming for extreme poverty to be cut to zero by 2030.

But what we are seeing indeed is there has been a reduction in the poverty rare but the number of poor has not declined. And in some countries in fact it has gone up and the continent is home to an estimated over 400 million people living in extreme poverty. And by our own estimations, unless policies accelerate the effort to eradicate poverty, the continent will still be home to close to 400 million people living in extreme poverty. So clearly that's an area where more and more progress needs to be made and where the continent is falling behind.

But what I would mention is to keep in mind is when the SDG's were adopted in 2015, it coincided with a time when the African countries, many of them were struggling with a large (inaudible) shock that had just hit in late 2014. So what that has done is to basically divert the resources toward crisis management, et cetera.

And I suspect that has contributed to lack of significant progress on the SDG's. But now with much of that crisis having been contained and managed, hopefully we can now see significantly more progress on the goals.

DEWS: And when we talk about Africa as a whole, we are thinking on a continental scale but obviously we know its home to over 50 individual countries. Can you talk about in which countries do you see gains and gaps in achieving the SDG's?

COULIBALY: Right. So the Foresight report tries to go into this and kind of rank countries in terms of how much they have achieved so far and how much is left to go. You can see countries like (inaudible) or say the Seychelles for example or Cabo Verde and they're further along say compared to their peers. While other countries notably say Chad, South Sudan or the Democratic Republic of Congo, they still have really a lot more ground to cover.

DEWS: I'll just again, remind listeners that in the report there is charts that demonstrate this quite effectively.

COULIBALY: Yes, indeed.

DEWS: You know, one thing I noticed, Coul, throughout the entire report, and I know its super important for almost every issue but it comes up in the SDG section because that's the first section is this question of governance?

COULIBALY: Yes.

DEWS: It's a theme that we see over and over again. Why is governance such a critical component in making progress on the SDG's?

COULIBALY: Well, governance is very critical because I kind of sort of see it as this social contract really between the government and the people to deliver and to look after their well-being, their social economic development.

It encompasses obviously different facets of it. We have democracy, it's also touched on efficient allocation and management or even of the resources, inclusion, economic inclusion, peace and security, all of which are important for the ability to plan and to execute an economic agenda.

And the other extreme then if you have poor governance, not only would it fail to achieve progress but it can actually lose some ground in terms of the progress that you have already achieved.

So it's not too surprising that the countries that we just listed as being countries where progress has not been as great, countries that are struggling with a state fragility which is really a case where governance issues are most acute.

DEWS: You, yourself contributed a piece on financing Africa's sustainable development goals and it's another critical component and you write in your piece that sub-Saharan Africa will need \$574 billion per year until 2030, so for the next 10 years, to finance the sustainable development goals.

COULIBALY: Right.

DEWS: Does Africa even have that financing? If it doesn't, how does it get funds to fill that kind of gap?

COULIBALY: Right. So, the \$574 billion number every year, I just want to clarify this in 2015 dollars. It's a real number.

The answer to your question is yes and no. No, because currently the domestic saving rates on the continent is very low and domestic savings tends to be the first source of sustainable financing for economic development. I think for Africa it is still like below 20 percent say on average where the needs are much greater than that.

I say yes also because the continent does have a lot of resources that it can mobilize to go a long way toward achieving its financing needs. If you look at for example, tax revenues, we have calculated that by just improving governance around tax or revenue collection and becoming much more efficient. Ceiling leakages, et cetera, they can mobilize over \$90 billion a year in addition to what they're already bringing in.

There is also scope to improve taxation capacity. Because there is a lot of informal sectors that dominate the economies but over the next 10 years, we expect them to be able to reduce that informality which will contribute to widening little bit of tax base and that can bring in an additional \$44 billion or so in tax revenues.

And then you have the issue of multi-national corporations that are engaging in some profit shifting schemes that actually allows them to avoid paying some taxes and a lot of international initiatives to kind of combat that form of practice. And the calculations are that if Africa if they successfully do it there could be another over \$20 billion in additional revenues that the governments can have.

And then you have illicit capital flows through the content that are estimated to be sizable. Some recent estimates put it at \$80 billion or so. And then there is

natural resources where governance there can be improved and by improving governance there will be more revenues to contribute to economic development.

So when you add all of those up together, it begins to really substantially narrow that funding gap and what's left by our calculation will just be around 10 billion or so and that for example one can count on external financing to be able to block the remaining gap without creating any sort of debt and sustainability issues.

DEWS: Where does this external financing come from? Is that from the IMF, World Bank, overseas development assistance from various governments?

COULIBALY: It could come from various sources. It could come from overseas element assistance, although we have seen that has been declining of late. There is still some there to be had. And the African countries now have the capacity to tap into the capital markets and some of them have done that so that could be another source if it's done with all the prudential management requirements that needs to go with borrowing with capital markets, that could be an important source of revenues. From also development partners, you mentioned IMF, there could also be the World Bank, et cetera.

DEWS: Let's move on to the theme of demographics. One of the big issues in demographics is as you mentioned earlier the youth bulge. We are talking about jobs and the absorption of people into the job market. The authors of the piece talk about a structural change taking place in Africa that's different from the historical experience of industrialized countries and in modern East Asia. What is the change and how is that different?

COULIBALY: So, first, let me perhaps explain a bit what they mean by the historical change that we have seen. So usually most economies start out being agricultural economies so that dominates economic activity and then at some point they move on to develop the industrial sector, mostly manufacturing. And then later on then they graduate and then move on to become service economies. So that's been the historical pattern.

But for some reason they are becoming a bit more difficult to actually develop the industrial sector. I can give you some numbers. For example, you look at the share of labor that industry or manufacturing could absorb back during the late industrializers of Britain, U.S. it could be as high as 30 percent or more. But nowadays you're lucky if you are able to get 15 percent.

And in Africa's case in particular, labor and industry has flattened out over the past decade or so to around five, six percent. So then what we are observing is that labor is moving from agriculture but then going straight into services and bypassing the industrial sector.

Now going in through your high productivity services sector, they're going into the low productivity sector, some even with productivity lower than in agriculture. So that movement of labor then is not occurring at a productivity premium, the kind you would need to really accelerate economic transformation.

DEWS: And what kinds of sectors, what kinds of industries are these?

COULIBALY: Mm-hmm. So what we tried to do basically is to ask ourselves whether they are some sectors indeed besides industries that can provide

that path towards structural transformation. And we have identified a few. Notably, agri processing, auto culture, tourism and certain ICT based services. And those for lack of a better word we have called them industries without smoke stacks.

DEWS: Industries without smoke stacks.

COULIBALY: Yes.

DEWS: High walls.

COULIBALY: And then, yes. Exactly. And they do share the same characteristics as manufacturing, at least the ones, characteristic that are elevate for economic development.

Notably they're tradable, right, so you can sell as much as you want without being confined by the weak consumption capacity of your local economies and then the benefit from technological transfers so productivity can continue to rise with global trends and then we can continue to increase wages.

And then the third and critical element is that they are also able to absorb large numbers of moderately skilled labor. And for Africa, that is really the critical feature. So those sectors we have identified as having the potential to check those three boxes and basically become another part of the Africa strategy to a more structural transformation in the face of the challenges to developed industry.

DEWS: I gleaned from the report that not only will this attention to industries without smoke stacks be a way to think about the absorption of the youth labor bulge but also is beneficial to women workers in particular. Can you talk more about how this lens and how this development is beneficial to women and youth in particular?

COULIBALY: It's difficult overall to -- the labor market is difficult in Africa overall for all those seeking jobs. Right. But in particular, it's more difficult for women and the youth.

But then what we find is that this industry without smokestacks that we have identified, at least based on the preliminary case study for South Africa is that they tend to be, employ more women and more young people. For example for young people we are looking at the 43 percentage the fifth percent and that's without smokestacks compared to 34 percent in the other industries.

And then for women, 42 percent in industry without smokestacks compared to 33 percent in the other sectors. So these are sectors that also not only are there development escalators, similar to manufacturing, but they are also inclusive in a sense of being more favorable to young people and to women. And that's why we think that's even a cherry on top of the cake.

DEWS: Well, having identified this framework for looking at these sectors of employment, these industries without smokestacks, where do you go from the analysis of describing this is what we see, this is the potential, to the kinds of policies that African nations, that the continent, should take in developing these kinds of industries over more traditional industrial manufacturing for example.

COULIBALY: Right. So the first thing we are doing is actually to complete a set of 10 country case studies across Africa that would actually assess for each of those countries first of all which are the industries without smokestacks that are within their comparative advantages and then number two, what are the enabling

environments in terms of constraints that they need to address to be able to allow those industries to flourish.

And finally, how many jobs can those industries generate? And what will it take to make young people more employable in those sectors?

So I think once we have those results, then we are working in partnership with local think tanks who are also partners with their own local governments so we see this as indeed informing some of the natural strategies on the youth, you know, youth employment.

We want to be clear, that we don't see the industry without smokestack as a substitute for traditional manufacturing. We are just saying that you need to recognize that it's becoming increasingly difficult to develop manufacturing but you should still continue to pursue that strategy where opportunities exist.

But given their limitations, you might want to consider also these are the sectors that we are calling industry without smokestack so in the end you have then a multifaceted approach to your development strategy. That tends to get a bit lost sometimes in the communications so I think it's important to emphasize that.

DEWS: We'll take a quick break here for another edition of Metro Lens with Metropolitan Policy Program Fellow Jenny Schuetz.

SCHUETZ: In the 10 years since the Great Recession, housing costs across the U.S. have risen faster than incomes. From New York to Austin, Texas, to Boise, Idaho, paying the rent takes a larger chunk of people's paychecks than it used to.

Hello, this is Jenny Schuetz. I'm a fellow in Brookings Metropolitan Policy

Program.

Elected officials across the political spectrum agree that housing is too expensive. But there is disagreement over who is to blame. Economists argue that local governments have adopted regulations that make it too difficult to build new housing.

Left leaning politicians like Bernie Sanders blame corrupt real estate developers off driving up prices. So which is it? Who really pockets the profits from building or not building new housing?

To answer that question we need to understand how regulations change the process of building homes. Real estate development is a risky business. Regulatory barriers make it riskier. Let's take a typical example.

A developer buys a piece of farmland at the edge of a city and wants to build a subdivision of single family homes. First, she has to ask the local government's permission to rezone the parcel from its current use, agriculture, to residential. The local government can grant the developer's request, deny it outright or grant it with modifications.

Say the developer asked to build 500 houses. The government might agree to rezone the land but will only allow 250 homes. That entirely changes the economics of the project.

Getting the land rezoned is just the first stage. Then comes an environmental impact review to assess effects on traffic, wildlife and soil erosion. Local governments require developers to build new infrastructure; roads, sidewalks, water

and sewer lines. All of this has to happen before construction on the first house can begin.

Each step required by local governments during the land development process has a purpose but there are costs associated too, fees for lawyer and consultants as well as the construction itself. These costs may reduce developer's profits or may be passed along to the people who will buy the new homes.

If we want housing to be cheaper, we need to allow homes to be developed faster. Most of the expenses of real estate development like buying land and dealing with regulations happen at the beginning of the project. The developer doesn't start earning income until construction is finished and the new homes can be sold.

It's not unusual for a large housing development to take 10 years from start to finish. Regulations that drag out the process mean that the developer will have to charge higher prices for the finished homes.

Local governments write the rules of the real estate game, then developers and investors choose whether or not they want to play. Some local governments have more complicated regulations than others. California and the Northeast Corridor are among the most tightly regulated markets.

So why would developers choose to build homes in California if building in Texas or Arizona is easier? It comes down to financial tradeoffs. Investors will only commit their time and money to risky projects if they anticipate higher returns in the land. That goes for developers, as well as for the bank and equity investors that provide most of the funding for housing development.

One way that regulatory barriers may drive up rents is through a process called upward filtering. In places where new construction is too difficult, developers and investors may choose instead to buy older existing apartment buildings, renovate them with shiny new kitchens and baths, then charge higher rents for the rehabbed apartments.

This process is particularly bad for affordability because it makes existing homes more expensive without creating any additional supply.

Developers, landlords and bankers aren't the only ones who profit from regulatory barriers. The largest group of beneficiaries from restricting housing supply aren't for-profit corporations. Homeowners who were lucky enough to buy houses 30 years ago in communities like San Francisco and West Chester County, New York have gotten a lot wealthier just by staying in place.

Small wonder that the home owners in these communities exert their political muscle to block new housing development in their back yards. Mayors and governors across the U.S. and even some presidential candidates are grappling with how to make housing more affordable.

Our housing production system is so complicated it's difficult even to reach a shared understanding of the problem. Making the development process simpler, shorter, and more transparent would be a good start.

DEWS: So let's turn now to the impacts of climate change. And when we think about climate change, it can be at the foreground or the background of any of these issues we have talked about already.

COULIBALY: Yeah.

DEWS: The section in the report talks about climate change threats but also as an opportunity that African nations can prioritize. It's almost counter intuitive to think about policies to combat climate change in a world where United States and China and the European countries, industrialized countries have created all the emissions and yet it sounds like African nations, you're suggesting African nations have an opportunity to do a lot in terms of meeting the threat of climate change even though they're not the ones who have contributed so much to the overall problem.

COULIBALY: Mm-hmm.

DEWS: So what are the threats in particular of climate change to African? What are some of the specific ways that climate change threatens Africa?

COULIBALY: Well, no, I think the threats of climate change throughout Africa are sort of numerous from droughts, for example to cyclones and to floods, et cetera, which all threatens the livelihoods, in particular, food security.

I think you're right that if really fairness was the issue, the onus of combatting climate change will rest almost entirely with the advanced economies. But the reality is the African countries being primarily agricultural economies are more exposed to the effects of climate change. They threaten the livelihoods there more than anywhere else for example.

So from that vantage point, global actors should have really tried to push a bit harder to mitigate climate change because it's really a global common good. But there is also things that local actors can do and that is what African nations have also

begun to do. Because besides combating climate change, there is also economic opportunities in going toward renewable energies and they're moving to take advantage of some of those opportunities.

Take the case of Morocco for example. They have the world's largest concentrated solar facility to achieve a goal of say 52 percent renewable by 2030. South Africa last year introduced a carbon tax that is going to cut the emission by one third, say by 2035. And Nigeria is also listed as a country that has a plan to shift to renewable energy to the mix of about 30 percent by 2030.

So it is not only helping with the environment for them but it's also generating new types of jobs and economic activities that they all benefit from.

DEWS: This is what you might call the new climate economy --

COULIBALY: Yes, exactly.

DEWS: -- in the report.

COULIBALY: Exactly.

DEWS: There is another section in the report that talks about some vulnerabilities in Africa in coastal areas --

COULIBALY: Right.

DEWS: -- which was relay interesting. Can you talk about that particular aspect?

COULIBALY: So the low elevation coastal areas in particular are highly exposed because for them it's really an existential threat, the issue of climate change. By the estimates of our experts, with an estimate of our experts by the turn of the

century if we go with a business as the usual we can see sea levels rise by as much as 100 centimeters. So clearly you can see how that exposes the low elevation coastal areas.

But in Africa's case, the density in those areas is ready high. In Nigeria for example you have a little under 500 habitants per square kilometers which is three and half times the density elsewhere. And populations are obviously attracted there because of the economic activities that tend to happen in those coastal areas, in the coastal zones.

And population projections are that it is going to grow by 3.3 percent per year through 2030 whereas the Africa population growth is around two and a half percent. So we are expecting more concertation of population in those areas. More concentration of economic activity in those areas but yet they are the ones that are most exposed.

DEWS: One of my takeaways, and please tell me if this isn't quite right, is that not only do African nations have a unique opportunity to engage in the new climate economy, for its own good, for job creation, because it's a global good as you say, even though we know most African nations didn't really contribute to what we see today at the bulk of emissions around the globe, but also climate change is a significant factor in undermining or contributing to state fragility in causing food insecurity.

And these are factors that African nations also have to deal with as they are trying to commit to meeting the sustainable development goals for example. So it all

kind of fits together in a cycle there.

COULIBALY: Yeah, no that's exactly right. And if you look at even the case of Lake Chad, where Lake Chad's waterbed was say 25,000 square kilometers in the 60's, nowadays it's like 2,500. So it's only down to one tenth of what it was those decades ago.

So what that has done then is create scarce resources there for different types of populations which is bringing in conflict between herders for example and farmers struggling for those resources. And it's threatened the livelihood of about \$50 million people and contributing obviously to the state of state fragility.

DEWS: Well, let's move on to another major theme of the report and that's the fourth industrial revolution. I remember when I was a kid in school I learned about the industrial revolution. Now I'm coming to find that there have been a couple more since and now we are in our fourth industrial revolution.

COULIBALY: Mm-hmm.

DEWS: Can you plain to the listeners what is the fourth industrial revolution and what were the other ones?

COULIBALY: So the fourth industrial revolution usually refers to the fusion say of the digital, the biological and the physical world and its characterized really by the growing normalization of technologies like artificial intelligence and a lot of things, 3D printing, block chains, et cetera, and other advanced wireless technologies.

By the first three we usually have in mind the invention of the steam engine

was one of the industrial revolution followed by the invention of the internal combustion engine that facilitated the development of heavy industries.

And then in the latter parts of the 20th century personal computers, the internet together fascinating a digital revolution. And now the fourth industrial revolution is basically a more advanced phase of that with the technologies like I mentioned earlier like artificial intelligence, internet, all things and 3D printing, et cetera.

DEWS: So how does the fourth industrial revolution interact with the themes that you're talking about with respect to Africa over the next 10 years and beyond?

COULIBALY: Right. So I think the fourth industrial revolution is actually providing technological solutions that have the scope to address a lot of the development challenges that we have mentioned. And I think that is where the authors really thought it's important to outline why it's urgent for Africa to do more to capture that fourth industrial revolution.

DEWS: Well, I'll quote from the paper that so far it does not appear that Africa has yet claimed the 21st century as it still lags behind in several indicators essential for a successful digital revolution. So Africa has not claimed the 21st century. Why not?

COULIBALY: Well, fist because we are still very early in the 21st century so I would say so far but I think what the authors were observing basically is some Africa lagging behind on some key information, communication technologically

development indicators that kind of lay out the groundwork for being able to capture the fourth industrial revolution.

If you notice access to internet in Africa is the level around 20 percent versus 43 percent also in other developing countries, and even as high as 80 percent in the rest of the world, all the advanced economies. Africa is only using I think one percent of the global internet bandwidth. And the investment in digital infrastructure is only about one percent of GDP whereas it's over three percent of GDP in advanced economies.

Similarly they're lagging behind in some important digital skills development area which are critical for capturing the fourth industrial revolution. So a survey was done that we also shared in the report. A firm asking how prepared they are for the fourth industrial revolution and there the statistics basically with that they were not as well prepared as they would like to be.

But the authors also recognize and highlight a significant progress that's being made on the continent and by their projections, some of this internet access gap that we mentioned is going to narrow substantially. I think currently we have a 55 percent gap in terms of access, Africa compared to advanced economies, and that's going to narrow to under 20 percent by 2030.

And they are also highlighting how Africa is actually have the highest penetration rate. It has risen I think about over 100 fold whereas it hasn't even doubled in other areas. And Africa is a leader in mobile banking where 2018 I think half of or more of all mobile banking accounts were in Africa. So there they're sort

of bypassing the traditional brick and mortar type banking system and going straight into the mobile banking.

So these are all encouraging signs that Africa is ready interested in utilizing these technologies. But the author's main point really is that despite many of these success cases, and there are many more of them that we highlight in the report, what is missing currently is being able to scale it up so we can be very transformational. And that scaling up would be centered around three core areas.

First is to bridge that digital infrastructure gap. Second is to be able to bridge that digital skills gap as well and then invest a lot in research and development and technology.

DEWS: I mentioned earlier that all the authors are experts and there is lots of them. One of them in particular I'll mention in this section of our conversation is Cyril Ramaphosa. He's the president of the Republic of South Africa and he proposes a national strategy for what he calls harnessing the fourth industrial revolution, particularly in his country in South Africa.

What kinds of policies does a country like South Africa that has some challenges need to do to claim the 21st century? Or at least start to claim the 21st century.

COULIBALY: Well, the first thing to note is that the very fact that south Africa under his leadership has decided to actually put in place a presidential committee to study the fourth industrial revolution, to study the opportunities and the challenge that that can present is a first step all nations should take.

And then out of that, that committee is made up of scientists, different stakeholders, academics, social scientists, cyber security experts and it's their task then to identify the opportunities as well as the threats that are posed by the fourth industrial revolution and suggest solutions which in turn will inform a national agenda.

And that's what we would like to see a lot of these African countries take. Opportunities and challenges will obviously vary by country depending on the type of economies they have, their structures, their comparative advantages, but the most important thing is to have that study that establishes where you need to focus your efforts and what risk you need to be, need to be mindful of with this fourth industrial revolution.

Because it's obviously going to be disruptive. It will disrupt all sectors. It will disrupt activity in all countries. The question is how we are responding to it. And I think that was for them a first step and among the things they have identified as priorities, is indeed they are going to roll out quickly the 5G technology which will be very critical.

And then they've identified some high growth sectors that they're going to try to support with the use of fourth industrial revolution including agriculture, mining, manufacturing and also assess how it's going to affect workers and then how, what responses they need to be able to shield them from the adverse consequences of those technologies.

DEWS: Well, Coul, we have talked about a number of issues but certainly

not all of them in the Foresight Africa report. So as we close, what else do you want listeners to know about challenges and opportunities you and your fellow scholars see for Africa in the coming decade?

COULIBALY: Yeah, so some of the key challenges that we haven't really talked about that I see forthcoming really would be the issue of the sustainable financing for economic development and there's a lot of discussion about possibly the region facing a systemic debt crisis, primarily because we have seen high increase in debt to GDP ratios recently as well as in the debt servicing, servicing costs.

It is indeed an important issue for policy makers to keep in mind because the financing needs are going to grow and in the quest for resources to finance them that they are financing it in a way that's still able to preserve macroeconomics stability.

I think that would be one of the critical challenges but if they do follow some of the strategies to further push ahead with increasing more of the domestic resources that would alleviate the pressure from having to resort to debt to finance their economic development agenda. So I see that as being an important challenge going forward.

DEWS: I'll also remind listeners that they can find this report on the website and if they want to dive even deeper, there is all kinds of papers and reports at the Africa Growth Initiative plus all previous nine Foresight Africa reports. And Africa Growth Initiative just held at Brookings an event to dive into this report.

What do you do next? What does the Africa Growth Initiative do next in

terms of promoting the ideas and the research in this report

COULIBALY: Throughout the year and that's a, even the decade we'll continue to leverage the reports to promote sound policy making to address some of these issues. But immediately next week we are going to Africa to launch the report there in partnership with some of our local think tanks.

We will start out first in Kampala next Thursday and then on Friday we will be in (inaudible) and then on Monday, the following Monday we will be in Dakar, Senegal.

DEWS: Well, Coul, I want to thank you very much for taking the time today to talk about this research and I hope you have a very excellent trip.

COULIBALY: Thank you. Thank you, Fred.

DEWS: You can find the report Foresight Africa, top priorities for the continent 2020 to 2030 on our website, Brookings.edu.

The Brookings Cafeteria podcast is the product of an amazing team of colleagues starting with audio engineer Gaston Reboredo and producer Chris McKenna. Bill Finan, director of the Brookings Institution Press does the book interviews and Lisette Baylor and Eric Abalahin provide design and web support. Our intern this semester is Amelia Haymes. Finally, my thanks to Camilo Ramirez and Emily Horne for their guidance and support.

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