

# Enabling Equity: Why Universal Broadband Access Rates Matter

JESSICA DINE | AUGUST 2023

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High rates of broadband adoption benefit all of society, yet those who stand to benefit the most are also least likely to be online. Pushing hard for near-universal connectivity is crucial if we want technology to help bridge, rather than widen, existing divides.

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## KEY TAKEAWAYS

- High broadband connectivity rates are positively linked to factors such as GDP growth and stability. They enable jobs, promote resiliency in the face of disasters, and support the massive and growing digital economy.
- Huge online marketplaces of every stripe are subject to network effects: They become more valuable to every user the more users there are. For all these reasons, increasing connectivity rates is broadly beneficial.
- Broadband enables cheaper, more convenient access to critical resources such as health care and government programs, so people with the fewest resources are often the ones who stand to benefit the most from being connected.
- From every angle, getting offline groups online—and aiming for as close to universal connectivity rates as possible—should be a policy priority.
- Doing so requires both completing deployment and increasing adoption rates.
- Congress and the administration should sustain funding for subsidy programs such as the Affordable Connectivity Program (ACP), build economic impact analyses into them, and survey households that remain offline.

CONTENTS

Key Takeaways..... 1

Introduction..... 2

The Economic Impact of Broadband..... 3

    Broadband Is Directly Related to GDP Growth..... 3

    Broadband Increases Economic Resiliency ..... 4

Online Institutions Increase Resource Accessibility..... 5

    E-Government..... 5

    Social Safety Nets..... 7

    Telehealth ..... 8

Policy Recommendations ..... 10

    Fund the ACP ..... 10

    Build Economic Impact Analyses Into Broadband Funding Programs..... 11

    Survey Households on the Impact of Remaining Offline ..... 12

Conclusion ..... 12

Endnotes..... 13

INTRODUCTION

In the third decade of the 21st century, getting online is no longer optional, and providing financial assistance to U.S. households that can’t afford broadband should be as much a given as food stamps. From a macro perspective, greater broadband connectivity is related to economic gains, more economic stability, and effective participation in the modern world. For the doubtful, the COVID-19 pandemic should have quelled any sense that bringing all of society online was a choice and not a necessity.

From an individual perspective, broadband also equalizes other resources in a way that other infrastructure does not. For example, broadband offers health care and education over physically untraversable geographic distances, and it democratizes access to classes and other resources through cheaper online versions. These advantages suggest that groups that currently spend more accessing these resources—whether in time, lost wages, or sheer volume of applications—will benefit *more* from access to broadband than will their more advantaged peers.

More broadly, from a macro perspective, high rates of broadband use benefit society and the economy; and from a micro perspective, those least likely to be online are those who would in many ways benefit most from it. In both cases, broadband policy should prioritize connecting remaining offline households in order to achieve universal connectivity.

The vast majority of Americans are served by broadband infrastructure, and remaining deployment gaps should be addressed after the new federal broadband programs—and new technologies such as low Earth orbit satellite systems—are fully implemented and deployed.

Once deployment is complete, the remaining policy task is to buttress adoption rates among the offline population. Nonadopters remain so for a number of reasons, most often due to a lack of interest or inability to afford a subscription.<sup>1</sup> If, as appears to be the case, not much can or even should be done on the supply side to sustainably lower prices, and since most offline consumers are reacting to lack of interest or price rather than network unavailability, a major avenue for getting people online is through consumer-side subsidies.

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The best subsidy program currently available is the universally popular Affordable Connectivity Program (ACP), whose fate currently hangs in the balance for lack of sustainable funding. Finding this funding, and continuing the program, should be non-negotiable for a country that wants to reap the full benefits of broadband. At the same time, U.S. broadband policy in general should be more closely shaped around results. This means better data collection on subscriptions generated by ongoing broadband programs and better understanding of the benefits of being online, so all future funding can be put where it will do the most good.

## **THE ECONOMIC IMPACT OF BROADBAND**

It is by now close to a truism that broadband penetration is intimately linked with economic success: Most advanced economies are also highly connected, and it appears impossible to have one without the other.

### **Broadband Is Directly Related to GDP Growth**

A longstanding body of work relates broadband penetration to a society's economic size and growth. A 2011 paper found that, from 1996 to 2007, a 10 percent increase in broadband access resulted in annual per capita growth for Organization for Economic Cooperation and Development (OECD) countries of up to 1.5 percent.<sup>2</sup> Similarly, a recent Network:On study by Katz and Jung finds that fixed broadband adoption accounted for 10.9 percent of economic growth in the United States from 2010 through 2020.<sup>3</sup> By retroactively decomposing gross domestic product (GDP) growth over a decade into its various causes, the researchers argued that the improvements in broadband adoption and speed across the United States over the course of the decade accounted for \$1.3 trillion of the 2020 GDP, about \$4,000 for each member of the population.<sup>4</sup> The benefits disproportionately accrued to locations with steeper expansions in broadband networks. In a separate paper, the authors also observed returns to scale in fixed broadband penetration, with the most developed countries seeing the highest GDP increases from additional fixed broadband.<sup>5</sup>

Some of this can be explained by the fact that broadband access spurs jobs both directly and indirectly.<sup>6</sup> Broadband deployment creates jobs in the construction and maintenance of that equipment.<sup>7</sup> In fact, a 2009 ITIF report suggested investing in infrastructure in direct response to an economic downturn, arguing that the infusion of funds would create 64,000 direct jobs in the telecommunications and electronic equipment sectors alone.<sup>8</sup> The indirect job creation is even larger: A World Bank study finds that broadband-enabled jobs each create between 2.5 and 4 additional jobs.<sup>9</sup> Brookings has further noted that broadband also improves the hiring process more generally; on the job-seeker's side by enabling faster, more convenient online job searching

and applying, and on the business's side, e-recruiting can bring more diverse pools of candidates for lower costs.<sup>10</sup>

Widespread broadband is also foundational to the massive digital economy. The U.S. Bureau of Economic Analysis puts the value of that economy at \$3.7 trillion of the U.S. gross output from 2005 to 2020, and further estimates that the digital economy accounted for 10.3 percent of GDP, and 8 million jobs, in 2021.<sup>11</sup> The benefits of this economy far exceed the price of a broadband subscription, but they are predicated on widespread broadband adoption.

In particular, digital marketplaces are made valuable by their ability to connect buyers and sellers online—so the values of, say, Amazon, Uber, and eBay are contingent on each having enough users on its platform. This dynamic exists because Amazon, eBay, Uber, and most big online companies are built around the premise of network effects—that is, they become more valuable the more people use them because part of the value they provide consumers is access to the other users.<sup>12</sup> This pattern is most evident in, for example, Facebook, but it plays a role in most online companies' business models as well. Even Amazon wouldn't be worth as much with a single seller on the other end. Insofar as the Internet itself connects people and enables shared resources, its entire value relies on network effects to a certain extent as well.

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Finally, there are other benefits to digitalization that aren't accounted for in such traditional measurements as GDP, such as, for example, the value of free digital services through applications such as Facebook and Google, and smartphone cameras.<sup>13</sup>

The significant benefits of a fully connected economy make the relatively small subsidy to connect additional users a worthwhile investment. To put this all in context, Lifeline, the main low-income subsidy program prior to the ACP, spent about \$100 per subscription it generated in fiscal year 2021.<sup>14</sup> The National Telecommunications and Information Administration's (NTIA's) Internet Use Survey finds the majority of offline households citing cost as the main constraint would be willing to pay \$10 a month for service, which means a subsidy making up the difference between that and the full cost of a plan might encourage many of them to go online.<sup>15</sup> This all suggests that relatively minor investments on the consumer side generate and support much larger, economy-wide benefits by advancing connectivity.

### **Broadband Increases Economic Resiliency**

Digital marketplaces offer avenues for economic transactions that are more resilient to certain external shocks such as climate disasters and shelter-in-place orders; telehealth, distance learning, and work-from-home can sustain the economy; and enterprises can often maintain at least some level of functioning at the virtual level. In fact, online platform activity in social-distancing-friendly areas, such as mobile payments and online marketplaces, increased an average of 20 percent early in the COVID-19 pandemic.<sup>16</sup> It is no surprise, therefore, that in addition to enabling economic *growth*, research shows that broadband penetration enables economic *resiliency* in the face of some external shocks.

For example, an International Monetary Fund working paper by Copestake, Estefania-Flores, and Furceri uses a differences-in-differences approach to examine the effects of digitalization on multiple industries in 75 countries.<sup>17</sup> Here, the authors found that more digitalized industries see less economic impact from recessions. Firms in more digitalized industries see smaller revenue losses, greater hiring rates, and larger net inflows following economic downturns. This relationship appears to have only intensified since the COVID-19 pandemic, after which forced widespread adoption has magnified the effects of digitalization.<sup>18</sup>

Similarly, Katz and Jung conducted another econometric analysis to examine the mitigating effect of digital infrastructure on the economic contractions caused by the COVID-19 crisis and found that broadband had a strong stabilizing effect on the economy.<sup>19</sup> Highly connected economies such as those of the United Kingdom and the United States saw less economic harm from the same level of disease severity than did less-connected economies: The former were able to mitigate 21 percent of COVID-induced economic harms.<sup>20</sup>

In practical terms, a 2021 Deloitte survey finds that government agencies overwhelmingly relied on digital services to get through the COVID-19 pandemic.<sup>21</sup> 74 percent of respondents said that digital capabilities helped agencies function through the pandemic.<sup>22</sup> When asked why government digitalization is important, one of the most common reasons given by government officials was the need for greater resilience. As in the private sector, digital access allows public sector workers to do their jobs remotely, to continue functions such as the provision of government benefits, and to maintain relationships with constituents given shelter-in-place orders or other interruptions to normal day-to-day functions.

## ONLINE INSTITUTIONS INCREASE RESOURCE ACCESSIBILITY

A less easily quantified benefit of broadband is greater access to resources and institutions. In particular, e-government can provide a more participatory, data-driven, and individualized form of governance. Online health care and social safety net programs help democratize access to resources and cut out ancillary costs such as commutes and extra time spent on paperwork, which often burden more resource-scarce groups most of all.

### E-Government

Digital government facilitates collaboration between citizens and their governments and greater participation from all stakeholders. It enables continuous, comprehensive data collection and sharing that help enable ongoing reforms and effectively designed policies.<sup>23</sup>

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Part of the value of digitalizing government is found in simply digitalizing and automating previously analog functions. Digital government payments, for example, are more efficient and secure than sending cash or checks in the mail. A 2017 International Monetary Fund book estimates the value of digitalizing government payments at roughly 1 percent of GDP per country, for a total of \$220 billion to \$320 billion annually across developing countries.<sup>24</sup> Countries that had invested in digital infrastructure to provide public services prior to the pandemic were able to provide easier and faster payments and access to benefits.<sup>25</sup> Paperwork in general is costly

and time-consuming: Taxes cost Americans some 9 billion hours of work per year.<sup>26</sup> E-filing can minimize time spent filing taxes, reduce the likelihood of visits by tax officials, and even moderately increase the tax-revenue-to-GDP ratio.<sup>27</sup>

Overall, the U.S. Treasury has identified \$1.4 billion to \$3 billion in potential government-wide cost savings through digitalizing and modernizing processes.<sup>28</sup> Other research has linked digital public services in the European Union to higher employment and export rates.<sup>29</sup> Digital readiness in government also opens the door for newer technologies: A 2017 Deloitte study, for example, finds that use of artificial intelligence (AI) to automate certain government work could save some 1.2 billion federal employee working hours, or \$41.1 billion in salary.<sup>30</sup>

Phase 2 of digital governance is improving and reimagining programs (using digital technology) to be more citizen-focused and designed around the individual. For example, the U.S. Department of Veteran Affairs has developed a personalized portal that allows users to only have to log in once and provides seamless access to multiple benefits. The redesign has led to a 50 percent increase in online applications by veterans.<sup>31</sup> Digitalization of government also creates opportunities for more inclusivity. For example, the city of Austin has a pilot program that sends audio cues on the status of public transportation to visually impaired riders' mobile devices.<sup>32</sup> Finally, technology helps improve government capacity. In the early days of the COVID-19 pandemic, Rhode Island moved its unemployment insurance contact center to the cloud, increasing its capacity from 75 concurrent calls to 2,000.<sup>33</sup>

In both stages of e-government evolution, greater use of online tools helps governments provide information to constituents, solicit more input, and overall engage more directly and more interactively with the governed. The United Nations (UN) regularly publishes an e-government survey that examines global trends in e-government and ranks members' performance on factors such as the number and quality of services offered online.<sup>34</sup> The UN simultaneously derives an "e-participation" score of its member states based on factors such as how they provide constituents public access to online information to encourage participation, how much they engage with citizens, and to what extent constituents have a say in policies through online mechanisms. Overall, the relationship between e-government and e-participation is so entrenched that strong performers in one almost invariably do well in the other.

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All these potential benefits rely on broadband networks that bring connectivity to both government bodies and enough of the population for e-government to justify the transition. A solid third of the UN's E-Government ranking is calculated by assessing member states' telecommunications infrastructure.<sup>35</sup> In turn, infrastructure needs to be affordable and accessible enough for the majority of the population to subscribe to it. Of the 10 countries with the highest e-government scores in 2022, only 1 had broadband adoption rates below 90 percent of households (Australia, at 89 percent).<sup>36</sup> Eight had at least 92 percent of households connected to fixed or mobile broadband. Therefore, 90 percent connectivity is likely a prerequisite to building an effective e-government.

## Technology in Government

Government plays a critical role in the responsible use of technology. Government reliance on digital services opens the door to more advanced technologies such as AI, and automating decision-making based on data needs to be done carefully or risk perpetuating longstanding inequities. Government reliance on virtual resources can also engender new forms of inaccessibility, and websites must be updated to more effectively meet the diverse needs of constituents.<sup>37</sup> In addition to the need for governments themselves to avoid these pitfalls by responsibly deploying technology, there is also a clear role for them to play by providing guidance to the private sector on how to address these risks. There is, therefore, a critical need for digital governments that can thoughtfully use AI and other advanced technology in ways that consider possible risks, and to set guidelines for the technology's responsible implementation. None of this is really possible with governments that are themselves ill-equipped to deploy online resources, or with populations that are ill-equipped to receive them.

## Social Safety Nets

One of the most critical functions of a government is to provide safety net programs, and effective online versions of these institutions can make these programs accessible to the people who need them most.<sup>38</sup> As in any sector, digitalization can allow for more seamless, less complicated services, thus maximizing their effectiveness, providing greater inclusivity, and fostering citizens' trust.<sup>39</sup>

Reliance on safety net programs is not uncommon: An Urban Institute Report finds that 55 percent of low-and-moderate income households (making up to four times the federal poverty line [FPL]) applied for at least one safety net program in 2021.<sup>40</sup> Of that group, 40 percent cited difficulties enrolling in major programs such as unemployment insurance and the Supplemental Nutrition Assistance Program (SNAP).<sup>41</sup> Problems with the application process of such programs are incredibly common and frequently result in eligible households not receiving assistance. Over half of households that leave CalFresh, California's SNAP program, are still eligible for the benefits and do so when it's time to re-enroll.<sup>42</sup> Nine million eligible Americans failed to receive unemployment benefits in the early days of the COVID-19 pandemic.<sup>43</sup> For something as critical as a safety net program, the drop-off caused by administrative friction can lead to severe losses among affected households.

Even when enrollment is successful, safety net programs come with huge administrative burdens. The undue amount of time and effort people need to put into applying for government services and working through bureaucratic inefficiencies is often referred to as the "time tax," a massive expenditure of resources. In 2017, for example, Americans spent a collective 11.5 billion hours on paperwork for federal agencies.<sup>44</sup> This tax disproportionately accrues to low-income groups most reliant on government resources—the same groups who are least likely to have expendable income for additional childcare or extra gas money, and most vulnerable to lost hours of wages and whatever else is spent to access those resources.

Online social programs are more efficient and convenient and can successfully reach more people. For example, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) made remote certification processes and other remote services widely available during the COVID-19 pandemic, which resulted in a 12 percent increase in child participation.<sup>45</sup> Better self-service such as the ability to upload documents by smartphone saves enrollees the

time that would otherwise be spent talking to agents, commuting to an agency or mailroom, or accessing a printer.<sup>46</sup> Online enrollment enables receipt of important documents when recipients move frequently or don't have a stable address, as is common among low-income people.<sup>47</sup> A full 27 percent of adults in households earning less than \$30,000 are also dependent on their smartphones for Internet access, so programs that prioritize mobile-friendly websites can further extend their reach.<sup>48</sup>

Some 77 percent of safety net programs currently have online applications available.<sup>49</sup> Some programs are also *only* available online: The child tax credit application for households that don't regularly file taxes, for example, is only offered through an online portal.<sup>50</sup> And sometimes, as was the case during the COVID-19 pandemic, online access is the only type of access available.<sup>51</sup> Since the need for financial assistance often extends to multiple areas of life, broadband subsidies such as the ACP are integral to getting eligible households connected to other resources they need.

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As a society, we've agreed to provide particular safety nets, and it benefits no one to make those services inaccessible to the people that need them most. The majority of the U.S. population—70 percent—will depend on some form of safety net program in their lifetime.<sup>52</sup> Moreover, effective, well-functioning social safety nets have been shown to benefit everyone, not just those they directly assist. Economic research has found that antipoverty programs often lift people out of poverty—and help mitigate poverty's attendant high costs of poor health, higher crime and incarceration rates, and lower productivity—and increase recipients' economic mobility, thus supporting the growth of the economy at large.<sup>53</sup> Aside from the benefits of the programs themselves, efficiently run programs of any stripe reduce extraneous paperwork and administrative bureaucracy that also hamper enrollment. Making these programs accessible will maximize their benefits—and key to doing that is ensuring smooth functioning of online services and providing broadband access for those who need it.

### **Telehealth**

Health, especially at the community level, is intimately related to other measures related to socioeconomic status, including geographic location and neighborhood characteristics, economic stability, and broadband access. Poverty can present a barrier to many elements of healthy living such as high-quality foods, exercise, and preventative health care.<sup>54</sup> The stress caused by poverty can itself cause poor health outcomes, and many factors leading to lower socioeconomic status are related to those that predict ill health.<sup>55</sup> On the flip side, unexpected or serious illness can generate medical bills that send a household into poverty.<sup>56</sup> This relationship means many of the same groups that are disproportionately offline are also more prone to health problems and a subsequent need for health care. The rise of telehealth has increased the accessibility of health care, particularly for those who'd otherwise face a prohibitively long commute, whose work hours are inflexible, or who have no money for childcare—in other words, particularly for households that are least likely to be online to receive it.

Telehealth appointments offer a cheaper alternative to traditional in-person visits.<sup>57</sup> One 2017 survey estimates the cost of a telehealth visit for an acute respiratory infection to be \$79, half the estimated cost for the same visit in person.<sup>58</sup> Telehealth can also help mitigate the associated travel and wait times of traditional health care, both of which frequently exceed other necessary services such as legal services and vehicle repair.<sup>59</sup> A 2019 report found an annual opportunity cost of \$89 billion, measured in lost wages, associated with time spent getting health care from 2006 to 2017.<sup>60</sup>

If telehealth is most helpful for those who'd have a harder time getting to a doctor otherwise, all trends run in the wrong direction. The Center for Disease Control (CDC) reported that a solid 37 percent of adults in the United States used telehealth in 2021.<sup>61</sup> Of that group, telehealth use has a positive correlation with education level, with only 29 percent of people with less than a high school diploma, but 43 percent of adults with a college degree, reporting use.<sup>62</sup> Similarly, adults making under 100 percent of the FPL reported telehealth use at rates lower than those making over 200 percent of the FPL and lower still than those making 400 percent (at 33 percent, 36 percent, and 41 percent, respectively). Finally, telehealth use has a strong positive relationship with urbanization, with 40 percent of adults in large, central metropolitan areas reporting telehealth use compared with 28 percent in nonurban areas.<sup>63</sup>

Of course, access to telehealth isn't fully determined by access to broadband. Other important factors include differences in insurance types, type of medical care sought, and even lack of health insurance precluding any health care appointments—telehealth or otherwise. However, the general trend still aligns with high-level patterns in average connectivity rates across groups, which suggests that broadband access plays at least some role in telehealth availability.

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Putting the difference in gains into perspective, Pew found that rural Americans live an average of 17 minutes from the nearest hospital, while urban Americans average only 10.4 minutes.<sup>64</sup> The most remote Americans meanwhile live an estimated 34 minutes away from health care. U.S. Social Security data puts average hourly U.S. wages at \$18.<sup>65</sup> This means the average rural adult loses \$10.24 in wages accessing health care at the nearest hospital, compared with the \$6.26 spent by the average urban consumer—all in addition to the actual costs of the health care itself. The most rural consumers might spend \$20.48 in lost wages for a single visit. Here, lost wages can be looked at as a stand-in for society's lost productivity, since not every employee must give up actual wages to visit the doctor—although insofar as low-income employees are more likely to be paid by the hour, they are also the most likely to be sacrificing actual pay for a doctor's visit.

For those individuals who are paid by the hour, the difference can be between taking some 20 minutes off work for a telehealth appointment or being forced to lose 2 or 3 hours of pay. For somebody making the federal minimum wage, the latter could mean a loss of almost \$22 in pay—and for a household living paycheck to paycheck, that financial loss could be a significant problem.<sup>66</sup>

There are 46 million U.S. residents living in rural areas.<sup>67</sup> If 40 percent of them had one telehealth appointment instead of one in-person appointment, they would save \$188.4 million in commute time in a year. For the farthest quarter of rural inhabitants living around half an hour from a doctor, they'd save \$235.5 million if they all took a single online appointment instead. Some 68 million urban Americans would need to swap an in-person appointment for a virtual one to see the same gains as these 30 million rural consumers.

By this measure, it's significantly more valuable for rural people to have access to telehealth. Similarly, groups that face higher health care burdens to begin with benefit disproportionately from easier access to health care, as do those who have a more difficult time getting to the doctor for reasons such as inflexible work schedules or lack of access to childcare. This all suggests that from an abstract, benefit-maximizing perspective, getting vulnerable groups better access to online health care—which means getting them subscribed to the broadband connection that supports it—should be a policy priority.

## POLICY RECOMMENDATIONS

Among the Internet's major selling points are relative cheapness, convenience, and ease of access to resources, so it follows that the most resource-scarce people stand to benefit the most from connectivity. In that sense, the consumers that stand to benefit the most from digital resources heavily overlap with the groups that are least likely to report having access to the Internet and are therefore *most likely* to be excluded from the very resources that would benefit them. From a fairness perspective, allowing them to miss out on connectivity even as more advantaged parts of society get online does nothing but widen an already gaping socioeconomic divide, when connectivity could be the very thing to narrow it. And society suffers the opportunity costs of not having everyone included in our digital life and economy.

Ensuring access to infrastructure is the first line of attack, but U.S. broadband deployment rates are strong, and a combination of emerging low-Earth-orbit satellite constellations—which may be able to provide cheaper access to remote households—and billions of dollars allocated through new and ongoing broadband deployment programs have set the remaining unserved population on track for full connectivity.<sup>68</sup> At this point, the digital divide is largely driven by low adoption rates among subsets of the population, some of which are caused by surmountable barriers to access. Broadband policies should step in to fill these gaps.

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## Fund the ACP

If the benefits of broadband are to be maximized, the communities most in need must have access to it. As it stands, a fifth of offline households identify the price of a subscription as the major barrier to adoption.<sup>69</sup> Policies aiming to lower prices only by stimulating new entrants are unsustainable at current levels of deployment—normalized broadband prices are in line with peer countries', Internet service providers' profit margins are significantly below the U.S. corporate profit average, and technological advances have enabled intermodal competition.<sup>70</sup> The way to bridge the gap between low-income consumers and broadband, then, is by providing money to defray the cost of service on the consumer side. In this sense, the ACP is the best subsidy

program available: It gives money directly to consumers to buy the plan that best suits them, provides eligible consumers with free or low-cost broadband plans, and has bipartisan support.

Despite every point in its favor, ACP funding is set to run out in 2024—and the program will run dry without sustainable funding. It is also currently operating at the minimum capacity necessary to actually close all affordability gaps. Estimates put the number of households eligible for the ACP at 4.8 million, and 2021 NTIA data finds that 4.4 million offline households cite price as the major reason for nonadoption.<sup>71</sup> This is most likely an underestimate, since many of the then-9 million households already signed up for the ACP would presumably be in the too-expensive camp otherwise.<sup>72</sup>

Legislative gridlock is the largest barrier to finding a source of sustainable funding for any program, but allowing the ACP to fall victim to that would be a tragedy. If compromise is necessary, funding the ACP may involve streamlining some federal broadband programs now that remaining deployment needs are heftily funded by the Broadband Equity, Access and Deployment program, which would have the added—and important—benefit of easing administrative costs and demystifying the broadband funding program landscape for consumers. It may even involve shifting funding from some now less-necessary programs to the ACP.<sup>73</sup> Congress should ensure continued funding for the best subsidy program available while preserving its breadth as much as possible—something that should not be a question in a country where over 4 million households are still offline explicitly because they can’t afford the price of a subscription.<sup>74</sup>

### **Build Economic Impact Analyses Into Broadband Funding Programs**

Good data collection is at the heart of any good policy program. For federal programs meant to stimulate broadband, whether by funding deployment or by defraying costs on the consumer side, the single best measure of their success is the number of subscriptions generated by this funding.

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**A real, data-driven economic impact analysis will be helpful to contextualize subsidies and point programs in better directions.**

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As part of its ACCESS Broadband imperative, NTIA created a dashboard and report consolidating the outcomes of all federal funding programs. But of the 9 agencies and 37 programs that provided data on outlayed funding alone, only 10 answered NTIA’s call for data on subscriptions generated by the program.<sup>75</sup> Congress should mandate that all programs providing any form of broadband funding provide data on results, including projected and actual subscriptions generated.

NTIA has already proposed a serviceable economic analysis of the overall impact of federal broadband programs, but it will be clearer once comprehensive subscription data is available. A real, data-driven economic impact analysis will be helpful to contextualize subsidies and point programs in better directions. Ongoing, active analyses can also be helpful in determining where to put funding, by considering the potential benefits of broadband connectivity alongside the costs.

## Survey Households on the Impact of Remaining Offline

NTIA regularly measures the number of households that subscribe to broadband in its Internet Use Survey, along with a variety of other metrics such as methods of access, reasons for nonadoption, and online activities. Importantly, questions aimed at offline households are mostly limited to the reasons for remaining offline. While it is the richest and most inclusive survey of its kind, the addition of more targeted questions could help better assess the potential benefits of getting offline households online. Questions assessing, for example, the amount of time a household spent filling out paperwork and finding a post office when an online form was an option, or commuting to an appointment that was available remotely, could help highlight the instances in which a respondent would be most clearly better served by being online.

## CONCLUSION

Because one of the great benefits of broadband is its ability to equalize access to resources, in one sense, the most important recipients of Internet access are those least likely to have a subscription. From another perspective, high connectivity rates are key to enabling positive institutions such as e-government and bring economic benefits to society at large. In every sense, policies that aim to get offline groups online are necessary for everyone to reap the benefits of broadband.

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### About the Author

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### About ITIF

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## ENDNOTES

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