The Africa Polling Institute (API) is an independent, non-profit and non-partisan opinion research think-tank, which conducts opinion polls, surveys, social research and evaluation studies at the intersection of democracy, governance, economic conditions and public life. Their main objective is to produce and disseminate credible opinion research data to support better decisions, public policy, practice and advocacy in sub-Saharan Africa.

Acknowledgements

This report was written by Ana María Rodríguez Pulgarín and Teddy Woodhouse. Additional comments and suggestions were provided by Nathalia Foditsch, Carlos Iglesias, and Radhika Radhakrishnan.

This document is an output from a project funded by the Internet Society Foundation. We are grateful for their support.

The survey within this report was conducted in partnership with the Africa Polling Institute. The authors also wish to thank the interviewees and focus group participants from Côte d’Ivoire and Nigeria who contributed their time and insights to help inform the analysis and recommendations of this report. Fieldwork was conducted by Jemila Abdulai, Audrey Ehouman, and Temitope Ogundipe. Any errors remain the authors’ alone.


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The Alliance for Affordable Internet (A4AI) is a global coalition working to drive down the cost of internet access in low- and middle-income countries through policy and regulatory reform. We bring together businesses, governments, and civil society actors from across the globe to deliver the policies needed to reduce the cost to connect and make universal, affordable internet access a reality for all.

The World Wide Web Foundation was established in 2009 by web inventor Sir Tim Berners-Lee and Rosemary Leith to advance the open web as a public good and a basic right. We are an independent, international organisation fighting for digital equality — a world where everyone can access the web and use it to improve their lives. The Foundation holds the secretariat of the Alliance for Affordable Internet.

The Africa Polling Institute (API) is an independent, non-profit and non-partisan opinion research think-tank, which conducts opinion polls, surveys, social research and evaluation studies at the intersection of democracy, governance, economic conditions and public life. Their main objective is to produce and disseminate credible opinion research data to support better decisions, public policy, practice and advocacy in sub-Saharan Africa.
Executive Summary

This West Africa Regional Report builds on the Costs of Exclusion report, published by the Alliance for Affordable Internet (A4AI) and the Web Foundation in October 2021.

This report provides qualitative evidence of the economic impact that digital technology has on women’s lives — and the economy at-large — based on eight interviews with women entrepreneurs in Côte d’Ivoire and Nigeria, focus groups of women who use the internet in both countries and in Ghana, and a telephone survey of over 1,000 Nigerian women.

The Cost of Exclusion Report estimates that 32 low and lower-middle income countries around the globe have lost $1 trillion USD in gross domestic product (GDP) over the past decade due to the digital gender gap. And it forecasts that, without action, another $524 billion USD will be lost over the next five years if countries fail to tackle this gender gap.

$18.4 billion USD
We estimate that the seven West African countries included in this model missed out on a collective $18.4 billion USD GDP in 2020.

To realise the full economic opportunities of digital inclusion, there is an urgent need to close the digital gender gap. This report illustrates both the opportunities for and barriers to digital inclusion for women in West Africa.

Key findings:

1. **Women’s awareness and use of the internet continues to grow, although there are clear gaps to overcome before universal internet access can be achieved.** Device gaps remain a crucial barrier for women, even those who have overcome the negative social norms around women’s use of ICTs.

2. **Internet access enables participation in society.** Women with internet access report being more confident in finding information and conducting a wide range of activities, including education, health, employment and political engagement, than their offline peers.

3. **Once online, women are using the internet for financial benefit.** Women with internet access are more confident when it comes to finding better prices, setting up a mobile money or bank account, and finding professional services.

4. **Women are both consumers and producers of online content and services.** Women are entrepreneurs and content creators across a wide range of economic sectors. New business models and flexible ways of working are emerging with greater use of ICTs, and many women in West Africa are already taking advantage of the possibilities — when they have access to the tools, technology, and support they need.

5. **Internet access has provided support for social and economic resilience for women during lockdowns.** Nigerian women with internet access were less likely to report having lost income over the course of the Covid-19 pandemic than their offline peers.
Serious barriers to digital gender equality remain

- Affordability of devices and data allowances, second-hand devices with limited functionality, wage gaps, fears around privacy and security, and a lack of literacy and digital skills all contribute to keeping women offline. Negative social norms that discourage women and girls from using technology are a further barrier to their participation in the digital economy.

- Digital gender inequality has an economic cost. This cost is borne by the women and girls who are disproportionately excluded from the online world, but also by us all in the form of lost economic activity and weaker growth. Governments looking to use ICTs to grow their economy must focus on closing the digital gender gap so that women have the same opportunities to participate as men.

It is time for governments to convert possibilities into action. Echoing women leaders who gathered at the Africa Summit for Women & Girls in Technology, this report calls upon policymakers to REACT and close the digital gender gap by focusing on rights, education, access, content, and targets holistically.
Digital gender inequality has an economic cost

Only 51% of the world’s population is connected to the internet. As a consequence of a number of gender-specific barriers, women’s levels of connectivity are even lower, and women are disproportionately excluded, with men 21% more likely to be online than women globally, rising to 52% more likely in Least Developed Countries.¹

Connectivity rates fall even lower in certain regions. Across Africa, only 29% of the population has internet access. In certain subregions within the continent, such as West Africa, the situation is only negligibly better, with just 32% of the population connected.

A large digital gender gap also affects much of the region. Sub-Saharan Africa holds the unfortunate title of one of the world’s largest and most stubborn gender gaps in mobile phone ownership and mobile internet use. Within West Africa, there are two women internet users for every three men that connect.² This gap has a cost for us all, individually and societally.

Around the world, several barriers keep women and girls offline. Gaps in pay and educational attainment, unaffordable devices and data tariffs, and fears about online privacy and security contribute heavily to this gender gap. Until these barriers are overcome, women will not catch up to their male peers, the digital gender gap will persist, and universal internet access will remain just a dream.

¹ This term is used based on the UN-defined classification.
² This is calculated using the Inclusive Internet Index 2021 estimates for percentage of women and men internet users in 11 countries in West Africa.
What are the digital divide and the digital gender gap?

These terms are often used interchangeably by many people.

The digital divide typically refers to a binary division of people into the connected and the unconnected. It can also relate to the division of different user experiences (e.g., the feature phone-smartphone digital divide) or different groups of people (e.g., the urban-rural digital divide). It simply refers to the disparities of technological access and use.

The digital gender gap speaks to many of the same aspects of the digital divide, as measured by gender. However, a focus on the ‘gender gap’ emphasises that this digital inequality is just one aspect of a broader system of discrimination and disadvantages that limit women’s and girls’ potential to participate in society.

The digital divide is a technological problem: the digital gender gap is a human one.

How we measure gender gaps

There are different ways to calculate the digital gender gap, depending on the particular lens through which each person sees the world and which group you choose as the reference. We typically calculate the gap as the difference between how many men and how many women are online, as a proportion of how many women are online. The lower the percentage of women online, the larger the digital gender gap will be. We use women as the reference group in order to put the focus on the disparity and disadvantages faced by women.

More specifically, our approach explains how many more women need to come online in order to reach gender parity using the formula below.

\[
\frac{\% \text{ of men online} - \% \text{ of women online}}{\% \text{ of women online}}
\]

However, this methodology excludes transgender and non-binary people from the calculation: in many ways, their experiences are hidden in most national-level statistical resources in this area.
The cost of digital exclusion

Analysis conducted by A4AI demonstrates that closing the digital gender gap in 32 low and lower-middle income countries (LLMICs) — seven of them in West Africa — would produce immense economic benefit. Based on this, A4AI found that the average digital gender gap in these countries stands at 30.4%. The report also estimates that if the gap was closed, the economies of these 32 countries would expand by an additional $524 billion USD over the next five years. Conversely, the analysis concluded that if the gap were to remain at its current size, the total loss of GDP between 2011 and 2025 would amount to $1.5 trillion USD.

In light of the ongoing pandemic and the economic devastation it has caused, it is of utmost importance that LLMICs harness the massive economic potential of gender digital inclusion. This is not only good policy — it’s good economics.

Among the seven countries of West Africa included within the model, the cost amounts to $18.4 billion USD in 2020. This comes in the form of lost economic opportunities, both for the women and girls kept offline by the digital gender gap; for economic sectors looking to scale, especially through digitalisation; and for governments looking for new potential sources of revenue through increased economic activity.

Economic prospects of closing the gender gap

In its most recent report, A4AI investigated the economic benefits of digital inclusion using macroeconomic data and analysis. This work provides a macroeconomic perspective of the digital gender gap and its economic impact.

This regional report brings testimonies from women in Nigeria, Côte d’Ivoire, and Ghana who use the internet as to what happens when they connect, what opportunities they find, and what activities they manage to undertake. In this way, the main Costs of Exclusion report and this regional report work as complements to bring together the macro- and microeconomic potential of closing the digital gender gap.

This report documents the ways that women use the internet to improve their economic potential and social position. This, in turn, ultimately results in economic growth that benefits us all. The responsibility will then turn to policymakers to correct the arc of history.

Figure A. Cumulative GDP gains of closing the digital gender gap, 2021–2025

Source: Alliance for Affordable Internet, 2021

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This is calculated using a rationale that is similar to the one motivating the design of the Costs of Exclusion model, it is not directly comparable to the cost estimated for the 32 countries in the Costs of Exclusion model.
The possibilities for women when they are online

Internet access greatly improves women’s economic, social, and mental wellbeing. Equipped with internet access, women are able to avail themselves of additional income generating opportunities, gain access to vital information, and connect to the people and world around them.

Understanding from access to use

To understand the benefits of internet access for women in West Africa, A4AI and the Web Foundation carried out computer-assisted telephone interviews (CATI) in Nigeria with 1,056 respondents, all women who own mobile phones, and also conducted a series of focus groups and in-depth interviews with women in Nigeria and Côte d’Ivoire who use the internet. As part of the survey, we spoke to 715 women who use the internet and 341 who do not. Women with internet access articulated the many ways an internet connection improves their lives and those that can not benefit from connectivity yet shared the main barriers that keep them offline and the difficulties they faced as a result of their lack of internet access.

The methodology does not allow for a fully representative sample of the experience of all Nigerian women. As a limitation of conducting quantitative research in the context of the Covid-19 pandemic, a telephone survey was selected as a suitable approach for this research around Nigerian women’s use of mobile phones and the internet. Naturally, because our survey was conducted over the phone, this excludes anyone without a phone from responding. Latest available Afrobarometer results suggest around 12% of Nigerians do not own a mobile phone.

Our survey sample was designed to give a broadly representative picture of the experiences of Nigerian women with mobile phones. Our sampling frame was set for representative samples according to age group and urban/rural divide according to the latest available gender-disaggregated information among these groups.

In implementation, the ultimate sample diverges from the intended plan with an undersampling of the 18-24 age group and an oversampling of the 25-34 and 35-44 age groups. In addition to urban/rural setting, the survey had a baseline of five respondents from each Nigerian state and the Federal Capital Territory, with a dynamic target set in proportion to the share of the percentage of internet subscribers in that state. This allows for a broad sampling of the experiences from a wide cross-section of Nigerian society.

Some limitations apply to our survey and its methodology. Rather than attempting to match quotas to internet use percentages among women with mobile phones, 68% of the respondents were internet users while the remaining 32% were not. This heavily over-samples the estimated percentage of women who use the internet. However, this approach allows for greater depth and detail in the variety of online experiences that women have when they connect to the internet, allowing for greater potential analysis of the benefits of internet access once online.

In addition, our sample includes a much higher proportion of individuals with secondary and tertiary degrees. This means our sample’s averages reflect a higher level of educational attainment than a nationally representative sample likely would look like. This may have an impact that biases some of the results, particularly around informational autonomy or activities conducted online. However, where possible, steps are taken to reduce this bias’ potential impact, which are described below.
Patterns of internet use by our respondents

Emphasising the increasing importance of internet access in the context of the Covid-19 pandemic, a majority of internet users in our survey, in both urban and rural areas and across different age groups, use the internet on a daily or near-daily basis. Over two-thirds stated that they access the internet on a daily basis.

The pandemic has also stressed the importance of internet access at home. Nearly nine out of every ten respondents who use the internet do so from their homes — by far the most common location. In addition, for 40% of internet users in our sample, home was the only place where they used the internet. This pattern replicated along a stark educational divide, where women with any kind of tertiary education were more likely to have internet access at multiple locations, including a majority of them at their workplace.

Figure B. Internet use by location, as % of online respondents, by level of education.

Other locations contribute to the constellation of access points for Nigerian women using the internet. Almost half (49%) of our respondents connect from work, including a majority (51%) of women in urban areas. This comes with our sample, where women with higher degrees were substantially more likely to have internet access at work than their peers with just a primary or secondary education. One out of every five (21%) connect from a place of study, like a school, university, or library; one in seven (16%) connect from a free public Wi-Fi point.

Device access also plays an influential role in women’s use of the internet. A stark device divide exists among our respondents who use the internet and those that don’t. Despite drawing from a cross-section of Nigerian society, with a spread of age groups, educational backgrounds, and localities in each group, internet users in our survey were much more likely to own a smartphone, while non-users most likely owned a basic phone with limited functionality. This factor matches with industry estimates and stresses the importance of affordable devices for women and the value of smartphones as a key enabler of meaningful connectivity.

Because of limitations in sample size, we have not reported averages among survey respondents who use the internet but have not completed secondary education.
Internet access equals participation

The internet provides a global gateway to information, and as more societies move online, more services and opportunities are found online, too. Universal internet access opens up these opportunities to women and girls. From the focus groups, interviews, and survey results, our research confirms the positive potentialities that come out of women's internet access in terms of education, health, community, and the economy.

Among Nigerian women who completed secondary education, those with internet access were two or three times as likely to feel confident in finding key pieces of information than their offline peers.

This included essential activities such as finding a doctor or reporting a crime and also more ordinary points of awareness, such as when the next general elections will be or what the weather will be like tomorrow.

With this information, women online are also more likely to engage in a wide range of activities, including using online government services, taking a class online, or looking for a job online. Some of these participation gaps were huge. For example, women with internet access were 3.5 times more likely to have looked for a job or seven times more likely to have taken a class in the past three months.

Figure C. Respondent device ownership, by internet use.

Source: Alliance for Affordable Internet, 2021

Figure D. Informational autonomy, by internet use

% respondents who said they could find out...

Source: Alliance for Affordable Internet, 2021
The internet’s potential extends through to building and maintaining social ties and communities. Those with internet access also reported being more likely to have reached out to a family member or a friend. Internet access enabled these activities — from education to family connections — through the pandemic and made them easier for billions of people. The continued exclusion of women and girls from the online world excludes them from these possibilities, as well.

“My first memory with the internet was that I was able to communicate with my brothers in Europe via WhatsApp.”

– Abidjan focus group participant

Not only are women internet users aware of the power and the benefits an internet connection brings, women in our survey who don’t use the internet are also able to identify the ways in which a lack of internet connection makes their lives more difficult. Among the women respondents without internet access that either said they had searched for a job or took a class in the previous three months, the majority stated it would have been easier for them if they had had an internet connection, with 86% of those that have completed a secondary education recognizing that it will be much easier to take a class if they had internet access.

“Online stores give you the opportunity to check different goods and prices before a purchase is made. It also gives you the time to decide the exact thing you want to buy, and where you can find the best deal.”

– Abuja focus group participant

Growing the market: women as consumers

The aforementioned benefits of internet access — in finding information and participating in society — also extend into the economic realm. This is a core factor in how increases in internet use relate to higher levels of GDP: as more people come online, including women and girls who have been historically excluded from the internet, the market grows.

“Well, I’m into maternal health awareness, so I’m always searching for information and I’m always educating myself. Because in order to educate others I need to have the facts down; so that’s a lot of the research that I do.”

– Urban woman, Ghana

**Figure E. Social participation, by internet use**

% respondents who said that in the past three months, they had...

![Social participation, by internet use](source: Alliance for Affordable Internet, 2021)
This higher confidence also connects with higher economic activity, but this is tied also to the educational level of women in our sample. Among women that have completed secondary education, internet users are twice as likely than non-internet users to make or receive payments. This difference widens when comparing users and non-users with tertiary education, internet users with tertiary education are four times more likely to make or receive payments online than their offline peers. Once women get involved in the digital economy, they use these tools regularly, regardless of educational level, almost half of the women that make or receive payments online do it once a week or more.

*Figure F. Economic informational autonomy, by internet use*

<table>
<thead>
<tr>
<th></th>
<th>Non-users (primary or less)</th>
<th>Non-users (secondary)</th>
<th>Non-users (tertiary)</th>
<th>Users (secondary)</th>
<th>Users (tertiary)</th>
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</thead>
<tbody>
<tr>
<td>Find a product</td>
<td>33%</td>
<td>20%</td>
<td>30%</td>
<td>44%</td>
<td>62%</td>
</tr>
<tr>
<td>For a good/low price</td>
<td>16%</td>
<td>16%</td>
<td>27%</td>
<td>29%</td>
<td>55%</td>
</tr>
<tr>
<td>Open a mobile money</td>
<td>14%</td>
<td>17%</td>
<td>26%</td>
<td>29%</td>
<td>47%</td>
</tr>
<tr>
<td>Or bank account</td>
<td>14%</td>
<td>17%</td>
<td>26%</td>
<td>29%</td>
<td>47%</td>
</tr>
<tr>
<td>Find someone to do a job</td>
<td>16%</td>
<td>17%</td>
<td>26%</td>
<td>29%</td>
<td>47%</td>
</tr>
</tbody>
</table>

Source: Alliance for Affordable Internet, 2021

This higher confidence also connects with higher economic activity, but this is tied also to the educational level of women in our sample. Among women that have completed secondary education, internet users are twice as likely than non-internet users to make or receive payments. This difference widens when comparing users and non-users with tertiary education, internet users with tertiary education are four times more likely to make or receive payments online than their offline peers. Once women get involved in the digital economy, they use these tools regularly, regardless of educational level, almost half of the women that make or receive payments online do it once a week or more.

*Figure G. Economic activity, by internet use*

<table>
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<tr>
<th></th>
<th>Non-users (primary or less)</th>
<th>Non-users (secondary)</th>
<th>Non-users (tertiary)</th>
<th>Users (secondary)</th>
<th>Users (tertiary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make or receive</td>
<td>20%</td>
<td>16%</td>
<td>16%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>A payment</td>
<td>24%</td>
<td>17%</td>
<td>17%</td>
<td>12%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: Alliance for Affordable Internet, 2021
However, as online commerce grows as an industry and more women and girls come online, more must be done to build confidence in the online marketplace. In several focus groups we organised, fraud and scams emerged as a common fear for women as potential online consumers. Even with the right infrastructure and the right technology, a failure to build social confidence in the digital economy could hinder potential growth.

“I often want to try [buying online], but I’m a little scared and there are so many scams. In fact, if we’re going to base [our opinions] on a scam, we’re never going to buy. So, you shouldn’t focus on the idea that when you send your money, they will rip you off. You have to tell yourself that the person is in front of you, it’s like you’re going to buy something at the store, and you give him your money, and he gives you the item.”

– Anyama focus group participant

As governments look to scale their digital economies, women’s digital inclusion is also, in many ways, financial inclusion. This creates the conditions for positive economic outcomes for both women themselves and for the communities in which they live.

**New possibilities: women as entrepreneurs**

Women’s inclusion as consumers is only one half of the picture. In addition to demand-side economics, women in various walks of life across West Africa have already proven themselves as capable content creators and entrepreneurs to invigorate new business models, find new efficiencies in their jobs, and create new sources of personal income.

“I actually run a business with my phone. It’s a must-have especially now that we might just be entering an actual cashless society or economy; most of the payments now are either via mobile money, Slydepay or Expresspay.”

– Woman entrepreneur in Ghana

The opportunity to sell goods online is a particularly powerful means of using the internet to earn additional income. 12% of women internet users in our sample that completed primary or secondary education earn additional income through the internet. **Among women online sellers with at least secondary education, 61% stated that they made at least half or more of their total income through online sales, and half said that they sold something online at least once a week.** The most common reason women gave when explaining why they chose to sell online was the possibility of reaching a larger number of customers than otherwise.

Besides offering the possibility of reaching a larger number of customers, the internet opens up a world of possibilities for women entrepreneurs interested in growing their business. It allows women to gain digital skills and helps them operate cost-effective businesses.

**Figure H. The frequency of online payments among women internet users**

How often do you use the internet to make or receive a payment?

![Bar chart showing the frequency of online payments among women internet users.](chart.png)

Source: Alliance for Affordable Internet, 2021

At least once a day, every day of the week
At least once a week
5-6 days a week
Less than once a week
Less than once a month
Don’t know/refused

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<thead>
<tr>
<th>TERTIARY</th>
<th>SECONDARY</th>
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<tbody>
<tr>
<td>100%</td>
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<td>75%</td>
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<td>50%</td>
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<td>25%</td>
<td>25%</td>
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<tr>
<td>0%</td>
<td>0%</td>
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</table>

Source: Alliance for Affordable Internet, 2021

<table>
<thead>
<tr>
<th>How often do you use the internet to make or receive a payment?</th>
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<tr>
<td>At least once a day, every day of the week</td>
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<tr>
<td>At least once a week</td>
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<tr>
<td>5-6 days a week</td>
</tr>
<tr>
<td>Less than once a week</td>
</tr>
<tr>
<td>Less than once a month</td>
</tr>
<tr>
<td>Don’t know/refused</td>
</tr>
</tbody>
</table>
Stories from women entrepreneurs in Côte d’Ivoire

Initially, Marie-Huguette Lohourou worked with her mother to sell fried plantains. Eventually, by promoting the venture through social media, she managed to set up her own independently-owned fried plantain restaurant. Using the internet she is also able to take orders online and deliver her food directly to her customers. This allowed her to continue selling throughout the pandemic. Marie-Hugette has also used the internet to learn Photoshop and create a range of marketing material which she uses to promote her business.

Part of Marie-Hugette’s story comes from the support she received from a non-profit organisation to increase her digital skills. The possibilities of internet access helping her business were not simply questions of infrastructure: skills and education play an essential role in closing the digital gender gap.

“So I belonged to an NGO. ... The Maison du Web allowed me to be comfortable with a computer. ... I am now comfortable with social networks, with my communication. Frankly, it was an important transition in my life to the world of the Web, being confronted with the digital world in Abidjan from 2010 to 2017, the transition is good, the experience is good.”

– Marie-Huguete Lohourou

For Yapi Prisca, having access to video conference platforms allows her to grow and expand her coaching business and reach more clients. This creates some practical cost savings, but importantly reduces the economic friction of physical geography (in the form of renting or maintaining physical offices or transportation costs), particularly within professional services and information-intensive industries.

“Back when I started, we didn’t have Facebook Live. We didn’t have Zoom. We didn’t have all these tools. Now, we have them. This allows us to get closer to our clients, host regular workshops with people without having to meet in person or rent rooms, and to save far more money.”

– Yapi Prisca
Patricia Zoundi Yao uses the internet to empower women farmers in Côte d’Ivoire. Patricia’s ambition was to create a unique women-centered model for agriculture. She achieved this using her application Canaan Land, an e-commerce platform that supports women farmers by providing them with training, tools, and inputs. Her platform also guarantees the purchase of their final products and in doing so provides them with added financial stability.

“We support women in rural areas to give them access to the market. But as access to the market necessarily involves sustainable farming techniques and access to only quality inputs, therefore we are creating a value chain from end to end for them, to allow them through this value chain to be able to have access to credit, to quality seed inputs and we buy back the production, which allows them to have stable incomes and we resell through our channels. Especially with hotels, restaurants, often supermarkets.”

Patricia Zoundi Yao, founder of Canaan Land

By using the internet, Patricia has built brand awareness, attracted clients, and expanded her business beyond physical boundaries.

“I can say that there are a lot of people who have known me through social networks; there are some clients who got to know us through the internet so I think that gave me some visibility. It allowed us to transcend public barriers; it has made our world like a small village. It was [a] big support actually.”

Patricia Zoundi Yao, founder of Canaan Land

Having access to remote financial services such as online payments and purchases offers particular value for women because it provides them with greater flexibility and freedom to earn an income even while facing societal constraints. In some cases, women are pressured to conform with gender roles, in others, they struggle with work-family balance or lack safe and accessible transportation. However, when women can earn an income with an internet connection, these constraints become less restrictive on their potential. As demonstrated, these span both the potential role as consumers and as vendors.

Gender discrimination pervades across national boundaries and throughout different sectors of the economy. The continued exclusion of women and girls from the online world forms just one part of that system. These stories and this research highlights some of the exceptions to the norms and some of the potential that lies within a vision for universal internet access. With concerted action, policymakers can change the internet from solidifying today’s inequalities to challenging us towards a more inclusive future.
Building resilience: Covid-19 and internet access

The Covid-19 pandemic proved the value of universal internet access. Through the internet, children could continue learning, jobs could convert remotely, and patients could continue to access healthcare. Some of these transitions were not perfect; however, ICTs provided an essential mitigation tool to ease the impact of the waves of global lockdown, including coordination and deliveries for healthcare itself.

“Actually, we delivered the drugs to patients’ doorsteps during the lockdown. Because there was no way they could come to the hospital to get their drugs, so we delivered it directly to their doorstep.”

– Port Harcourt focus group participant

In addition to the broad, societal impacts of the internet through the pandemic, internet access offered personal benefits for many in building economic and social resilience.

In our survey, internet users reported having more autonomy to be able to find on their own some of the symptoms of COVID-19. Women internet users with secondary education were almost twice as likely than non-internet users to find some of the symptoms on their own. A similar behaviour was observed among those with at least primary and tertiary education, internet users find themselves with more autonomy to find key information online.

Beyond just access to information, the internet has also been economically empowering for women. For example, women in Nigeria with internet access during the Covid-19 pandemic were 10 percent less likely to report a negative impact on their income as a result of the pandemic, compared to those without a connection.

Figure J. Women affected by a lower income during the Covid-19 pandemic in Nigeria

By using ICTs, including the internet, women are able to access opportunities to start a business, earn a higher income, and save time and money as consumers and as entrepreneurs.

“... said as a hairdresser, people (both regular and new customers, based on recommendations) often call her to schedule hair appointments. She said that her phone is very useful because she also uses it to communicate with the wholesaler who informs her on the availability of hair products including its current price and she can order products through calls, which reduces the extra cost and time she may have spent going to the market to purchase these products.”

– Lagos focus group participant

% respondents who said they could find out what some of the symptoms of coronavirus are:

<table>
<thead>
<tr>
<th></th>
<th>Internet Access</th>
<th>Without Internet Access</th>
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<tbody>
<tr>
<td>Users (secondary)</td>
<td>56%</td>
<td>69%</td>
</tr>
<tr>
<td>Users (tertiary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-users (primary or less)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-users (secondary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-users (tertiary)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Alliance for Affordable Internet, 2021

Figure I. Coronavirus-related informational autonomy of Nigerian women, by internet use

Source: Alliance for Affordable Internet, 2021
In part because of its comprehensive and influential effect on a person’s experience in lockdown, both internet users and non-users alike gave strong answers of their perspective that access to the internet improves the quality of life of its users in lockdown. This perception becomes increasingly stark as education levels rise.

Two-thirds of our respondents with internet access said their lockdown experience would have been much worse if they did not have internet access. Meanwhile, only roughly one third of women who did not use the internet said their experience would have been much better if they had had access to the internet.

The more mixed picture among internet non-users may match to the education and skills barrier to internet use generally. Our survey did not ask for respondents to explain why they felt this way about the Covid-19 pandemic and their hypothetical experience with/without internet access; however, the higher response rate of not knowing how internet access would affect someone’s pandemic experience matches to the theory that one of the barriers to greater internet use relates to understanding what the internet has to offer and its potential benefits.

Table 1. Perceptions of Covid lockdown experience, based on internet access

<table>
<thead>
<tr>
<th></th>
<th>To internet users: How do you think your experience of the past year overall would be different if you didn’t have any access to the internet?</th>
<th>To non-users: How do you think your experience of the past year would be different if you had access to the internet?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LESS THAN SECONDARY</td>
<td>SECONDARY</td>
</tr>
<tr>
<td>Much better</td>
<td>-</td>
<td>10.5%</td>
</tr>
<tr>
<td>Somewhat better</td>
<td>-</td>
<td>0.8%</td>
</tr>
<tr>
<td>About the same</td>
<td>-</td>
<td>11.3%</td>
</tr>
<tr>
<td>Somewhat worse</td>
<td>-</td>
<td>11.3%</td>
</tr>
<tr>
<td>Much worse</td>
<td>-</td>
<td>56.4%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>-</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

Source: Alliance for Affordable Internet, 2021
What keeps women and girls offline?

There are clear benefits to bringing more women online. These benefits are both personal to the individuals using the internet and to society as a whole as it is able to benefit from the scaling potential of a larger and more inclusive digital economy. However, in the face of this evidence, hundreds of millions fewer women and girls are online compared to men and boys. As policymakers confront this issue, interventions should address the barriers that keep women and girls from participating in the online world.

The Costs of Exclusion report details a number of barriers to gender-equitable internet access. These span financial, social, technical, and educational reasons. In particular, negative social norms underpin so many of these barriers. For example, as gender wage gaps continue to mean women earn less than men on average, affordability barriers more acutely block women and girls from accessing the internet. This is why changing social norms and cultural perceptions has been identified as a key intervention in closing the digital gender gap.

If I could change anything, I would change the cost of data and devices, especially phones. The more sophisticated your phone, the higher the rate of data consumption, that needs to change. I subscribed for the $4 data bundle which lasts for about a month with my old phone but to my surprise, when I changed phones, the same bundle lasts for just 2 days! I can’t do without data. Now I have to subscribe for more data to last the month and this is not convenient but I need it. As a family woman, I need to ensure the safety of my children by making sure they can learn comfortably without leaving the comfort of our home.”

– Lagos focus group participant

Our survey asked Nigerian women who own mobile phones on what barriers kept them offline. An outright majority said that the limited functionality of their device was why they don’t use the internet — by far the most common answer. This matches with our survey data on different rates of internet use by the type of mobile phone that a survey respondent owned and with research from the mobile industry on handset ownership that suggests that ownership of less sophisticated devices correlates with lower mobile internet usage. This also reaffirms the importance of the policy indicators within the meaningful connectivity framework, like smartphone ownership, in closing the digital gender gap and growing the digital economy.

Table: Reasons for internet non-use, among offline respondents

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>You don’t know what the internet is</td>
<td>3.8%</td>
</tr>
<tr>
<td>The internet is too expensive</td>
<td>2.3%</td>
</tr>
<tr>
<td>You are not interested in the internet, or you do not think it’s useful</td>
<td>14.7%</td>
</tr>
<tr>
<td>You are not allowed to use the internet</td>
<td>1.5%</td>
</tr>
<tr>
<td>You do not have a device that can access the internet</td>
<td>61.9%</td>
</tr>
<tr>
<td>Some other reason</td>
<td>2.3%</td>
</tr>
<tr>
<td>You don’t know how to use the internet</td>
<td>7.0%</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>0.9%</td>
</tr>
<tr>
<td>You don’t have time to use the internet</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Source: Alliance for Affordable Internet, 2021
However, this does not undermine the influence of negative social norms. Our sample draws from a group of women who have already overcome many of the social and financial barriers that discourage them from owning a mobile device in the first place. Instead, it is in part because of social norms and expensive device costs that women have lower rates of smartphone ownership in West Africa and across the globe. In addition, educational and knowledge barriers, such as not knowing what the internet is and not knowing how to use the internet, were more commonly identified as barriers by women with lower levels of education.

Policy action to close the digital gender gap must be formulated from a holistic perspective and take comprehensive account of the ways that barriers to women’s and girls’ access to the internet interact. **Negative social norms relate to and reinforce other barriers of equitable access, such as device ownership, digital skills, and affordability. These barriers are all reflections of the same system of gender inequality that has a clear economic cost for us all.**

“Data is costly and it doesn’t last for long. I [would] like [to] make data cheaper as well as the internet network faster.”
– Abuja focus group participant

“What limits the knowledge of the internet is that people are not aware. Getting food to your doorstep via ordering online has been in existence, but people are not aware of this.”
– Port Harcourt focus group participant

Economic as well as social development are integral to human prosperity. An economically productive person cannot thrive without social development and a socially well-developed individual cannot survive without economic means. These two aspects of life are intertwined and equally important, and the internet gives us the potential of enriching both. Governments and policy makers should be conscious of the macroeconomic, microeconomic and social impact that the internet offers and that remains untapped in many economies around the world, specially in LLMICs. More should be done to provide meaningful connectivity, offering girls and women the opportunity to further develop their economic and social spheres in digital spaces.
From possibilities to action: policy steps to close the digital gender gap

The stakes are clear for governments across West Africa, as they set their broadband policies in the context of post-Covid ambitions. For both economic and development goals, increasing access to the internet and supporting meaningful connectivity— and, by extension, closing the digital gender gap — offers an essential catalyst for progress. The policy choices that governments make today will set the trajectory for the coming decade.

Countries that want to scale their digital economy to the size of something that offers measurable growth in their annual GDP must build from inclusive foundations. This requires policy and regulatory decisions that challenge negative social norms that discourage women and girls from using the internet, promise consumer protections to build trust in the digital economy, and build up digital skills equitably so that new applications and use cases for the internet can be developed across the globe.

Policy strategies for an inclusive digital economy

**RIGHTS**
*Protect and enhance everyone’s rights online.*

- Challenge gender norms that would curb a woman’s or a girl’s right to own a device, use the internet, and express herself.
- Adopt adequate data protection laws that ensure users’ privacy is respected.
- Update consumer protection laws to build confidence in the online marketplace.

**EDUCATION**
*Use education to equip everyone – especially women – with the skills they need to access and use the web.*

- Close the educational gap and support the schooling of all children with free primary and secondary education.
- Include digital skills within the curriculum to introduce new technologies.
- Attract and retain women as teachers and professors in STEM fields, especially computer science.
ACCESS
Deliver affordable — or free — access to an open web.

- Reduce the cost of connectivity through policy strategies such as the A4AI Good Practices.
- Adopt, regularly review, and update the National Broadband Plan and the Universal Access Strategy/Policy, including gender as part of its mandate.
- Include gender and inclusivity as an evaluation criterion in public access projects and the operation of the Universal Service & Access Fund.

CONTENT
Ensure relevant and empowering content for women is available and used.

- Support the creation of locally-relevant content, including through institutions such as the Universal Service & Access Fund.
- Prioritise the development of content in local languages and audiovisual content that engage the widest possible audience, across skill sets, education levels, and abilities.
- Provide fair and free information to women and girls on topics important to them, including sexual and reproductive health, legal rights, and digital financial services.

TARGETS
Set and measure concrete gender-equity targets.

- Set clear targets, including for indicators on meaningful connectivity, with gender-disaggregation within policies.
- Regularly collect gender-disaggregated data through standard statistical practices to track progress and monitor any other emerging gender gaps.
- Make targets and data publicly available for other stakeholders to engage and create accountability.

In our main Costs of Exclusion report, we reinforced the value of the REACT Policy Framework. It focuses on a comprehensive policy strategy that includes rights, education, access, content, and targets and echoes the call to action from attendees of the inaugural Africa Summit for Women and Girls in Technology.

Fortunately, there are already examples of this policy framework and its principles in action across the continent.
Example policy interventions to close the digital gender gap

**RIGHTS**
Protect and enhance everyone’s rights online.

**NIGERIA**
Collaborative spaces for consumer protection

Scaling the digital economy requires not only closing the digital gender gap but also increasing consumer protections and confidence in the online marketplace. The Central Bank of Nigeria leads the Nigerian Electronic Fraud Forum, an industry-wide body that brings together private and public sector stakeholders to collaborate on issues of financial fraud within the digital economy.

**EDUCATION**
Use education to equip everyone – especially women – with the skills they need to access and use the web.

**RWANDA**
Community leadership for digital skill-sharing

Education and skills for women and girls are a crucial part of digital inclusion. Taking note of the power of peer-to-peer learning and building women's confidence in technology, the Rwandan Digital Ambassadors Programme supports community learning and reserves 50% of its positions for women.

**ACCESS**
Deliver affordable — or free — access to an open web.

**KENYA**
Taxation policies to lower device costs

Greater affordability is not just about infrastructure and data tariffs. In line with recognition that internet-capable mobile devices are not luxury goods but lifelines in the modern world, Kenya eliminated taxes on handset purchases to help reduce the cost of purchasing such a device and making internet connectivity more affordable for millions.

**CONTENT**
Ensure relevant and empowering content for women is available and used.

**REGIONAL**
Partnerships on fake news and local languages

Women deserve relevant content online in the languages they speak. In the regional context of lower literacy rates among women and linguistic barriers for global platforms, Facebook partnered with Africa Check, an independent fact-checking organisation, to increase its capacity to fact-check news content in local languages like Yoruba, Igbo, and Wolof.

**TARGETS**
Set and measure concrete gender-equity targets.

**SENEGAL**
Gender targets in national broadband plan

Gender targets create accountability and help measure progress over time towards closing the digital gender gap. The Digital Senegal plan includes a high-level commitment to mainstream gender in all broadband policy decisions and also sets a clear target for a 33% rate of use of e-commerce and public services by the rural female population by 2025.
These case studies demonstrate some initial steps that policymakers can take within the region to close the digital gender gap and increase women's and girls' internet access and use. The return on investment for these policy actions — and what is lost if policymakers fail to act in time — is clear. It is now time for governments to act decisively in building a robust and inclusive digital economy by closing the digital gender gap.

“Policy should be made in such a way that consideration is given to the woman. A woman seems to be faced with a lot of challenges in society. For example she has to go through the pregnancy for nine months and then giving birth to a child means that she has to take time off work. Policies made should reflect an inclusion in terms of taking into consideration difficulties that come with being a woman that a man may not necessarily face.”

– Gbemisola Okunowo, Nigeria

These policies, as they address issues of gender equality, should also be crafted in a gender-equitable context. Policymakers and regulators should engage transparently with the private sector, across different government departments, and with civil society that ensures that women's and girls' voices are heard. We will not create the policies nor the digital economies that we dream of without women at the table, in the market, and online.
Annex 1: **Survey Results**

**Table 2.** Internet use by location, as % of online respondents.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SECONDARY</th>
<th>TERTIARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>89.5%</td>
<td>89.7%</td>
</tr>
<tr>
<td>Work</td>
<td>31.6%</td>
<td>53.9%</td>
</tr>
<tr>
<td>Place of study</td>
<td>9.0%</td>
<td>24.1%</td>
</tr>
<tr>
<td>Free public Wi-Fi</td>
<td>5.3%</td>
<td>18.6%</td>
</tr>
<tr>
<td>Paid public Wi-Fi</td>
<td>2.3%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Someone else's home</td>
<td>2.3%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Any other location</td>
<td>1.5%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Only at Home</td>
<td>63.2%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

**Table 3.** Respondent device ownership, by internet use.

<table>
<thead>
<tr>
<th></th>
<th>BASIC PHONE</th>
<th>FEATURE PHONE</th>
<th>SMARTPHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet non-users</td>
<td>82.0%</td>
<td>6.7%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Internet users</td>
<td>13.2%</td>
<td>5.8%</td>
<td>81.0%</td>
</tr>
</tbody>
</table>
Due to sampling limitations, this report does not include average response levels among internet users with only a primary education or less.

Table 4. Informational autonomy, by internet use and educational level.

<table>
<thead>
<tr>
<th></th>
<th>USERS (SECONDARY)</th>
<th>USERS (TERTIARY)</th>
<th>NON-USERS (PRIMARY OR LESS)</th>
<th>NON-USERS (SECONDARY)</th>
<th>NON-USERS (TERTIARY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What the weather will be tomorrow</td>
<td>42.9%</td>
<td>58.6%</td>
<td>12.8%</td>
<td>19.6%</td>
<td>25.0%</td>
</tr>
<tr>
<td>When the next elections will be</td>
<td>29.3%</td>
<td>40.7%</td>
<td>11.1%</td>
<td>9.3%</td>
<td>17.9%</td>
</tr>
<tr>
<td>How to report a crime</td>
<td>22.6%</td>
<td>36.0%</td>
<td>5.1%</td>
<td>5.6%</td>
<td>12.5%</td>
</tr>
<tr>
<td>How to schedule an appointment with a doctor</td>
<td>16.5%</td>
<td>38.2%</td>
<td>9.4%</td>
<td>5.6%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Where I can find a product for a good/low price</td>
<td>43.6%</td>
<td>61.6%</td>
<td>32.5%</td>
<td>19.6%</td>
<td>30.4%</td>
</tr>
<tr>
<td>How to open a mobile money or bank account</td>
<td>28.6%</td>
<td>54.8%</td>
<td>16.2%</td>
<td>15.9%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Where you could find someone to do a job for you</td>
<td>28.6%</td>
<td>46.8%</td>
<td>13.7%</td>
<td>16.8%</td>
<td>25.9%</td>
</tr>
<tr>
<td>What are some of the symptoms of coronavirus</td>
<td>56.4%</td>
<td>69.0%</td>
<td>29.9%</td>
<td>34.6%</td>
<td>28.6%</td>
</tr>
</tbody>
</table>
Table 5. Social and economic participation, by internet use and educational level.

<table>
<thead>
<tr>
<th>Activity</th>
<th>USERS (SECONDARY)</th>
<th>USERS (TERTIARY)</th>
<th>NON-USERS (PRIMARY OR LESS)</th>
<th>NON-USERS (SECONDARY)</th>
<th>NON-USERS (TERTIARY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sought information about government services</td>
<td>27.1%</td>
<td>39.6%</td>
<td>6.8%</td>
<td>11.2%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Contacted a family member or a friend that you do not live with</td>
<td>78.2%</td>
<td>86.1%</td>
<td>61.5%</td>
<td>56.1%</td>
<td>55.4%</td>
</tr>
<tr>
<td>Taken a class</td>
<td>12.8%</td>
<td>36.6%</td>
<td>1.7%</td>
<td>4.7%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Looked for a job</td>
<td>12.0%</td>
<td>32.8%</td>
<td>5.1%</td>
<td>7.5%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Made or received a payment</td>
<td>30.1%</td>
<td>53.0%</td>
<td>23.9%</td>
<td>16.8%</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

Table #: Frequency of online payments among respondents, by educational level.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>SECONDARY</th>
<th>TERTIARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t know-Refused</td>
<td>5.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Less than once a month</td>
<td>30.0%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Less than once a week</td>
<td>18.0%</td>
<td>11.3%</td>
</tr>
<tr>
<td>At least once a week</td>
<td>28.0%</td>
<td>26.0%</td>
</tr>
<tr>
<td>5-6 days a week</td>
<td>13.0%</td>
<td>15.4%</td>
</tr>
<tr>
<td>At least once a day, every day of the week</td>
<td>8.0%</td>
<td>25.3%</td>
</tr>
</tbody>
</table>
A global coalition working to make broadband affordable for all